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Determinants of Foreign Capital Inflows in Emerging Markets: The Role of Institutional Quality

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ABSTRACT

Purpose: The purpose of the study was to examine the key determinants of foreign direct investment (FDI) and foreign portfolio investment (FPI) in emerging market economies, with greater emphasis placed on the impact of institutional quality.

Design/Methodology/Approach: The study applied a panel data system generalised method of moments (GMM) model using annual data spanning the period 2007 to 2017, in respect of 12 emerging market economies. To measure institutional quality, the study adopted the Worldwide Governance Indicators, and constructed a composite index for institutional quality using the Principal Components Analysis (PCA) method.

Findings: The results revealed that FDI in the selected emerging markets was attracted by institutional quality and economic growth. Capital account openness, institutional quality and economic growth were positive determinants of FPI. However, stock market development stood out as the key determinant factor for foreign capital inflows.

Implications/Originality/Value: The implications of these findings are that, in their pursuit of foreign capital inflows, these emerging markets should continue to liberalise their economies and develop their financial markets. Importantly, such developments must be coupled with the strengthening of the formal governance institutions. Robust institutions would not only curb institutional weaknesses that deter international capital inflows, but would also insulate emerging markets from unfavourable effects of volatile capital flows.



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Introduction

Growing financial market integration and globalisation are marked by increasing international capital flows across advanced and emerging economies. The debate over the effects of capital inflows and globalisation in economic development has continued in scholarly papers and policy areas over the past few decades. This debate gave rise to skepticism that saw some countries somewhat reversing their financial liberalisation and deregulation policies towards foreign capital inflows; while other countries remained resolute in their pursuit of foreign investment (UNCTAD World Investment Report, 2019).

Fueling this uncertainty over the impact of capital inflows might also have been the literature that has produced differing results on the relationship between foreign direct investment and economic growth. However, there also exists substantial empirical evidence showing the importance of absorptive capacities in the form of sufficient development in factors such as human capital, capital markets, infrastructure, and institutional quality, in relation to the host economy. These absorptive capacities enable the host economy to absorb the growth enhancing benefits that are embedded in foreign direct investment (Borensztein, De Gregorio & Lee, 1998; Choong, Baharumshah, Yusop & Habibullah, 2010; Slesman, Baharumshah & Wohar, 2015). Other empirical literature goes on to suggest that the uncertainty in the direct relationship between foreign direct investment and economic growth can be partly ascribed to the type of foreign direct investment a recipient economy would attract – that is, whether efficiency-seeking, market-seeking or resource-seeking foreign direct investment (Zarkovic, Gligorić & Zarkovic, 2017; Khan, Arif & Raza, 2021).

Moreover, foreign portfolio investment may have faced skepticism, in some countries, due to its volatile nature. However, empirical literature has shown that the interaction between foreign portfolio investment and adequately developed institutions and financial markets has the capability to transform or mitigate any adverse economic effects from volatile portfolio flows (Choong et al., 2010; Agbloyor, Abor, Adjasi & Yawson, 2014; Slesman et al., 2015). Economies faced with the problem of low savings rates often depend on the international capital flowing into the domestic capital markets in order to lower current account deficits as well as to fund investment projects that are necessary to stimulate economic activity and growth. In addition to these advantages of foreign portfolio investment, foreign participation and significant FPI inflows carry the benefit of broadening the domestic capital markets by increasing liquidity, which in turn lowers the cost of finance (Marozva & Makoni, 2021). This further includes the role of foreign participation in improving market efficiency and the allocation of resources to productive ventures (Errunza, 2001).

