

The Nexus between International Capital Flows and Nation Branding¹

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Abstract

In this paper, we seek to assess the nexus between international capital flows and the various factors which have significant impact on a country's ability to attract inward foreign flows. Such factors include the level of financial market development, institutional quality, natural resources' endowment, infrastructural development, human capital development, trade and capital openness, economic growth prospects, amongst others. Due to the diversity of the aforementioned factors, researchers in recent years have coined the term "nation branding" to collectively refer to all characteristics which can be used to describe a country with respect to its economics contributors. The emphasis on inward foreign capital flows is based on their ability to complement domestic savings and other internal efforts by governments, in a bid to ensure that productive sectors of the economy are adequately funded at all times. We argue that developing countries need to shed their dependence on aid, by rather attracting permanent foreign direct investment (FDI) capital flows, which would have a positive impact on the economy. However, the attraction of international capital flows has to occur in line with enhancements within the country that would serve to entice those with excess funds to invest these in a conducive host country, offering not only higher returns than would be realised in the investors' home country, but other value-additions such as sound institutional quality, availability of adequately developed financial markets, reliable infrastructure (communication and transportation), and a large, skilled pool of labour; and this is amply supported by the findings of this paper. Our recommendations are that developing nations should adopt a holistic approach to potential investment assessment, prior to accepting such offers. Oftentimes, there are terms and conditions which would be detrimental to the host country, but greed tends to inform political decisions, rather than policy or a cost-benefit analysis at the very least. Future studies should consider quantifying aspects such as carbon footprint which would harm countries more than they would potentially benefit financially and from other spill overs such as new technology or employment creation.

Articulated paper summary

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 financial market development (FMD) and institutional quality (INSTQ), as proxies for 'nation branding'.

Methodology: 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.

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Findings: The results revealed that FDI in the selected emerging markets was attracted by institutional quality (INSTQ) and economic growth prospects, while capital account openness, institutional quality (INSTQ) and economic growth prospects were positive determinants of FPI. However, it was confirmed that financial market development (FMD) and institutional quality (INSTQ) stood out as the key determinant factor for all forms of international capital inflows.

Implications/Originality/Value: The implications of these findings are that, in their pursuit of international capital inflows, emerging markets should continue to liberalise their economies and further 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.

Recommendations for future studies: Future studies should consider quantifying aspects such as carbon footprint which would harm countries more than they would potentially benefit financially and from other spill overs such as new technology or employment creation. Also, a combination of the methodological techniques applied could yield different results, hence instead of using only a PCA-composite index, researchers could regress the individual FMD and INSTQ variables individually to determine their respective impact as nation branding descriptors in the international finance space.

Keywords: international capital flows; FDI; FPI; ODA; nation branding; financial market development; institutional quality

Introduction and background

International capital flows have long attracted the interest of policy-makers, central banks, international institutions, investors and academia, mainly because the volume of flows has grown at a phenomenal rate since the beginning of the 1990s (De Santis & Ehling, 2007). This has not changed in recent years; if for anything – the upward trajectory has continued. According to Makoni (2016), several forms of international capital flows exist, including official development assistance (ODA), remittances, foreign direct investment (FDI), and foreign portfolio investment (FPI). Foreign capital inflows, particularly in host countries, play a pivotal role in boosting economic growth. Adusah-Poku (2016) avers that these international capital inflows are a critical source of funding that assists developing countries in expediting their economic development agenda, by transferring advanced technologies and discoveries from developed countries to emerging markets.

