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Free Market Institutions and FDI Performance in Emerging Asian Economies

Abstract

This paper examines long-term developments in the quality and efficiency of free market institutional systems across thirteen emerging economies from South, South-east, and East Asia over the 1995–2014 period. The paper also empirically assesses the impact of free market institutions on a country's inward foreign direct investment (FDI) performance. We find that the free market institutional framework in most economies is still relatively inefficient, restrictive, and underdeveloped but has, nevertheless, substantially improved during the last twenty-year period. Our empirical results also indicate that a free market institutional system in a host-country is a factor that attracts inward FDI to emerging Asian economies by multinational companies. Consequently, policy makers should focus on further improving the quality of free market institutions.

Keywords: economic institutions; multinationals; FDI; Asia; developing countries

JEL: P14; P48; F21; F23; O53

Introduction

A clear trend in the contemporary globalization process is the growing share of developing countries in foreign direct investment (FDI) inflows. This share, which has been consistently increasing, currently accounts for some 44% of all inward FDI in the world

economy [UNCTAD, 2016], and emerging economies from the Asia-Pacific region are now (collectively) the number one FDI recipient.

For multinational corporations (MNCs), this region is attractive as an operational location for several reasons. Among them are high market growth and potential, low labour costs, access to other markets, and deepening integration with the global economy. The growing phenomenon of outsourcing and vertical production networks in the region are another key strategic motive of FDI location [Yang, 2016; Wignaraja, 2016; Athukorala, 2014].

Countries that meet those criteria are presumably more likely to be the primary target of MNCs, and consequently exhibit stronger FDI performance. However, other characteristics also affect a host-location's advantageous attributes and operational costs. Specifically, a country's free market institutional system is also critical. This system encompasses all aspects associated with the functioning of the domestic market and regulatory framework, including private property rights (including intellectual and trademarks), contract enforcement, prices, trading, investments, financial market transactions, capital transfers, and labour market. Those attributes directly influence market conditions, transaction and business costs, as well as entrepreneurial motivations and activities. Consequently, this systemic element should impact the location choices of MNCs.

Given the ongoing trend of service sector growth and private participation in emerging economies in Asia, free market institutions are likely to become increasingly relevant. For instance, foreign companies operating in the financial banking, and insurance sectors would find it relatively difficult, risky, or less profitable to invest in countries where those sectors are not well-established under a free-market system and instead show a high degree of state control. This could apply to other service industries as well as such as real estate, wholesale and retail trade, telecommunications, education, health, and various business services. Notably, FDI in services shows a significant upward trend in developing countries in East Asia, and is believed will become even more important in the future [UNCTAD, 2016; ASEAN Secretariat, 2014].

Moreover, operations of certain MNCs may require a mature private sector, particularly if essential supplies, subcontracting activities, and business services have to be obtained locally, or if local partnerships and joint-ventures are necessary for penetrating and succeeding in the host market. Countries with more developed free market based institutions are more likely to exhibit the attributes of a private sector oriented economy, and hence attract MNCs that need local companies or partners. Finally, MNCs might view free-market oriented countries as generally more promising host-economies.

Although over the past three decades many developing countries in Asia have turned toward a more free market-oriented economy, free market institutions are in most cases still relatively underdeveloped, restrictive, and inefficient. Furthermore, local institutional frameworks generally differ across those countries, resulting in different domestic market

and business conditions [World Bank, 2016; Heritage Foundation, 2016; Gwartney et al., 2015; Djankov et al., 2002].

Consequently one might expect differences in the quality of free market institutions among emerging Asian economies to impact MNCs' location choices, and thus influence a host-country's inward FDI performance. This reasoning implies a vital role for efficient free markets in fostering foreign investments in developing countries. There is growing empirical literature in this field, which pays attention to developing and emerging economies in Asia with a primary focus on either overall institutional quality, business regulations, or certain economic institutions. Studies that comprehensively examine all relevant aspects of the free market institutional environment are scarce.