Empirical literature studying the drivers of foreign capital inflows often point to such factors as macro-economic variables, as well as global, policy and development variables (Róžański & Sekuła, 2016; Gossel & Biekpe, 2017; Saini & Singhania, 2018; Sabir, Rafique & Kamran, 2019; Makoni, 2020). These include, among others, variables such as economic growth, global interest rates, human capital development, capital market development, and financial market liberalisation (Róžański & Sekuła, 2016; Gossel & Biekpe, 2017). The focal interest behind this current study is the growing belief that over and above the macroeconomic, policy, and development factors - domestic institutions are a prime and crucial determinant of inward foreign investment (Alfaro, Kalemli-Ozcan and Volosovych, 2007; Fratzscher, 2012; Ghosh *et al.*, 2014; Agbloyor *et al.*, 2016; Róžański & Sekuła, 2016; Kurul, 2017). Therefore, the purpose of this study is to examine the key determinants of foreign direct investment (FDI) and foreign portfolio investment (FPI) in emerging market economies, with greater emphasis placed on the impact of institutional quality.

Literature Review

Theoretical Literature

Several earlier theoretical frameworks in the study of foreign direct investment or international

production remain relevant to date. These theories include, among others, the imperfect markets theory, pioneered by Hymer (1960), as well as the eclectic paradigm theory (Dunning, 1980). More relevant to this current study of the determinants of foreign capital inflows is the eclectic paradigm theory, which practically hinged on the insights of Hymer (1960). This theory combined several elements of international production to formulate a paradigm that explains the rationale for entities to embark on foreign direct investment (Dunning, 1980). These elements include ownership, locational and internalisation aspects of FDI; and they essentially set out to explain the prerequisite advantages that an entity should hold in order to pursue competitive and successful international production. Ownership advantages refer to the firm's privileges that give it an upper hand or competitive advantage relative to other firms, such as greater access to capital, markets, and technology (Denisia, 2010). Locational advantages involve the factors that determine the country to host the multinational firm (Dunning, 1980). These factors would entail, in relation to the host country, institutional quality, capital market development, macroeconomic conditions, and natural resources (Dunning, 2001). Finally, internalisation advantages pertain to the firm's preference of exploiting its ownership advantages in foreign markets within the firm (internally), which may be more lucrative than to supply the foreign market through licensing agreements or exports (Dunning, 1980).

Concerning FPI, scholars such as Calvo, Leiderman and Reinhart (1996) and Taylor and Sarno (1997) pioneered the view that international capital flows might be driven by pull and push factors. This meant that portfolio flows can be attributed to factors that are internal (pull factors) to recipient countries and those that are external (push factors) to the recipient countries (Calvo et al., 1996; Nxumalo, 2020). Sarno, Tsiakas and Ulloa (2016) described push factors as those global forces that push capital flows from wealthier economies to other countries. These include low interest rates, low growth, high appetite for risk and international portfolio diversification on the part of wealthier economies. By contrast, pull factors are country-specific factors that reflect favourable domestic economic conditions in host economies such as higher economic growth and interest rates (Sarno et al., 2016). These factors pull capital flows into host countries, and reflect the host countries' relative attractiveness in terms of investment opportunities and risk (Sarno et al., 2016).

Dunning and Dilyard (1999) later reconfigured the eclectic paradigm theory and applied it to the FPI context. The aim was to elucidate the trade-off that international firms face between FPI and FDI, where FDI serves to strengthen and expand existing competitive advantages, while FPI serves as a conduit to transfer other financial resources. In this context, ownership advantages relate to the privileges that the investing firm has greater access to than other firms do, for instance, superior access to capital markets and investable capital (Dunning & Dilyard, 1999). Locational advantages are similar to those contained in the context of FDI, such as host country institutional quality and capital market development. Finally, internalisation advantages, in this context, are replaced by externalisation advantages. Externalisation essentially refer to the use of external/international capital markets in lieu of internal processes for the transfer of capital to foreign markets (Dunning & Dilyard, 1999).

Empirical Literature

Previous empirical evidence has shown that a set of high quality institutions is important for emerging markets economies to attract sizeable inflows of foreign investment. However, there is still no consensus as to which institutional factors are the most salient institutional determinants for foreign capital inflows in emerging markets. In addition, existing studies appear to have been relatively more concerned with the impact of institutions on foreign direct investment inflows than to foreign portfolio investment inflows. These gaps can be observed in the following earlier and recent strands of empirical literature.