The differentiating factor between FDI, FPI and ODA is largely premised upon the tenure of the foreign capital flow, and its intended use. FDI, which is the preferred source of international capital, is cross-border investment made by an investor outside of their home country, with the objective of obtaining a lasting interest in, or effective (active) management control over an enterprise resident in the host country (Organisation for Economic Co-operation and Development [OECD], 2008). Important to note is that, for investment to qualify as FDI, the investor must hold at least 10% of the voting shares. Foreign portfolio investment (FPI), on the other hand, is that investment made by a resident entity in one country in the equity and debt securities of an enterprise resident in another country, motivated by capital gains, but not necessarily seeking to establish a significant interest or long-term lasting relationship in the foreign enterprise (International Monetary Fund, 1993). FPI thus comprises of investments in bonds, notes, money market instruments and financial derivatives, as well as government bonds. As such, an FPI investor would be expected to be prominent in the shareholding and trading activities of companies listed on a host country's stock exchange. Lastly, official development assistance (ODA), typically known as foreign aid, has significantly influenced economic progress of developing countries, by plugging the leakage in government coffers, particularly for socio-economic purposes. ODA thus includes non-repayable funding specifically for financing social and economic infrastructure, assistance to the service and manufacturing sectors. Projects which are often funded in this way are social infrastructure comprising education provision, water supply and sanitation, all of which aim to enhance human development, and ultimately, contribute to long-term sustainable economic growth (Addison & Tarp, 2015; Wehncke, 2022). Well known international aid agencies include as the Bretton Woods Institutions, the World Bank Group, the Inter-American Development Bank, the African Development Bank, the Asian Development Bank, and the International Monetary Fund, which were established to achieve ODA goals (Ali and Zeb, 2016).

International capital inflows are determined by an array of factors, including but not limited to, macroeconomic policies, institutional quality, availability and level of infrastructural development, financial

market development levels, natural resources endowment, human capital development, trade and capital openness, economic growth and prospects, amongst others (Makoni, 2016).

To visually contextualise the trend of international capital flows, the figures below are presented:

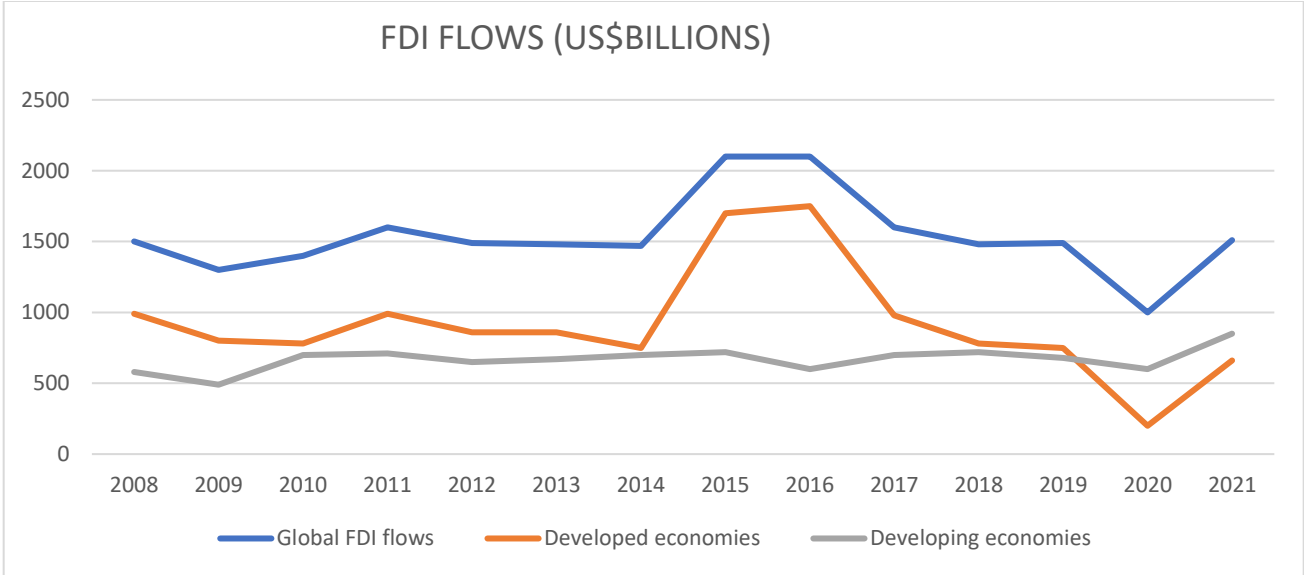


Figure 1: : Global FDI flows by economic grouping (2008-2021) (Source: OECD, 2022)

As shown in Figure 1 above, after the 2007 global financial crisis, it took almost three years for FDI flows to recover, before flat-lining again. There was a surge in FDI flows for developed economies in 2014. When the COVID-19 pandemic hit in 2019, global FDI flows declined drastically, hitting their lowest levels in 2020. Although there are signs of economic recovery, it may be a few more years before we see pre-pandemic levels again.