The main objective of this paper is to empirically examine whether a developing host-country's free-market institutional system has an effect on the country's FDI performance. Our empirical analysis considers developing and emerging economies from South, South-east, and East Asia over a 20 year period. As already mentioned, this group of economies constitutes a particularly dynamic region with respect to inward FDI. To maintain our focus on economic policy implications for emerging Asian economies with similar developmental and institutional characteristics, advanced countries from Asia or other areas are excluded. Since the examined time span is long, a number of changes to the relevant free market institutional systems have occurred. In addition to cross-country variability, this extended time span allows us to capture the change and impact of free market institutions on a host-economy's inward FDI performance over time.

In the remaining part of the paper, we briefly present the literature, discuss the data and select variables, provide a short descriptive analysis of patterns and trends. Next, our econometric methodology is outlined, followed by a presentation and interpretation of empirical results. The last section summarizes the main findings and states out concluding remarks.

Theoretical and Empirical Literature

Although FDI theories initially ignored institutions, more recent FDI literature does consider the role of a host-country's market system and overall institutional framework. The ownership – location – internalization (OLI) theory, which is well-established, suggests that FDI takes place when companies have advantages in each of those aspects [Dunning, 1980]. Besides other factors, MNCs assess the location advantage that relates to the host-country. Different host-countries generally exhibit different L-advantages; that is, features which translate into a favourable environment for MNCs' operations. Input prices, wages, costs, infrastructure, natural resources, labour endowments, human capital, and demand conditions are examples of the location dimension. Dunning [1998] pointed out that a host-economy's institutional framework is becoming increasingly more important

even for FDI in developing countries. In a recent formulation of the OLI paradigm, the L-dimension explicitly accounts for a market regulatory environment and institutional characteristics [Dunning and Lundan, 2008].

In other FDI theories which analyse various, more complex motivations, forms, and types of FDI [e.g. Oyamada, Uchida, 2011; Bergstrand, Egger, 2007; Ekholm et al., 2007; Markusen et al., 1996], the L-advantages (including the institutional framework) are not irrelevant. These are viewed as basic, facilitating host-country features that work together with other determinants. Generally, the literature suggests that in addition to location factors, MNCs also take into account various country attributes, including the institutional environment. Thus, market regulations and institutions cannot be disregarded [Peng et al., 2008].

On the empirical side, a considerable body of literature on the institutional determinants of FDI has emerged. Much of this literature is devoted to the role and impact of general legal environments, the extent of corruption, and the governance quality [e.g. Nondo et al., 2016; Shah et al., 2016; Godinez, Liu, 2015; Sánchez-Martín et al., 2014; Zhang, 2014; Buracom, 2014]. Generally, institutions that concern these attributes are, indeed, relevant factors in both developed and developing countries. Other empirical studies focus on either a specific economic institution, selected aspects of the free market system, or business regulations that entrepreneurs and companies face within a country. Various works indicate that inward FDI is stimulated by efficient business regulations and market-supporting institutions, such as property rights [e.g. Bayraktar, 2015; Corcoran, Gillanders, 2015; Torriti, Ikpe, 2015, World Bank, 2013; Khoury, Peng, 2011].

Finally, although institutions are generally considered to be important, there is also evidence that instead of general institutional quality and democratic institutions, MNCs appear to be more concerned with a host-country's institutional framework related specifically to the domestic free-market system and the degree of economic freedom Mathur and Singh [2013].

Variables and Hypotheses

Given our heterogeneous set of countries differing greatly by size, we focus on inward FDI performance in relative terms. We consider two measures, namely inward FDI stock per capita and inward FDI stock as a percentage of GDP, which provides information about FDI's importance for domestic economy. Furthermore, it better relates economic development implications to the absolute level of FDI.

An appropriate measure that reflects the extent of development and efficiency in free market institutions in a host-country is critical. Thus, instead of using a general measure of institutional quality, we construct our own indicator of the quality and improvement

in a country's free market institutional system, using a data subset used for the Economic Freedom Index (EFI), which is compiled and published by "The Heritage Foundation".