In a study of 83 emerging markets, Busse and Hefeker (2007) observed that law and order,

government stability, democratic accountability, and bureaucratic quality stand out as the most salient institutional determinants of foreign direct investment inflows in emerging markets. In the same spirit, Alfaro, Kalemli-Ozcan and Volosovych (2008) averred that the quality of institutions, as measured by a broad set of institutional indicators, was the most consistent variable in accounting for the phenomenon of the “Lucas paradox”; which essentially posits that international capital flows do not flow from wealthier countries to poorer countries. These institutional indicators included, inter alia, conflicts, bureaucratic quality, government stability, law and order, and corruption. Ali, Fiess and MacDonald (2010), on the other hand, found that insofar as inward FDI flows are concerned, the protection of property rights is the most pertinent aspect of institutions, relative to other institutional factors such as political stability and corruption, for FDI flows to emerging markets. This was based on their assessment of FDI inflows in 69 emerging market economies between 1981 and 2005.

There are also recent studies that have adopted the Worldwide Governance Indicators (WGI) as a measure of institutional quality. For instance, Rózański and Sekuła (2016) employed the WGI and found that rule of law, political stability, and voice and accountability had a positive and statistically significant impact on FDI inflows, while control of corruption was negative but statistically significant, in a sample of 51 developed and emerging countries, over the period 1996-2014. In the same vein, for 113 developing economies, over the period 2002 to 2012, Kurul and Yalta (2017) observed that control of corruption, government effectiveness, and voice and accountability were statistically significant and positive for FDI inflows. On the other hand, Peres, Ameer and Xu (2018), focused specifically on the impact of the control of corruption and the rule of law on FDI inflows, and found that these indicators were strongly significant for FDI inflows only in advanced countries, and weakly significant in the case of emerging markets. Similarly, Sabir *et al.* (2019) recently found more statistical significance of institutional quality on FDI inflows in advanced economies than in emerging markets. Both Peres *et al.* (2018) and Sabir *et al.* (2019), based on their separate findings, concluded that emerging markets did not succeed in attracting sufficient capital inflows due to the weak state of domestic institutional quality. Finally, Gossel and Beard (2019), in a sample of sub-Saharan African developing economies, observed that political stability, government effectiveness, control of corruption, rule of law, and regulatory quality were the notably relevant institutional factors for foreign portfolio inflows in that region, over the period 1985-2015.

It was therefore the purpose of this study to complement this strand of empirical literature by re-examining the role of institutional quality on both FDI and FPI inflows in the context of emerging markets. We sought specifically to reassess the key determinants of FDI and FPI inflows in emerging markets, with emphasis on the role of institutional factors.

Methodology

Data, Variables and Sample

The study applied panel regression models using annual data spanning the period 2007 to 2017, in respect of 12 emerging market economies. Our dependent variables in this study consisted of FDI net inflows and FPI net inflows, both as a share of GDP. These data were retrieved from the World Bank’s World Development Indicators (WDI) database. Institutional quality indicators served as our main independent variables. To measure institutional quality, we utilised the World Governance Indicators (WGI). These WGIs rank countries on the basis of six aspects of governance: Voice and Accountability, Political Stability/Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption (Thomas, 2010; Kaufmann, Kraay & Mastruzzi, 2011; Nxumalo, 2020).

An array of additional explanatory variables, including macroeconomic variables, that are considered in the existing scholarly literature as strong drivers of foreign capital inflows, were also

included in this empirical study. The data for these control and explanatory variables were also mainly sourced from the World Bank's WDI database. Table 1 below presents the variables and their data sources as applied in this study.

