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Country-Level corporate governance and Foreign Portfolio Investments in Sub-Saharan Africa: The moderating role of institutional quality

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Abstract: Given the declining volumes of Foreign Portfolio Investments (FPI) in Africa, the study sought to examine the moderating role institutional quality (INST) plays in the relationship between country-level corporate governance (CG) and FPI in Sub-Saharan Africa. This is motivated by arguments from the hierarchy of institutions hypothesis, which posits that the quality of political institutions (INST) determine the strength of economic institutions (CG) and how they affect economic activities. Data was collected on 33 SSA countries from 2009 to 2017 and analysed using the systems GMM approach. The results revealed that economies characterised by strict adherence to international auditing and reporting standards, ethically behaved firms, effective corporate boards, and well-regulated security markets tend to attract more FPI inflows, even though weak shareholder protection regimes are likely to deter FPI. We also confirmed the positive impact of robust institutions in luring FPI into SSA. Finally, we found the FPI-CG nexus to be significantly moderated by the quality of institutions prevalent in a country. This implies that the effectiveness of country-level corporate governance mechanisms can be affected by the existing institutions, thereby impacting the level of FPI an economy receives. We

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PUBLIC INTEREST STATEMENT

The governance-foreign investment nexus has generally received scholarly attention; however, how specific country-level corporate governance mechanisms influence FPI inflows is limited in the literature. Moreover, the role political institutions could play to strengthen the relationship has also not received any attention. Following the hierarchy of institutions hypothesis, the study obtained data on 33 SSA countries to examine the moderating role institutional quality plays in the relationship between country-level corporate governance and FPI inflows into SSA. The study found that sound country-level corporate governance mechanisms and quality institutions are major drivers of FPI. Again, the study concludes that the Governance—FPI relationship is strengthened by the quality of institutional structures prevalent in a country. The study therefore recommends that firms adopt sound corporate governance practices while SSA countries also work to strengthen their institutions to harness attract more FPI inflows into the region.

recommend that SSA firms take pragmatic steps to develop and practice sound CG mechanisms while the institutional setting in SSA is strengthened to harness more FPI inflows to support their economic growth agenda.

Subjects: International Economics; International Finance; Corporate Governance

Keywords: Country-level corporate governance; Foreign Portfolio Investments; institutional quality; institutions; sub-Saharan Africa

1. Introduction

Foreign Portfolio Investment (FPI) inflows have been found to have umpteen benefits on the receiving economy. It enhances the liquidity and development of the domestic capital market, boosts GDP, and reduces pressure on the exchange rate (Iriobe et al., 2018; Tsaurai, 2017). Alleviation of the degree of information asymmetry, complementing domestic investment, expansion in employment, and increase in tax revenue are other benefits of FPI to the host economy (Gossel & Beard, 2019; Jo et al., 2015; Tsaurai, 2017). Notwithstanding these benefits, recent statistics show a decline in global capital inflows. Specifically, foreign capital flows declined from $8 trillion in 2017 to $5.9 trillion in 2018, a drop of over 26%. FPI suffered the most, declining by over 40% during the period, with developing economies, including Africa, experiencing a 30% fall (UNCTAD, 2019). Africa has received the least FPI inflows in the past two decades, and compared to other regions, inflows to Sub-Saharan Africa (SSA) have been the most volatile and relatively concerted in only a few countries (Gossel & Beard, 2019; Makoni, 2018; Oyerinde, 2019).

Consequently, some empirical efforts have been made to establish the determinants of FPI in SSA. In these attempts, factors such as the financial market development, economic growth potential, exchange rate volatility, interest rate, and the quality of political institutions among others have been found to explain cross-country variations in FPI inflows to these countries (Iriobe et al., 2018; Ojong et al., 2017; Oyerinde, 2019). However, Makoni (2018) and Anyanwu (2012) aver that to attract more FPI, there is the need to pay particular attention to the corporate governance (CG) practices in SSA. Agyemang et al. (2016) further explained that CG structures and practices highly influence foreign investors' perception of how effectively domestic firms are run in that country. Furthermore, Agyemang et al. (2019) found country-level CG structures to be germane in attracting foreign investment inflows into Africa.

Specifically, country-level CG are those firm and country-specific arrangements devised to monitor and advise management to safeguard the rights and interests of all stakeholders of a firm (Agyemang et al., 2019). Minority shareholders such as portfolio investors do not have direct control over their investments, and for that matter, mainly rely on these country-level CG structures present in foreign firms to protect their investments (Lysandrou et al., 2016). More so, foreign investors tend to invest less in poorly governed countries where the risk of expropriation is high, and minority shareholder interests and private property rights are not protected (Huynh et al., 2020). Countries with well-functioning governance structures also tend to lure more foreign investors, lower the cost of monitoring investments, prevent opportunistic behaviours and improve transparency and accountability (Larcker & Tayan, 2019). Thus, any discernible improvement in foreign investment in host economies can be effectively fashioned out by strengthening country-level CG structures in the host economies.