Similarly, when we consider the FDI-ODA nexus in Africa using data between 1980 and 2016, Figure 2 below indicates that most African countries were aid-dependent, until around 2007 when the level of FDI inflows overtook ODA. Strangely, this coincided with the global financial crisis (GFC), which saw many integrated global markets take a knock. Many wonder why the opposite occurred for African countries. Despite the level of integration with the global financial markets, African stock markets are highly regulated, and so were insulated from the shocks of the GFC. In addition, the natural resource endowments in African countries were attractive to foreign investors as they presented them with an opportunity to appear as “saviours” of ailing mining, agricultural and manufacturing sectors on developing countries. With nowhere safe to place their excess funds, foreign investors sought projects in Africa that required funding, hence the increase in FDI inflows during the GFC downturn in the other trading markets.

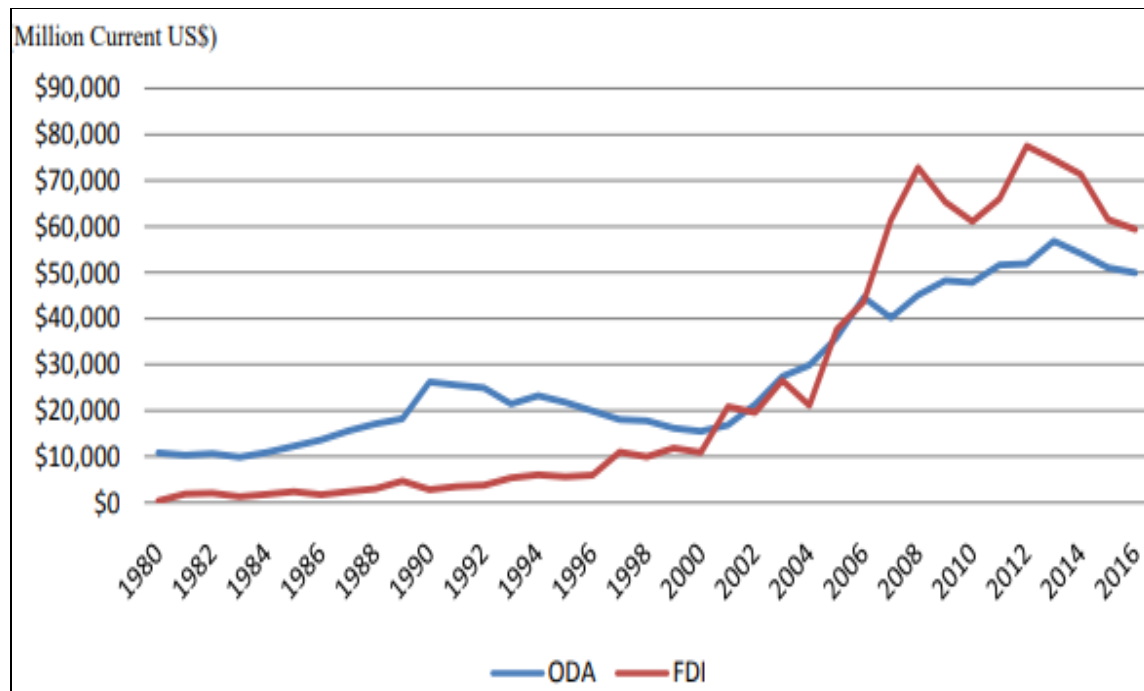


Figure 2:

FDI and total Net ODA disbursements for Africa from 1980 to 2016 (Source: UNCTAD, 2017)

The scenarios above can be explained theoretically. An increase in FDI inflows can be seen as a positive signal for future business development opportunities, for example, risk is reduced, and there are enhanced confidence levels in the business environment in which the foreign institutional investor or multinational corporation is investing. Carro and Larru (2010) further argue that increased ODA allocations may indicate a period of low FDI inflows, essentially safeguarding developing countries against possible volatile FDI inflows.