Table 1:
Variables and data sources

VARIABLE	INDICATOR	SOURCE	SIMILAR STUDIES
FDI net inflows	Ratio of net FDI inflows to GDP	World Development Indicators	Jensen (2003); Choong <i>et al.</i> (2010); Makoni (2018); Saini & Singhania (2018)
FPI net inflows	Ratio of net FPI inflows to GDP	World Development Indicators	Choong <i>et al.</i> (2010); Singhania & Saini (2017); Makoni (2020)
Institutional quality indicator	Rule of law	Worldwide Governance Indicators	Ali, Fiess & MacDonald (2010); Rózański & Sekuła (2016); Peres <i>et al.</i> (2018); Gossel & Beard (2019); Nxumalo (2020)
Institutional quality indicator	Regulatory quality	Worldwide Governance Indicators	Gossel & Beard (2019); Nxumalo (2020)
Institutional quality indicator	Political stability	Worldwide Governance Indicators	Busse & Hefeker (2007); Rózański & Sekuła (2016); Aziz (2018); Meyer & Habanabakize (2018); Gossel & Beard (2019); Nxumalo (2020)
Institutional quality indicator	Government effectiveness	Worldwide Governance Indicators	Kurul & Yalta (2017); Gossel & Beard (2019); Nxumalo (2020)
Institutional Quality indicator	Voice and accountability	Worldwide Governance Indicators	Rózański & Sekuła (2016); Kurul & Yalta (2017); Gossel & Beard (2019); Nxumalo (2020)
Institutional Quality indicator	Control of corruption	Worldwide Governance Indicators	Kurul & Yalta (2017); Peres <i>et al.</i> (2018); Gossel & Beard (2019); Nxumalo (2020)
Economic growth	Real GDP growth rate %	World Development Indicators	Ahmed & Zlate (2014); Žarković, Gligorić & Žarković (2017); Akalpler & Adil (2017); Singhania & Saini (2017); Owusu-Nantwi & Erickson (2019); Khan, Arif & Raza (2021)
Exchange rate	Real effective exchange rate	Bank for International Settlements	Cambazoğlu & Güneş (2016); Mensah, Bokpin & Fosu-Hene, (2017); Gossel & Biekpe (2017)
Financial openness	Degree of capital account openness	Chinn-Ito capital account openness index – Chinn & Ito (2006; 2008)	Okada (2013); Byrne & Fiess (2016); Kurul & Yalta (2017)
Financial market development	Stock market capitalisation (% of GDP);	World Development Indicators	Alfaro <i>et al.</i> (2004); Ahmed <i>et al.</i> (2007); Agbloyor <i>et al.</i> (2014); Soumaré & Tchana (2015); Makoni (2021)
Financial market	Domestic credit to private	World Development	Alfaro <i>et al.</i> (2004);

development	sector by banks (% GDP)	Indicators	Ahmed et al. (2007); Agbloyor et al. (2014); Soumaré & Tchana (2015); Makoni (2018)
Human capital development	Education index (expected & mean years of schooling)	Human Development Index – United Nations Development Reports	Kheng et al. (2017); Mallik & Chowdhury (2017)
Total natural resource rent	Total natural resources rents (% of GDP)	World Development Indicators	Mohamed and Sidiropoulos, (2010); Anarfo et al. (2017)
Global interest rates	US real interest rates, measured as the lending interest rate, adjusted for inflation by the GDP deflator.	World Development Indicators	Mohamed and Sidiropoulos, (2010); Anarfo et al. (2017) Gossel & Biekpe (2017)

Source: Authors' own compilation.

Table 2 below portrays the list of emerging market countries that constituted our sample for this study. The selection of these countries was based solely on complete data availability for the respective variables for the duration under study. These countries are also some of the recipients of the largest inflows of foreign capital in their regions, according to the World Economic Outlook (2018) of the International Monetary Fund.

Table 2:
Sample of emerging market countries

Africa	Asia	Europe	Latin America
Egypt	China	Hungary	Argentina
Nigeria	India	Poland	Brazil
South Africa	Indonesia	Russia	Mexico

Source: Authors' own compilation.

Institutional Quality Index

This study applied the principal components analysis method to construct a composite index of institutional quality, similar to the work of Sabir *et al.* (2019). The use of a single composite index, rather than individual indicators of institutional quality, was necessitated not only by the glaring correlations among the individual indicators comprising the WGIs; but also the lack of consensus in previous studies as to which of the indicators are the most pertinent in attracting foreign capital inflows into emerging economies (Nxumalo, 2020).