Lysandrou et al. (2016) provided evidence on the relationship between country-level CG and FPI but chiefly concentrated on developed economies, with developing economies, especially Africa, receiving less attention in this regard. Agyemang et al. (2019) also examined the nexus between country-level CG and FDI in Africa. However, since portfolio investors do not have direct control over their investments (relative to direct investors), they would pay more attention to the country-level CG mechanisms present within the host economy to make their investment decisions and

also protect their investments. We, therefore, take a different approach by examining how specific country-level CG structures such as ethical behaviour of firms (EB), the efficacy of corporate boards (ECB), protection of minority shareholder rights (POMI), the strength of auditing and reporting standards (SARS) and regulation of securities and exchanges (RESE) are uniquely related to FPI in SSA economies that are characterised by idiosyncratic institutional settings.

Furthermore, in examining the role CG plays to entice FPI to Africa, the institutional setting cannot be overlooked since they "form the rules of the game in every society". This is because, the effective functioning of the CG structures in a country is contingent, to a larger extent, on the institutional structures prevalent in that country (La Porta et al., 1998; Globerman & Shapiro, 2002; Jia et al., 2019; Nguyen, 2022b). For instance, in what is termed as *Hierarchy of Institutions Hypothesis*, Acemoglu et al. (2005) argued that the economic or private institutions, which in this case encapsulate the country-level CG structures, determine the efficiency in the resource allocation and the structure of incentives for economic agents, thereby influencing their investments. However, the effectiveness of these economic institutions is determined by the quality of existing political institutions.

Impliedly, societies with well-functioning political institutions in the form of the rule of law, democracy, government effectiveness, political stability, etc. will facilitate the development of private governance mechanisms that provide a conducive atmosphere for investments in that economy (Nguyen & Dang, 2022). We, therefore, contend that the political institutions in a country could condition the effect of its CG mechanisms on foreign investments. The combined impact of CG mechanisms and political institutions could have favourable or dire consequences on attracting more FPI into SSA (Huynh et al., 2020). Therefore, our study fills another lacuna by examining the moderating role of political institutions in the relationship between country-level CG and FPI. This missing link could provide a plausible explanation for the low levels of FPI in SSA in recent years.

The rest of our paper is structured as follows: We first present a review of theories and empirical literature, followed by a discussion of the research methods. We then present the analysis and discussion of our results before concluding by setting out the practical implications and policy recommendations.

2. Literature review

2.1. Theoretical review

We argue from the perspectives of the new institutional economics theory and the hierarchy of institutions hypothesis to explain the relationships among country-level CG, institutions, and FPI.

2.1.1. New institutional economics (NIE) theory

Institutional theorists suggest that the NIE theory manifests in two approaches (Ménard, 2018). The first approach to the study of institutions focuses on the institutional environment and the rules of the game that outline the framework and mechanisms governing human interactions at the macro-level (Canitez, 2019) while the second approach pays attention to micro-level behaviour and transaction cost economics (TCE) in the selection of governance types (Spithoven, 2019). Both approaches to the NIE are relevant to explaining how governance and institutional structures shape economic activities. Williamson's approach deals with how economic participants structure their activities and execute transactions within the institutional environment proposed by North (Canitez, 2019). Therefore, institutions could play a key role in reducing transaction costs by enhancing the security of property rights and contract enforcement; and when property rights are secured, investment increases (Ménard & Shirley, 2005). Quality institutions are needed to further ameliorate information asymmetries by channelling information about market conditions and reducing risks as property rights and contracts are defined (Nguyen, 2022a). Intuitively, foreign portfolio investors would be attracted to countries where the CG structures are efficient, and the institutional arrangements are robust and well-functioning.

2.1.2. Hierarchy of institutions hypothesis

The hierarchy of institutions hypothesis, as postulated by Acemoglu et al. (2005), argues that economic institutions are the main determinants of the incentives of and constraints on economic agents, and these institutions shape economic activities and outcomes. However, these economic institutions are determined by the existing political institutions (Olaoye & Aderajo, 2020). This means that robust and well-functioning political institutions facilitate the development of private governance mechanisms, which provide a conducive atmosphere for investments in the productive sectors of the economy. Consequently, foreign portfolio investors are likely to pay attention to both the economic (protection of property rights, equal opportunities, the strength of accounting and reporting standards, regulation of securities and exchanges, etc.) and political institutions (rule of law, democracy or dictatorship, political stability, government effectiveness, voice and accountability, etc.) in the domestic economy before they make any decision about the destination of their investments.