Thus, the guiding question that we want to answer herein is: What role does nation branding (in the form of financial market development and institutional quality) play in countries' abilities to attract international capital flows, specifically FDI and FPI? The remainder of the paper is organised as follows: the next section presents a brief overview of the concepts under study, and makes an attempt to conceptualise the underlying relationships between the key variables of financial market development, institutional quality and international capital flows. This is followed by the methodology in which we outline our econometric model(s). The findings are discussed thereafter, and conclusions and recommendations wind up the paper.

Conceptual framework

So, what is the big deal with international capital flows? As already alluded to above, the inflows come in different forms, from different sources, and serve different purposes. Africa, which is made up of 54 countries, is one of the largest recipients of aid. While on the surface this may look good for the intended projects, and spruces up the donors' image, it is actually bad for the recipient African country for a number of reasons. Of great concern, is the dependency that foreign aid creates. Countries that use ODA almost never exit that status.

The need for foreign aid makes certain countries and funding agencies feel important, and needed; yet the reality is that the money comes with stringent conditions which our politicians need to assess beyond the obvious.

Many developing African countries are endowed with natural resources such as rivers, forests, mineral wealth, land, large pools of cheap labour, skilled labour, developing financial markets, amongst others; making them excellent candidates for inward FDI and FPI flows. It is these inherent country assets that foreign investors are interested in. However, the one determinant that creates a loophole in the African investment landscape, is the poor institutional quality.

In this context, *institutions* are the rules that govern economic, legal, political and social interactions and transactions such as laws, regulations, and codes of conduct, as well as the mechanisms that enforce these rules (North, 1991; Nxumalo, 2020). Efficient institutions engender positive economic outcomes because they stimulate investment and entrepreneurship, protect property rights, enforce contracts, enable adoption of efficient technologies, integrate world markets, maintain political and macroeconomic stability, promote the rule of law and civil liberties, manage risks, including those taken by the financial sector, and promote long-run economic development and growth (Alfaro et al., 2008; Rodrik, 2008). Good institutional quality therefore lays a firm foundation for domestic and foreign investment, as well as long-term economic development. Investor confidence is boosted, and this can enhance the attraction of foreign capital inflows.

Unfortunately, foreign investors have found unorthodox ways to worm their way into African countries by throwing large amounts of foreign-denominated investments into desperate countries. Sometimes, politicians get lured with the ‘brown envelope’ to either turn a blind eye, or gain an indirect shareholding into the pursued project, often registering this vested interest in the name of a relative with a different surname.

Nation branding

The identity of a country is made up of many independent characteristics, much like a human persona. We can thus collectively term these different characteristics as “nation branding”. It is essentially a set of factors which contribute to the ‘make up’ of a country, and how it is perceived in the eyes of not only its own citizens, but also external and interested stakeholders such as foreign investors. In the niche area of international finance and economics, ‘nation branding’ would thus be the level of financial market development, institutional quality, economic activity, natural resources’ endowment, infrastructural development, human capital development, trade and capital openness, economic growth prospects, amongst others. For the purposes of clarity, we will provide a comprehensive breakdown of two of these nation branding characteristics, being financial market development, and institutional quality.

Financial market development

The term ‘financial market development’ (FMD) is frequently and loosely applied in empirical literature, although there is no consensus on its definition. Chinn and Ito (2005) described FMD – as measured by stock market activity – as being dependent on capital account openness individually, as well as with interaction with the level of legal development (an element of institutional quality). In their study, Chinn and Ito (2005) applied the different financial market size variables of private credit over GDP, stock market capitalization, and stock market total value, as proxies of FMD. In its simplest form, Soumaré and Tchana Tchana (2015) defined FMD as a well-functioning financial sector or market liberalisation. Makoni (2016) postulated FMD as the extant components of domestic financial markets, which are regarded as the conduits for channelling surplus international funds, as well as to raise additional credit and/ or equity capital in the banking sector and/ or the stock market platforms by foreign investors. Similar to the work of Makoni (2016), we selected a number of variables which are used to measure financial market development, namely, stock market capitalisation (SMCAP), stock market value traded (SMTVT), domestic credit to the private sector by deposit banks as a share of GDP (PCRED), liquid liabilities of the financial system (M3) scaled by GDP (LIQLI), and the ratio of commercial bank assets to commercial bank and central bank assets (CCBA). The first two variables measure stock market development, while the latter three apply to the bank credit market. Existing studies either use one or more of these FMD variables individually, or formulate a composite index using the principal component analysis.