The principal components analysis method is carried out by estimating the eigenvalues of the correlation matrix of the original variable data set. Usually, the first few generated principal components associated with the greatest eigenvalues are considered to account for the largest part of the variation between the dataset/variables, and they are therefore deemed to embody the most relevant information about the original dataset (Kurul, 2017; Nxumalo, 2020).

Model Specification

To address the objective of assessing the key determinants of FDI and FPI inflows into our sample of emerging market economies, we adopted a dynamic panel data system generalised method of moments model (system GMM). The panel data methodology requires the selection of an appropriate estimation approach from random effects and fixed effects. To this end, we applied the Hausman test with a null hypothesis that the appropriate approach was the random effects approach, against the alternative hypothesis that the fixed effects approach was the appropriate one (Nxumalo, 2020).

Two separate panel regression models were specified for examining FDI determinants and FPI

determinants. Guided by the theory and previous empirical studies reviewed, we specified the FDI regression model as follows:

$$FDI_{it} = \alpha_0 FDI_{it-1} + \alpha_1 FPI_{it} + \alpha_2 INSTDEX_{it} + \alpha_3 SMC_{it} + \alpha_4 CRED_{it} + \alpha_5 HUMC_{it} + \alpha_6 NATR_{it} + \alpha_7 EXCH_{it} + \alpha_8 GDP_{it} + \varepsilon_{it} \quad (1)$$

where i denotes cross-section, t denotes time, α represents the constant term and coefficients of explanatory variables (indicating the mean change in the value of the dependent variable from changes in the independent variable), and ε_{it} is an error term. The rest of the variables are defined as follows: FDI_{it} = FDI net inflows as a percentage of GDP into country i at time t ; FDI_{it-1} = first lag of FDI net inflows, measured as the previous period's FDI net inflows as percentage of GDP into country i at time $t-1$; FPI_{it} = FPI net inflows as a percentage of GDP into country i at time t ; $INSTDEX_{it}$ = institutional quality index, composed of the Worldwide Governance Indicators; SMC_{it} = stock market capitalization as a percentage of GDP; $CRED_{it}$ = domestic credit by banks to the private sector as a percentage of GDP; $HUMC_{it}$ = education index, measured as the number of expected and mean years of schooling; $NATR_{it}$ = total natural resources rent as a percentage of GDP; $EXCH_{it}$ = real effective exchange rate; and GDP_{it} = real GDP growth rate.

The FPI dynamic GMM regression model was expressed as follows:

$$FPI_{it} = b_0 FPI_{it-1} + b_1 FDI_{it} + b_2 INSTDEX_{it} + b_3 GINTR_{it} + b_4 SMC_{it} + b_5 CRED_{it} + b_6 CAOP_{it} + b_7 NATR_{it} + b_8 GDP_{it} + \varepsilon_{it} \quad (2)$$

where i denotes cross-section, t denotes time, b represents a constant term and coefficients of explanatory variables, ε_{it} is a random error term. The remainder of the variables are defined as follows: FPI_{it} = FPI net inflows as a percentage of GDP into country i at time t ; FPI_{it-1} = first lag of the FPI net inflows as a percentage of GDP into country i at time $t-1$; FDI_{it} = FDI net inflows as a percentage of GDP into country i at time t ; $INSTDEX_{it}$ = institutional quality index, composed of the Worldwide Governance Indicators; $GINTR_{it}$ = global interest rates, proxied by US interest rates; SMC_{it} = stock market capitalization as a percentage of GDP; $CRED_{it}$ = domestic credit by banks to the private sector as a percentage of GDP; $CAOP_{it}$ = measure of capital account openness based on Chinn and Ito capital account index; $NATR_{it}$ = total natural resources rent as a percentage of GDP; and GDP_{it} = real GDP growth rate.

Results and Discussion of Findings

This section presents the results of the study, together with a discussion of the findings, as derived from the two GMM model estimations.