The EFI takes into consideration several crucial issues of economic freedom and market functioning.² There are 10 different aspects of economic freedom, grouped into four broad categories (Rule of Law, Limited Government, Regulatory Efficiency, and Open Markets). For each of those 10 aspects a sub-indicator index value of between 0 and 100 is constructed. Based on those scores, an EFI overall index is calculated as a simple average. The higher the value of this 0–100 index, the more economic freedom exists in a country.

We construct our index by calculating the average score of the following EFI sub-indicator scores: "property rights", "business freedom", "labour freedom", "monetary freedom", "trade freedom", investment freedom", and "financial freedom". In constructing our index, we ignore scores of "freedom from corruption", "fiscal freedom", and "government spending", which are associated with limited government and corruption themes, because they are less directly relevant to free market institutions. Thus, our measure, which we call a free market institutional system index (FM), focuses solely on economic and free market institutions.³

Under this measure, ranges higher index values indicate a more developed and efficient free market institutional framework. Changes (positive or negative) in our FM index over the time indicate changes (improvement or deterioration) in the free market institutional environment. Notably, from a correlation analysis, we find that compared to the EFI our measure exhibits a higher correlation coefficient with FDI in our sample. Based on the theoretical and empirical literature, FM is expected to contribute positively to a host-country's inward FDI performance.

To conduct a valid empirical analysis of the impact of FM, several control variables are included. According to the literature, relevant host-country determinants of FDI include: market size (MS), welfare level (WL), labour cost (LC), natural resources (NR), international trade openness (OP), export orientation (XO), human capital (HC), infrastructure (IN), and economic stability (ES). The selection of control variables also depends on data availability. For the countries in our sample we were able to construct the above mentioned control explanatory variables using data over the period 1995–2014.

MS is associated with a market-seeking FDI incentive. Domestic market size is generally expected to positively impact absolute FDI inflows; however, in the case of relative FDI performance it might be less important. WL is also related to a market-seeking motive, as a country's welfare level reflects consumer income and prosperity. Thus, a high WL indicates favourable demand conditions, which contribute positively to FDI inflows. LC generally has a negative effect on inward FDI. Especially in the developing country context, investment might be related to vertical FDI, where labour cost minimization in labour-intensive tasks is the primary focus. NR is expected to have a beneficial impact on attracting MNCs with a resource-seeking motive. OP generally promotes investment inflows. An

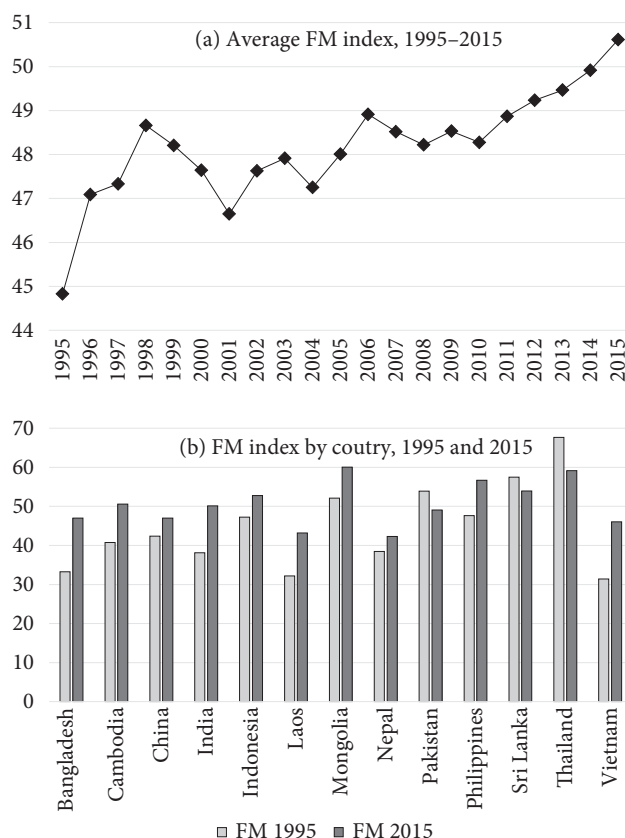
open host-location is usually well-connected and integrated with other economies, which could be vital for a multinational's network of subsidiaries and overall operations.