SMD

Stock market capitalisation as a share of GDP (SMCAP) measures two aspects: the size of the domestic equity market, as well as financial market depth. SMCAP evaluates the size of the stock market, relative to the country’s economy. According to Mahonye and Ojah (2014), stock market value traded (SMTVT) measures the stock market trading relative to economic activity, thereby giving an indication of the stock market’s liquidity. Total value of stocks traded scaled by GDP (SMTVT) measures stock market liquidity on the basis that active stock markets have a higher turnover ratio than less liquid stock markets (Hieroms, 2012). Stock market liquidity does not specifically measure the ease of buying and selling securities, but rather the degree of trade on the stock market. These measures thus shed light on the importance of an active stock market in every country which seeks to develop, and eventually integrate with the global financial markets.

BSD

Three key variables measure financial intermediation and other services offered by the banking sector, i.e. the level of banking sector development. These are domestic credit to the private sector by banks (PCRED) which refers to financial resources provided to the private sector by the financial sector including deposit money banks and other depository corporations (deposit-taking corporations except central banks), such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable, that establish a claim for repayment (World Bank, n.d.). Credit provided by banks to the private sector as a share of GDP (PCRED)

measures financial intermediary activity and the efficiency of channelling savings to investors. It is considered to be a common investment vehicle in countries where the stock market is under-developed (Ghartey, 2015). PCRED is a banking sector activity indicator that examines the value of credits provided by depository institutions to the private sector, gauged against the economy of the country. A high level of credit to the private sector also indicates an abundance of domestic capital, in which case, foreign capital (FDI and FPI) would not be necessary (Anyanwu, 2012).

The second banking sector development measurement variable is liquid liabilities of the financial system (M3) as a ratio of GDP (LIQLI), which is an indicator that shows the general size of the banking sector by measuring the sector's realisable obligations, relative to the economy of the country, (Levine, 2002; Ahmad & Malik, 2009). Liquid liabilities of the financial system (M3) as defined by the World Bank (n.d.) is "the sum of currency (demand, time, savings and foreign currency deposits), and other interest-bearing liabilities of banks and non-bank financial intermediaries". Ghartey (2015) further added that these are essentially financial resources set aside for investment to boost production for future consumption, and consequently promote economic growth.

The last banking sector development measurement variable is the ratio of commercial bank assets as a share of the sum of commercial bank and central bank assets (CCBA). This indicator measures the degree to which commercial banks allocate savings in the financial system, thereby giving an indication of the overall importance of the various financial institutions (Levine et al., 2002).

Institutional quality

The primary measure of institutional quality used in many empirical studies is the six individual Worldwide Governance Indicators (WGI), compiled by the World Bank (Nxumalo and Makoni, 2021). Kaufmann *et al.* (2011) argued that institutional quality and governance assess how authority is exercised in a particular country. Institutional quality and governance are underpinned by three key themes: (a) the processes of government selection and monitoring; (b) government capacity in effective and sound policy formulation and implementation; and (c) due regard for the institutions that govern the economy and society, by the state and its citizens. From these three key themes, Kaufmann *et al.* (2011) then developed the six measures of governance, which are commonly referred to as institutions, and described as follows:

- (1) **Voice and accountability** – measuring the extent of civil liberties, including citizens' ability to participate in the selection of their government, and the freedoms of association, expression and media.
- (2) **Political stability and absence of violence** – capturing the probability of political or government instability caused by violent or unconstitutional means such as political violence and terrorism.

(3) **Government effectiveness** – measuring the independence of government from political interference, and the quality of government services, policy formulation and execution, and the credibility of government's commitment to such policies.

(4) **Regulatory quality** – capturing government capability to formulate and implement sound policies and regulatory frameworks that promote private sector development.