Our FDI estimation results based, on the fixed effects approach, are presented in Table 3 below. The Hausman test produced a p-value of 0.0000, which warranted the rejection of the null hypothesis, and thus rendered the fixed effects estimation approach more suitable for our FDI model. The discussion of results that follows will be focused solely on the system GMM output. Other results in Table 3 merely served as robustness checks.

Table 3:
FDI System GMM regression results

	Pooled effects	Fixed Effects	Random effects	System GMM	GLS
	FDI	FDI	FDI	FDI	FDI
L.FDI	0.625*** (0.118)	0.0991*** (0.0919)	0.625*** (0.118)	0.702*** (0.597)	0.625*** (0.0783)
FPI	0.00743* (0.0219)	-0.00736 (0.0168)	0.00743* (0.0219)	-0.149* (0.0862)	0.00743* (0.0231)
INSTDEX	0.0375* (0.0587)	-0.0306 (0.0802)	0.0375 (0.0587)	0.636* (0.211)	0.0375* (0.0557)
SMC	-0.00155* (0.000649)	-0.000729 (0.000866)	-0.00155* (0.000649)	0.00361 (0.00316)	-0.00155* (0.000724)
CRED	0.00371* (0.00179)	0.00575 (0.0033)	0.00371* (0.00179)	-0.0208* (0.0101)	0.00371* (0.00165)
HUMC	0.0065 (0.482)	0.336 (1.148)	0.0065 (0.482)	-2.291 (5.120)	0.0065 (0.374)
NATR	0.0037 (0.00957)	0.011 (0.0162)	0.0037 (0.00957)	-0.0643* (0.0288)	0.0037 (0.00874)
EXCH	-0.00114 (0.0027)	0.00271 (0.00236)	-0.00114 (0.0027)	-0.0275 (0.0179)	-0.00114 (0.00309)
GDP	0.0231** (0.00821)	0.024 (0.0135)	0.0231** (0.00821)	0.0531* (0.0208)	0.0231* (0.0104)
_cons	3.751** (1.356)	8.377*** (1.269)	3.751** (1.356)		3.751*** (0.938)
<i>N</i>	120	120	120	108	120

Source: Authors' own compilation.

Note: Standard errors in parentheses. *** $P < 0.001$, ** $P < 0.01$, * $P < 0.05$ are levels of statistical significance at 0.1%, 1% and 5% respectively. Dependent variable: FDI (Foreign direct investment). Independent/Explanatory variables: L.FDI (lag of the dependent variable, FDI); FPI (Foreign portfolio investment); INSTDEX (Institutional quality index); SMC (Stock market capitalization); CRED (Bank credit to private sector); HUMC (Human capital development); NATR (Natural resource rent); EXCH (Exchange rate); GDP (GDP growth rate).

The system GMM output depicted in Table 3 above revealed a statistically significant and positive relationship between institutional quality and FDI inflows in emerging markets. Given the notion that emerging economies are associated with inadequate institutional systems, this finding suggested that foreign investor optimism is significantly raised by enhancements in the institutional environment. In addition, the significant and positive impact of previous period inflows of FDI indicated the persistence of foreign direct investment inflows. This finding was in line with the hypothesis of clustering effects; which suggests that, when selecting a host economy, new investors imitate and cluster with existing FDI with the aim to benefit from external economies of scale (Walsh & Yu, 2010). Moreover, the FDI results revealed a statistically significant but negative association between FPI inflows and FDI inflows. Although this result contrasted the complementary and positive association found by Noman, Rahman and Naka (2015); it, however, corroborated the findings of Humanicki, Kelm and Olszewski (2017) of a trade-off or substitutability relationship between FDI and FPI inflows, in the case of Poland.