Furthermore, where MNCs location decisions are driven by an export-platform reason, export oriented host-economies would likely be FDI targets. In that scenario, XO is expected to be positively associated with FDI. For certain knowledge-related activities, services, and higher management tasks, skilful human resources are essential. Thus, a host-country's HC, which may also reflect labour productivity, is expected to exert a positive effect on inward FDI. Lastly, IN and ES, which represent general factors, are both expected to attract FDI. IN is necessary for many economic activities. In addition, a more sophisticated infrastructure generally helps MNCs' operations, and reduces various transportation and transactions costs. Economic stability in a host-country usually facilitating investment inflows. A sound macroeconomic environment sends promising signals to foreign investors.

For the dependent variable and above-mentioned explanatory variables, we created a panel-data set for 13 developing and emerging economies from South, South-east, and East Asian area (Bangladesh, Cambodia, China, India, Indonesia, Lao PDR, Mongolia, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, and Vietnam) over the 1995–2014 period. Definitions and data sources for all the variables are presented in the Appendix (Table A1).

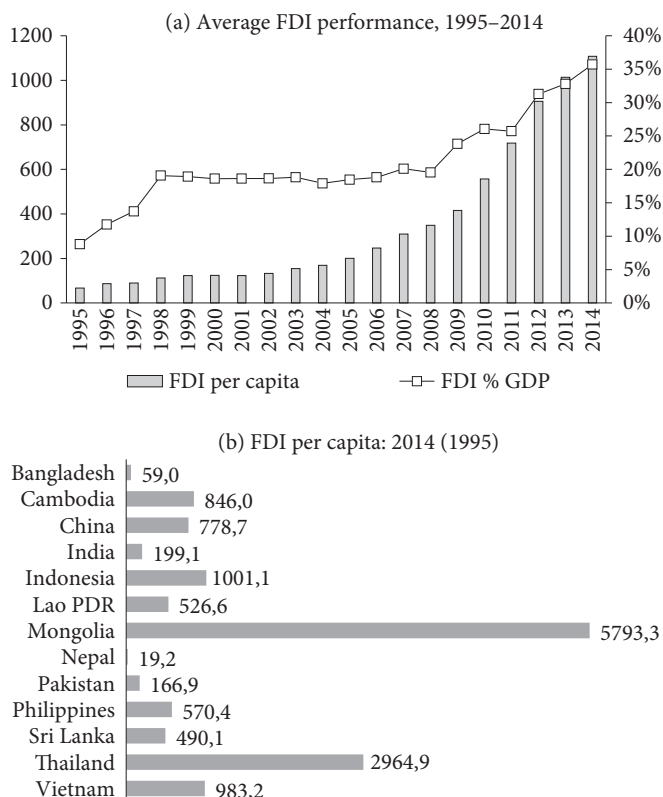
Patterns and Trends

This section analyses observed patterns and trends in free market systems, as well as relative FDI performance across the thirteen emerging Asian economies included in our research. Figure 1(a) shows the average FM index, which is calculated as the simple arithmetic mean of individual country FM indices. It is evident that, on average, quality in free market institutions has increased over 1995–2015. Figure 1(b), which shows the FM index for each country in 1995 and 2015, confirms this general improvement in free market institutional systems, with only three countries exhibiting a decline in the relevant index, and the remaining 10 showing an increase. Notably, the 3 decreasing countries initially show an increase and later fall. According to our results, Mongolia and Thailand exhibit the highest FM index. It should be emphasized, that although most Asian countries in our analysis have improved their FM index over time (some substantially), the quality and efficiency of free market institutional systems are still rather low, especially when compared to advanced and developed countries.⁴

FIGURE 1. Trends in free market development, 1995–2015

Source: own elaboration based on data from Heritage Foundation.