(5) **Rule of law** – capturing perceptions of the extent to which agents, economic and others, have confidence in and abide by the laws of the country, and in particular the quality of property rights, contract enforcement, the courts, and the police, as well as the likelihood of violence and crime.

(6) **Control of corruption** – capturing the extent of corruption, i.e. the exercise of public power for private gain, including petty and significant forms of corruption, as well as state capture by elites and private interests.

These governance indicators have been used extensively in empirical studies of both developed and developing countries to examine the impact of host-country institutional quality, and of the individual indicators, on inward international capital flows, including FDI and FPI (see Nxumalo & Makoni, 2021; Gossel & Beard, 2019). Empirically, institutional quality has been shown to be one of the most consistent and statistically significant structural determinants of investment and productive activity in an economy, and the most consistent explanatory variable for international capital flows not coming from wealthier countries to poorer countries (Alfaro et al., 2008; Lim, 2014; Nxumalo, 2020). We can either use the variables individually, or collectively after developing a composite institutional quality index using the principal component analysis technique.

International capital flows, financial market development and institutional quality

In an effort to illustrate the interactions between domestic financial markets, institutional quality and inward international capital flows, towards economic growth enhancement, Figure 3 is presented below. The figure shows that as domestic savings grow, more financial assets become available, leading to deepening and broadening of the local financial markets. This, coupled with sound institutional quality such as those regarding foreign ownership, property rights and legal rights, leads to an attraction of inward international capital flows (FDI and FPI specifically), whose investments can be used to increase productivity and output, resulting in increased income levels for the country.

Agbloyor et al. (2014) proffered that the role of financial markets is to facilitate the liquidity and tradability of assets, provide alternative avenues for risk diversification, reduce information asymmetry, enhance savings mobilisation and the attraction of foreign capital, as well as improve corporate governance of firms and governments. This implies that, conceptually, there are bi-directional causal relationships that exist between financial market development, institutional quality and inward flows of international capital.