One of the key absorptive capacities for inward foreign direct investment in the host country is the development of domestic financial markets (Alfaro & Chauvin, 2016). To capture the effects of financial market development on foreign direct investment inflows, we used the stock market capitalisation ratio as well as the domestic credit to the private sector by banks, both as share of GDP. Our results indicated stock market capitalisation, although not statistically significant, had a

positive impact on FDI inflows. Domestic credit, on the other hand, had a significant but negative relationship with FDI inflows. One would interpret these results as indicating that higher domestic liquidity provided by bank credit lowers the need for foreign direct investment (Marozva & Makoni, 2021). Moreover, considering both the measures of financial market development, equity markets appear to play a relatively more positive on inward FDI than the banking sector (Nxumalo, 2020). These results are comparable to the findings of Soumaré and Tchana (2015) and Makoni (2021) who found an indecisive relationship between bank credit and FDI, but revealed a positive and significant association between stock market capitalisation and FDI.

With regards to the explanatory variables, although it was observed that economic growth exerted a significantly positive influence on foreign direct investment inflows, the other variables of natural resources, human capital development and exchange rate volatility exerted weak deterministic influence on FDI inflows to this sample of emerging market economies.

For FPI, the outcome of the Hausman test produced a p-value of 0.9889, which meant that the null hypothesis was not rejected, implying that the random effects approach was appropriate. The results of the FPI GMM estimation are displayed in Table 4 below.

Table 4:
FPI System GMM regression results

	Pooled Effects	Fixed Effects	Random Effects	System GMM	GLS
	FPI	FPI	FPI	FPI	FPI
L.FPI	0.178 (0.188)	0.0491 (0.136)	0.178 (0.1880)	-0.247* (0.102)	0.178* (0.0844)
FDI	-0.00728 (0.00946)	0.00549* (0.00372)	-0.00728 (0.00946)	-0.00013 (0.0061)	-0.00728 (0.0177)
INSTDEX	-0.351 (0.226)	1.274* (0.950)	-0.351 (0.226)	2.609 (3.324)	-0.351 (0.213)
GINTR	-0.32 (0.199)	-0.514** (0.164)	-0.32 (0.199)	-0.853** (0.259)	-0.32 (0.196)
SMC	0.0129*** (0.00242)	0.0325*** (0.00536)	0.0129*** (0.00242)	0.0264** (0.00772)	0.0129*** (0.00231)
CRED	-0.011 (0.00641)	-0.0510* (0.0219)	-0.011 (0.00641)	-0.113** (0.0319)	-0.0110* (0.00476)
CAOP	0.186 (0.176)	0.117 (0.210)	0.186 (0.176)	0.858 (0.923)	0.186 (0.131)
NATR	-0.124* (0.0514)	-0.112 (0.0617)	-0.124* (0.0514)	-0.136* (0.0531)	-0.124*** (0.0356)
GDP	0.0166 (0.04030)	-0.0315 (0.0558)	0.0166 (0.0403)	0.0074 (0.0281)	0.0166 (0.0371)
_cons	1.967** (0.683)	3.368* (1.492)	1.967** (0.683)		1.967*** (0.486)
N	120	120	120	108	120

Source: Authors' own compilation.

Note: Standard errors in parentheses. *** P < 0.001, ** P < 0.01, * P < 0.05 are levels of statistical significance at 0.1%, 1% and 5% respectively.

Dependent variable: FPI (Foreign portfolio investment). Independent/Explanatory variables: L.FPI (Lag of the dependent variable, FPI); FDI (Foreign direct investment); INSTDEX (Institutional quality index); GINTR (Global interest rates); SMC (Stock market capitalization); CRED (Bank credit to private sector); CAOP (Capital account openness); NATR (Natural resource rent); GDP (GDP growth rate).

Based on Table 4 above, the results suggest that the statistically significant determinants of inward

foreign portfolio investment in emerging markets were past FPI inflows, global interest rates, stock market capitalisation, domestic credit to the private sector by banks, and natural resources.

A negative and highly significant association between global interest rates and FPI inflows was also observed. Global interest rates were proxied by U.S interest rates. The inverse relationship between these two variables is consistent with the push and pull factor hypothesis; which postulates that lower interest rates in advanced economies push international capital flows towards emerging markets, which offer higher returns because of higher growth rates and interest rates (Calvo *et al.* 1996; Carstens & Schwartz, 1998; Nxumalo, 2020).