We also trace FDI performance in relative terms. Figure 2(a) reveals that, on average (across the thirteen Asian economies), inward FDI per capita and inward FDI as a percentage of GDP both increased during 1995–2014. Furthermore, the relative importance of FDI in the domestic economy in those countries was considerable. In 2014 average FDI reached a per capita value of more than 1,100 USD, representing almost 36% of GDP. Figure 2(b), which shows FDI per capita by country in 2014 and in 1995 (reported in parenthesis), demonstrates that FDI in per capita terms grew substantially in each country. This is especially true for Mongolia, which also exhibits the highest FDI 2014 per capita value (5,793 USD). Thailand shows the second highest relative FDI performance. Notably, our previous analysis identified these as the two countries with the highest FM indices. Emerging economies such as, Indonesia, Vietnam, and Cambodia follow as the best performing countries in FDI per capita.

FIGURE 2. Trends in relative inward FDI performance, 1995–2014

Source: own elaboration based on data from UNCTADstat.

Econometric Methodology

All of the ten independent variables previously presented potential inward FDI factors:

$$(1) \quad FDI_{it} = f(FM_{it}, MS_{it}, WL_{it}, LC_{it}, NR_{it}, OP_{it}, XO_{it}, HC_{it}, IN_{it}, ES_{it})$$

The empirical analysis of the impact assessment concerning free market institutional systems is based on our estimation of a panel-econometric model of host-country determinants of inward FDI across emerging Asian economies. The estimated regression model takes an eclectic view, reflecting standard host-economy level FDI determinants from the OLI and other theoretical frameworks. However, before we estimate the panel-data model

we derive the appropriate specification. Thus, we first assess the empirical (statistical) relevance of the variables to be included as regressors.

Through an initial correlation analysis we found that MS does not show a significant association with our FDI variable, whilst the correlation coefficient of ES is rather low. Consequently, those variables are excluded from the econometric analysis. Next multicollinearity diagnostics (correlation matrix and variance inflation factors) are performed, which show that OP and XO are highly correlated. From those we retain only the former, and confirm that after excluding XO there is no collinearity problem with our covariates. Based on the above-mentioned tests, we consider the remaining seven variables in the panel-data regression model, which can be generally represented as follows:

$$(2) \quad FDI_{it} = \alpha + \beta_1 FM_{it} + \beta_2 WL_{it} + \beta_3 LC_{it} + \beta_4 NR_{it} + \beta_5 OP_{it} + \beta_6 HC_{it} + \beta_7 IN_{it} + \gamma_i + u_{it}$$

$i = 1, 2, \dots, 13.$

$t = 1995, 1996, \dots, 2014.$

The dependent variable is the inward FDI stock per capita⁵ in the host country i at time t , α is the constant, the betas (β_1 to β_7) are the regression slope coefficients to be estimated, γ_i is the individual country-specific effect, and u_{it} is the stochastic error term. To assess the relative importance and impact of the various determinants on inward FDI, the model, as shown in equation (2), refers to a standardized regression analysis. Here the estimated regression coefficients, which are known as standardized or beta coefficients, show how many standard deviations the FDI variable changes as a response to one standard deviation shock in an independent variable.

As several critical data issues are usually encountered in a panel-data setting, we perform further specification and diagnostic tests to derive the appropriate panel-econometric framework. It is revealed that the data are non-stationary in levels, but stationary in first differences. Moreover, there is evidence of heteroscedasticity, serial correlation, country fixed-effects, and endogeneity (reverse causality).

To derive reliable results, the empirical modelling explicitly takes into account those issues. Regarding endogeneity, we expect that FDI impacts some of our explanatory variables. For instance, the inflow of foreign companies (FDI) might improve the free market institutional system over the time, raise economic welfare, increase wages, and lead to further openness of the economy. On the other hand, FDI is less likely to have a significant direct effect on education level, public infrastructure, and the availability of natural resources in the host-country.