2.2. Empirical review

2.2.1. Country-level CG and Foreign Portfolio Investments

Good CG is gradually becoming the centre of attraction for the factors informing the degree of foreign investments an economy receives, as multinationals and investors at large in recent times lookout for these structures before taking decisions (Appiah-Kubi et al., 2020). Das (2014) contends that due to the informational disadvantage of foreign investors, they prefer to invest in foreign firms with better governance practices and systems since such systems help to reduce the cost of acquiring information and monitoring the activities of firms. Rueda-Sabatar (2000) asserts that foreign investors discriminate among recipient economies based on governance structures and even argues that CG affects the bargaining power of host economies to attract foreign investors.

2.2.2. Strengths of auditing and reporting standards and FPI

The quest for global harmonisation of financial reporting is one of the key factors driving the adoption of international auditing and reporting standards (Lahmar & Asbi, 2017). DeFond et al. (2019) contended that the use of such mechanisms could reduce the cost of obtaining information and enhance transparency, thereby boosting investor confidence. The adoption of internationally recognised standards such as the International Financial Reporting Standards (IFRS) and the international auditing standards (ISAs) enhances the quality and amount of financial information disclosed to investors, which would otherwise not be required under local standards (Balsmeier & Vanhaverbeke, 2018). Empirical evidence exists to support the notion that the use of these harmonised auditing and reporting frameworks positively impacts that adopting economy (Ho & Iyke, 2017; Jinadu et al., 2017; Lungu et al., 2017), although some studies suggest that IFRS adoption has not paid off for the adopting countries (DeFond et al., 2019). It is, therefore, hypothesised that:

H1: Countries that comply with internationally accepted auditing and reporting standards can lure more FPI.

2.2.3. Effective corporate boards and FPI

The existence of a corporate board facilitates the process of instituting a sound CG aimed at improving accountability, transparency, and the monitoring of management activities for the perennial success of the organisation (Nehme & Jizi, 2018). Owing to this, the numerous corporate scandals over the last twenty-five years have raised the question: "where was the board" (Nordberg & Booth, 2018)? Effective corporate boards seek the long-term sustainability of the firm through the dissemination of high-grade, authentic, and reliable information to the broad spectrum of stakeholders. Miletkov et al. (2014) observed that the presence of independent and effective boards send a good signal to investors about the governance of firms, which can help

attract more foreign investments. Agyemang et al. (2019) further revealed that efficient boards positively impact the volumes of FDI an economy receives while Appiah-Kubi et al. (2020) also found similar results in West Africa. We, therefore, argue that:

H2: Economies with highly effective and efficient boards of directors can lure more foreign portfolio investors.

2.2.4. Ethical behaviour of firms and FPI

Ethical behaviour suggests that best practices, guidelines, legal requirements, and regulations are complied with (Duraisamy & Nedunchezhian, 2015). Bardy et al. (2012) maintain that being ethical goes beyond following the rules to set the rules of the game. Corollary to recent scandals across the business world, mostly associated with greediness, monstrous abuse of office and dishonesty in firms such as Enron, WorldCom, Parmalat, etc., there has been heightened calls for higher levels of ethics in corporations across the world (Agyemang et al., 2016; Tomo & Landi, 2017). Behavioural finance theorists suggest that foreign investors prefer to be associated with ethically behaved firms since those firms can generate a vicious cycle of investment for investors, thereby attracting more investors (Jo et al., 2015). This suggests that foreign portfolio investors would pay more attention to economies whose firms are ethically behaved and conduct businesses as such (Appiah-Kubi et al., 2020). Bardy et al. (2012) further contend that organisations that are engaged in opportunistic behaviours open themselves to attack from the media, government and non-governmental organisations, and civil society groups among others. Such activities make firms appear unattractive to foreign investors, thereby obstructing FPI. Agyemang et al. (2019) additionally revealed that African countries with firms practising highly ethical values attract enormous volumes of foreign investments while Appiah-Kubi et al. (2020) found that West African economies characterised by highly ethical firms positively attract FDI into their countries. Therefore, this study further hypothesises that:

H3: Economies characterised by highly ethical firms tend to attract more FPI, ceteris paribus.

2.2.5. Protection of minority shareholders and FPI

Good CG practices can reduce agency problems and costs, thereby protecting portfolio investors (Agyemang et al., 2019). It is expected that countries that have governance practices structured to protect minority investors will attract more FPI, because how much foreign investments an economy can attract depends on how well minority shareholders are protected in that economy (La Porta et al., 1998). McLean et al. (2012) found minority shareholder protection to be directly related to foreign investment inflows. Further evidence was provided by Kim et al. (2007) whiles Caixe and Krauter (2014) maintain that the protection of minority shareholders has a positive influence on FDI inflows. Appiah-Kubi et al. (2020) and Agyemang et al. (2019) also support this line of argument with empirical evidence.