Both stock market capitalisation and bank credit had statistically significant effects on FPI inflows. However, the impact stock market capitalisation was positive, while the effects of bank credit to portfolio investment inflows were negative. The positive effects of stock market capitalisation signify the important role of equity markets, relative to the banking sector, on the allocation of global portfolio flows in emerging market economies (Bayar, 2017; Qamruzzaman & Wei, 2019). Lastly, another negative and significant relationship was found between natural resources and FPI inflows. Given that these natural resources are rarely traded in the capital markets, FPI would only have exposure to them through commodity markets. Moreover, even though a good number of these emerging economies are richly-endowed with natural resources, the natural resource sectors are in most cases strictly controlled by government and the state. Therefore, the negative relationship between FPI and natural resources imply that the more the emerging market economy is based on the natural resources (given as well the domestic institutional weaknesses and dominant government/state control), the more foreign investors keep away from such economy (Nxumalo, 2020).

Weak statistical significance was observed in respect of the remaining explanatory variables. The impact of FDI on FPI inflows was negative and statistically insignificant. This outcome supports the earlier argument that these two types of capital inflows are substitutes rather than complements in emerging markets (Humanicki *et al.* 2017). The substitutability between FDI and FPI can also be linked to the earlier evidence by Wu, Li and Selover (2012), which suggested that foreign investors would pursue more foreign direct investment than foreign portfolio investment in a country whose institutional environment is prevailed by informal institutional systems over formal institutions.

The impact of institutional quality, which was the main explanatory variable, on FPI was positive but insignificant. The negligible effect of institutional quality signifies the low quality of institutions in emerging markets. Correspondingly, capital account openness had a positive but insignificant effect on FPI inflows. It has been highlighted that the coefficient of capital account openness, particularly the Chinn-Ito index, is always statistically insignificant, which reflects the poor implementation of capital account liberalisation in emerging markets (IMF, 2008). Nonetheless, the result of a positive impact of capital account openness implies that the liberalisation and deregulation of the capital account pursued by these emerging markets is producing positive results in attracting foreign portfolio investment inflows. Relatedly, Byrne and Fiess (2016) had earlier found that institutions, or capital account openness, could not independently attract international capital flows. However, the positive effects of capital account liberalisation on capital inflows become stronger with improvements in the quality of institutions, as argued by Makoni (2020).

Economic growth was found to exert a positive but insignificant influence on FPI inflows. Slesman *et al.* (2015) had earlier found that the impact of GDP growth on foreign portfolio inflows becomes significant in the recipient country when the levels of institutional quality and financial market development improve. Therefore, for the growth benefits of foreign capital inflows to be

experienced, these emerging market economies would have, as a priority, to strengthen institutions as well as financial market development.

Conclusion and Recommendations

In conclusion, although stock market development stood out as the most important variable for foreign capital (FDI and FPI) investors, as evidence by the significant positive relationship between FPI inflows and stock market capitalisation, it is still argued that institutional quality plays an equally important role in the attraction and retention of international capital flows in emerging markets. Hence, emerging market economies should therefore prioritise stock market development, not only to enhance FPI and FDI flows, but also to insulate their fragile economies from the volatility of portfolio flows, while harnessing the more stable FDI inflows. Moreover, the continued development of financial markets is crucial if the spillover effects of FDI and FPI are to be realised, as financial markets play a critical intermediation role in the channeling of capital inflows to productive investment endeavours (Choong et al., 2010; Agbloyor et al., 2014; Gök & Güvercin, 2020). In order to achieve financial market development, coupled with higher inward foreign capital flows - emerging markets should strive to combine their financial liberalisation (capital openness) policy efforts with the development of strong governance institutions in order to enhance their attraction to both domestic and foreign investors, and enjoy sustainable economic growth benefits (Slesman et al., 2015; Byrne & Fiess, 2016; Makoni, 2021). Future studies could consider undertaking a comparative analysis of the same variables between emerging markets and developed economies.

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