To account for endogeneity, we first apply the instrumental variables (IV) two-stage least squares (2SLS) estimator, utilizing a parsimonious specification approach. The instruments used are the first time-lag of the endogenous explanatory variables plus the ES variable, which is revealed to be a good instrument (relevant and exogenous), as it is

correlated with the endogenous variables and uncorrelated with the residuals. This is also confirmed by other tests after the regression, as explained below.

It is worth mentioning that the IV approach is a GMM (general methods of moments) type of estimation (when time-lagged instruments are used), though it does not exploit all available moment conditions. As in our panel-data set the time-dimension (T) is very long, the various GMM estimators (differenced, one-step, two-step, level, or system), which use all available moments, are not appropriate in this case [Blundell, Bond, 1998]. Furthermore, studies have shown that the estimation efficiency increase of the more sophisticated GMM methods compared to standard IV estimation is only modest when T is large [Loshkin, 2008; Judson, Owen, 1999]. The IV approach (with its parsimonious instrument set) also avoids the problem of too many instruments, and is less likely to encounter weak instruments [Judson, Owen, 1999].

Moreover, in order to check our results for robustness, in addition to the IV model, we rely on a regression analysis in which all the explanatory variables are included with a one year time lag ($t - 1$) to account for the endogeneity issue in this alternative way. With a very large T (and relatively small n), as in our case, a standard fixed-effects (within transformation) model is not suitable. Thus, we specify the model as a Prais-Winsten cross-section time-series regression, which is suitable in a long T setting and controls for autocorrelation and heteroscedasticity. In summary, in both regression models the dataset is made stationary by the first-difference transformation, which is also the way with which country-specific fixed effects are controlled in the regressions. Endogeneity and the other statistical issues discussed above are taken into account as well.

Empirical Results and Discussion

The econometric results derived from the two alternative regression analyses are reported in Tables 1 and 2. In both models time-specific fixed effects (year dummies) are not included, given that Wald test of joint significance indicates year effects are not statistically significant. Thus, the regression models should be specified without time dummies. Turning first to the instrumental variables (IV 2SLS) model, it is evident that a host-country's support of a free market institutional system has a positive and statistically significant effect on inward FDI performance (at the 1% level as evidenced by the p-value).

The estimated beta regression coefficient indicates that a positive one standard deviation change in the FM index (an improvement in free market institutions) leads to an increase of about 0.2 standard deviations in the FDI variable. Considering that our dependent variable refers to relative FDI flow per capita, the magnitude of the impact is considerable. In fact, when translated into US dollars (the underlying measurement unit of the dependent variable), the positive effect of an improvement in the free market institutional system amounts to an increase of about \$ 155 in inward FDI per capita in the host economy. To

put this into perspective, most countries in our research exhibit rather low value of FDI in per capita terms. The associated increase in FDI due to FM represents a sizable effect.

In terms of the relative importance of FDI factors, FM exhibits the fourth-highest beta coefficient. The most important determinant (with the highest impact) is found to be a host-country's welfare level and demand, with a beta coefficient value of 0.6. This finding suggests that market-seeking FDI motives are important in emerging economies in Asia. Human capital (with a positive effect) and labour cost (with a negative sign, as expected) are shown as the two next most important host-country level factors of inward FDI performance.

TABLE 1. IV 2SLS regression for impact of free market institutional system on FDI⁶

Explanatory variables	Beta coefficient	t-test	p-value	Regression statistics
Free Market Institutions (FM_{it})	0.2069	2.75	0.006	F-test = 23.520
Welfare / Demand (WL_{it})	0.6037	4.73	0.000	P>F (p-value) = 0.000
Labor Cost (LC_{it})	-0.2284	-2.82	0.005	R ² = 0.641
Natural Resources (NR_{it})	0.1716	2.70	0.007	Kleibergen-Paap = 55.831
International Trade Openness (OP_{it})	0.1343	2.63	0.008	$\chi^2(2)$ p-value = 0.000
Human Capital (HC_{it})	0.4254	4.37	0.000	Hansen J statistic = 0.549
Infrastructure (IN_{it})	0.1775	3.59	0.000	$\chi^2(1)$ p-value = 0.459

S o u r c e : own elaboration. Author's econometric results based on data and estimation methodology described in previous sections.