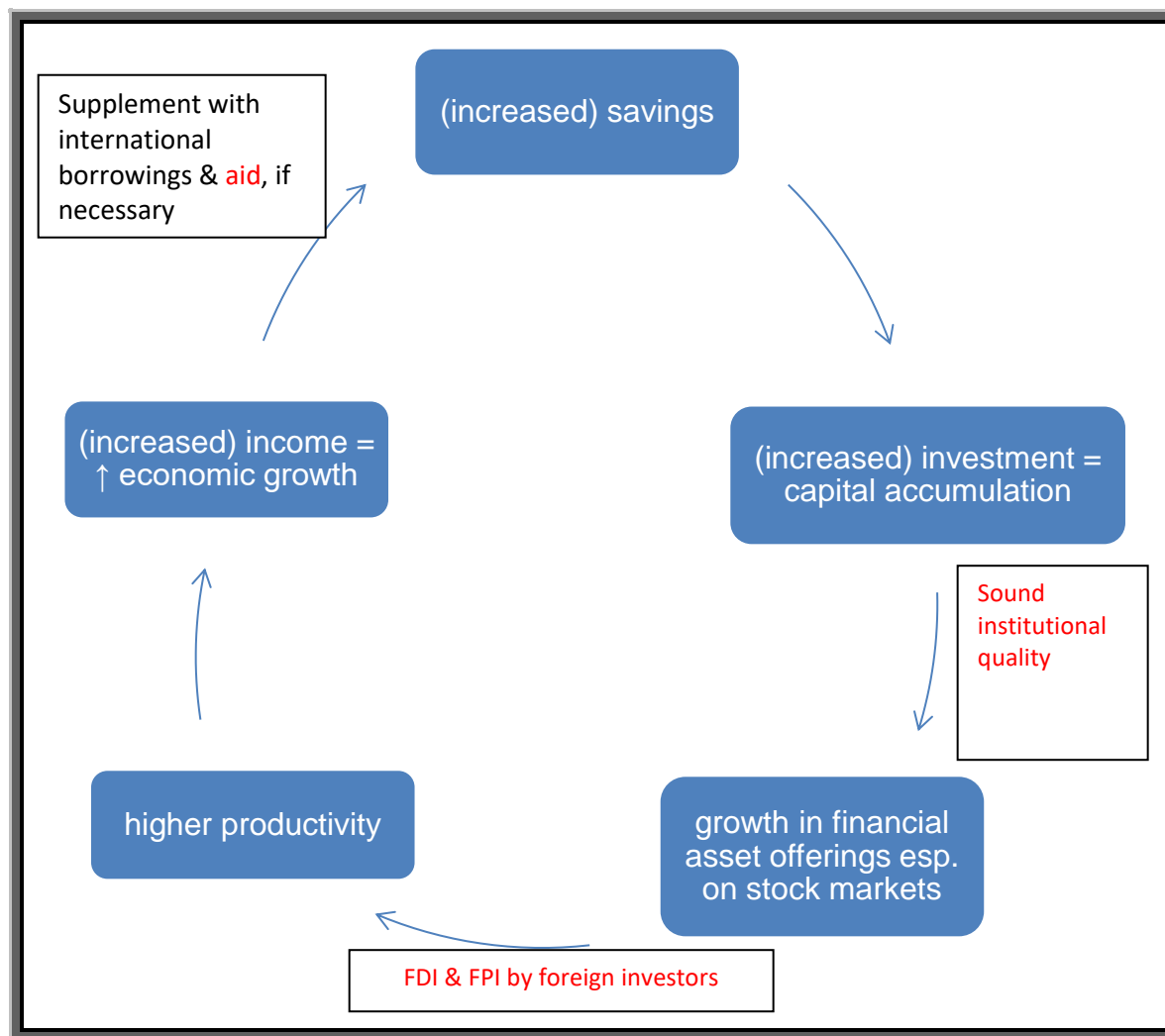


Figure 3: Financial market development life cycle (Makoni, 2016)

With this synopsis, we can proceed to empirically test our earlier assertions.

Methodology

Data and Variables

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 international 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 & Singhanian (2018)
FPI net inflows	Ratio of net FPI inflows to GDP	World Development Indicators	Choong <i>et al.</i> (2010); Singhanian & 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); Singhanian & 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 et al. (2004); Ahmed et al. (2007); Agbloyor et al. (2014); Soumaré & Tchana (2015); Makoni (2021)
Financial market development	Domestic credit to private sector by banks (% GDP)	World Development Indicators	Alfaro et al. (2004); 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 (PCA) method to construct a composite index of institutional quality, similar to the work of Nxumalo and Makoni (2021). 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 WGI; 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).

Econometric 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 earlier and conceptual framework, 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 capitalisation 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:

$$FPI_{it} = b_0FPI_{it-1} + b_1FDI_{it} + b_2INSTDEX_{it} + b_3GINTR_{it} + b_4SMC_{it} + b_5CRED_{it} + b_6CAOP_{it} + b_7NATR_{it} + b_8GDP_{it} + \varepsilon_{it} \quad (2)$$

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; Makoni, 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 a 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 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	0.117	0.186	0.858	0.186

	(0.176)	(0.210)	(0.176)	(0.923)	(0.131)
NATR	-0.124*	-0.112	-0.124*	-0.136*	-0.124***
	(0.0514)	(0.0617)	(0.0514)	(0.0531)	(0.0356)
GDP	0.0166	-0.0315	0.0166	0.0074	0.0166
	(0.04030)	(0.0558)	(0.0403)	(0.0281)	(0.0371)
_cons	1.967**	3.368*	1.967**		1.967***
	(0.683)	(1.492)	(0.683)		(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 one of the main explanatory variables, 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 international 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, as this is one of the factors that characterizes a nation. 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 (INSTQ) 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; Nxumalo & Makoni, 2021).

Recommendations for future research

Future studies could consider undertaking a comparative analysis of the same variables between emerging markets and developed economies. Also, with the drive for nations to achieve some of the SDGs before 2030, researchers could bring in other 'nation branding' elements such as measuring the effect of carbon footprint on international capital flows. With the many extractive industries in developing countries, many find themselves reeling under heavy pollution after not factoring this into their investment decisions.

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