TABLE 2. Prais-Winsten regression for impact of free market institutional system on FDI⁷

Explanatory variables	Beta coefficient	t-test	p-value	Regression statistics
Free Market Institutions ($FM_{i,t-1}$)	0.1858	2.62	0.009	Wald-test = 458.540
Welfare / Demand ($WL_{i,t-1}$)	0.5409	7.48	0.000	$\chi^2(7)$ p-value = 0.000
Labor Cost ($LC_{i,t-1}$)	-0.2074	-3.37	0.001	R ² = 0.686
Natural Resources ($NR_{i,t-1}$)	0.1271	2.60	0.009	
International Trade Openness ($OP_{i,t-1}$)	0.1094	2.28	0.023	
Human Capital ($HC_{i,t-1}$)	0.4198	6.34	0.000	
Infrastructure ($IN_{i,t-1}$)	0.1706	3.86	0.000	

S o u r c e : own elaboration. Author's econometric results based on data and estimation methodology described in previous sections.

Generally, the explanatory fit of the model is satisfactory and the instrumental variables satisfy the relevance and exogeneity conditions. The instruments used are relevant

(there is no weak instrument problem) as we can clearly reject the null hypothesis of weak instruments (not correlated with endogenous variables) according to the Kleibergen-Paap rk LM under-identification test. The instruments are also valid (not correlated with the error term), and thus exogenous, as we cannot reject the null hypothesis of the Hansen J test that the over-identifying restrictions are valid.

Turning to the econometric results of the Prais-Winsten model, in which the regressors have been included with a one year time-lag, it is apparent that in general the findings are very similar, though the estimated standardized regression coefficients are slightly smaller for most explanatory variables. The free market institutional system is again found to exert a positive and significant effect on FDI with a beta coefficient value of over 0.18. Although the beta dropped somewhat, FM in this model once again appears to be the fourth most important host-country location factor of FDI out of the seven explanatory variables. To a lesser extent, the size of FM's impact is still noticeable and significant, especially in the context of emerging economies. As in the IV model, determinants of FDI performance such as, a country's welfare and domestic demand, human capital, and labour cost are associated with the strongest impact.

In summary, both regression models suggest that a host-country's support of a free market institutional system significantly affects inward FDI performance in emerging Asian economies during the period 1995–2014. Moreover, the magnitude of the impact is amongst the four highest, surpassing those of trade openness, natural resources, and infrastructure.

Conclusions

By constructing our FM index and tracing free market institutional system trends across thirteen emerging economies in the South, South-east, and East Asian regions, our study shows the importance and extent of market-based institutions in those countries over a period of twenty years. We provide evidence of the effects of free market institutions on inward FDI performance. Our findings show that generally, in most countries the quality and efficiency of the market related to institutional system is low. Depending on a country, there has been, however, a considerable improvement in such systems over time. Furthermore, our econometric analysis reveals that a free market institutional system is a significant host-country determinant of inward FDI performance in selected emerging Asian economies. We also found that free market institutions, while not the most important FDI determinant, have a relatively sizeable impact which exceed those of several traditional factors. This suggests that a host country's domestic economic and market-related institutional framework should not be ignored and that more efforts to improve its quality and efficiency are desirable.

Based on our empirical findings, certain economic policy implications arise for developing and emerging economies in Asia. Given the significance of the FM index, economic reforms that foster all forms of private property rights, increase the efficiency and timeliness of business regulations, promote a competitive and efficient labour market, eliminate government induced distortions and controls with regard to market prices and trading, remove barriers and disincentives to domestic and foreign investment, and modernize and liberalize the financial market, would result in more efficient market-related institutional system. In turn, this improved institutional environment should facilitate private business transactions, stimulate entrepreneurial activities, and raise a host-country's foreign investment climate.

Aside from existing location advantages, the focus of economic policy makers should also be on developing a supportive free market institutional framework to attract FDI. This may be a particularly relevant host-country characteristic for emerging economies in Asia in the future as competition for inward investment in that region is likely to intensify. In that case, a high-quality institutional environment is a location advantage, making a host-country more favourable and competitive for inward FDI. Furthermore, FDI in services, which is steady rising in importance, may well be more sensitive to, and dependent on, a well-functioning, efficient free market system. The implication is that emerging Asian economies with more efficient free market institutions are likely to attract more FDI in the coming years.

Notes

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² For further information and detailed description of the underlying measures and data, see the methodology appendix on pages 467–479 in the Heritage Foundation [2016].

³ Those cover all relevant issues in areas such as private property rights, business regulations, labor market regulations, and freedoms and institutional framework related to international trade, domestic and foreign investment, and the financial sector.

⁴ We have calculated the FM index according to our methodology as outlined in section 3 for a sample of developed countries, and found that many of those countries exhibit an index value around 80.

⁵ Among our two measures of relative FDI performance, inward FDI stock per capita exhibits a higher correlation with the independent variables as compared to inward FDI stock as a percentage of GDP. Although similar regression results are obtained with the second measure, the estimated impact of the determinants is smaller.

⁶ Dependent variable is inward FDI stock per capita. Kleibergen-Paap rk LM statistic and Hansen J statistic refer to the under-identification test and over-identification test for the instrumental variables, respectively.

⁷ Dependent variable is inward FDI stock per capita. Prais-Winsten model with cross-section specific AR(1).

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Appendix

TABLE A1. Definitions and data sources

Variable	Definition	Data source
FDI	Inward FDI stock per capita (constant 2005 prices) in US dollars; deflated using GDP deflator.	Own elaboration based on data from: UNCTADstat, Interactive database, United Nations Conference on Trade and Development; World Development Indicators (WDI) database, World Bank;
FM	Free Market Institutional System Index, as defined in 'Section 3' and calculated with a subset of data used for the EFI.	Own elaboration based on data from: Database on Economic Freedom, The Heritage Foundation.
MS	Gross Domestic Product (constant 2005 prices) in US dollars.	World Development Indicators (WDI) database, World Bank.
WL	Gross Domestic Product per capita (constant 2005 prices) in US dollars.	World Development Indicators (WDI) database, World Bank.
LC	Real Wage (constant 2005 prices) in US dollars: calculated from nominal wage data from ILO in local currency units and deflated to constant 2005 prices using the country's GDP deflator from WDI and then converting in US dollars using exchange rates from IFS, IMF.	Own elaboration based on data from: ILOSTAT database, International Labor Organization (ILO); World Development Indicators (WDI) database, World Bank; International Financial Statistics (IFS) database, International Monetary Fund (IMF).
NR	Natural resources rents (% of GDP).	World Development Indicators (WDI) database, World Bank.
OP	International trade (% of GDP).	World Development Indicators (WDI) database, World Bank.
XO	Exports (constant 2005 prices) in US dollars.	World Development Indicators (WDI) database, World Bank.
HC	Human capital: Enrolment in tertiary education per 100,000 inhabitants.	World Development Indicators (WDI) database, World Bank.
IN	Infrastructure: It is a 0–100 index, calculated as the average of two infrastructure related variables, "Secure Internet servers (per 1 million people)" and "Rail line density", both of which have been rescaled to a 0–100 range. A higher index value indicates better infrastructure.	Own elaboration based on data from: World Development Indicators (WDI) database, World Bank.
ES	Macro-economic stability: It is a 0–100 index, calculated as the average of two stability related variables, "External debt stocks (% of GNI)" and "Inflation", both of which have been rescaled to a 0–100 range and reversed, so that a higher index value shows a higher degree of economic stability.	Own elaboration based on data from: World Development Indicators (WDI) database, World Bank.

Source: own elaboration.