Lskavyan and Spatareanu (2011) however suggest that in jurisdictions of weaker shareholder protection, disclosure of corporate information is more protective, which weakens the soundness of governance in such firms. This allows corporate managers to conceal unpleasant information from investors and also indulge in misconduct of various degrees. Consequently, minority expropriation will increase, making firms in such economies unattractive to foreign investors, thereby discouraging foreign investments. We, therefore, argue that:

H4: Economies that protect minority shareholder rights are likely to attract more FPI, all things being equal.

2.2.6. Regulation of security exchanges and FPI

The efficiency of securities and stock exchange regulations has been argued to influence the amount of foreign investment an economy receives. Security exchanges should be autonomous and devoid of any political interferences to allow them to supervise trading in the financial markets effectively (Agyemang et al., 2019). Austin (2017) surmised that protecting investors, enhancing market efficiency, ensuring the markets' fairness or integrity, and protecting the markets from systematic risk are the four main reasons for regulating security exchanges. According to Agyemang et al. (2019), the regulation of the security exchanges also deters corporations from publishing false statements and manipulating stock prices to the benefit of managers. Regulated security exchanges provide a robust mechanism that ensures accountability, transparency, and market efficiency. This invariably promotes investor confidence, higher trade volumes, and the market (Mashamba & Magweva, 2019). Kirkpatrick et al. (2006) further suggest that well-regulated securities exchanges guarantee stable prices and uncompromised profit, encouraging foreign investors to participate and invest more. Ho and Iyke (2017) also consent that foreign capital flows to countries where their security markets are highly regulated. Hence, we argue that:

H5: In societies where security exchanges are effectively regulated, FPI inflows tend to be higher, ceteris paribus.

2.2.7. Institutional quality and FPI

The extant literature on foreign investments reveals some interesting institutional factors to explain the amount of foreign investments countries receive. Most of these studies report that quality institutions facilitate foreign investments whiles weaker institutions are impediments to investments in general (Agyemang et al., 2016; Al-Smadi, 2018; Das, 2014). Al-Smadi (2018) found that countries with quality institutions in the form of rule of law, control of corruption, political stability, voice and accountability, among others are likely to attract more FPI. In a recent study, Su et al. (2021, p. 2) surmised that "strong institutions provide fundamental rights to investors in an environment where they can protect the returns from their investment". Agyemang et al. (2016) similarly found that foreign investors are drawn to countries where the rule of law is upheld and there is high regulatory quality in a politically stable environment without any violence and signs of terrorism. Das (2014) also agrees that rule of law has a positive and significant influence on the level of FPI an economy attracts. This is because, in regimes where the legal system is not transparent, foreign investors cannot rely on the judicial system to enforce their rights and protect their investments (Wu et al., 2012). Similar findings have also been reported by Gossel and Beard (2019) and Makoni (2018).

2.2.8. Country-level CG, institutional quality and FPI

As postulated by the hierarchy of institutions hypothesis, the country-level CG practices in a country are, to a larger extent, contingent on the quality of political institutions prevalent in that country (Acemoglu et al., 2005). It is further argued that CG practices are entrenched in institutions (Williamson, 2000) and thus, the soundness of these governance systems is highly dependent on the institutional environment in which firms operate. Subsequent researchers have also supported this claim. Globerman and Shapiro (2002), for instance, contend that the strength of institutions is pertinent in creating robust CG frameworks, which can help attract more foreign investors into an economy. La Porta et al. (1998) claim that effective CG systems cannot flourish without robust institutional frameworks.

Furthermore, Cano et al. (2020) found evidence to suggest that the positive impact of sound CG is amplified in well-functioning institutional environments. Similarly, Jia et al. (2019) contend that in environments where institutions are robust and effective, corporate officers are exceptionally limited from expropriating investors' rights and therefore tend to deal more diligently and productively with their firms (Nguyen, 2022b). According to Huynh et al. (2020), "governance and

institutions serve as a catalyst for encouraging or deterring investment inflows" and therefore surmised that foreign investments are associated with better governance practices and quality institutions. The general argument is that well-functioning institutions can help formalise sound CG practices that can in turn enhance FPI inflows into the region. This, therefore, necessitated the need to examine the moderating role of institutions in the relationship between country-level CG and FPI.

3. Data and methodology

3.1. Data sources and variable measurement

Data on 33 SSA countries from 2009 to 2017 were collected to examine the moderating role institutional quality plays in the governance FPI nexus in SSA. FPI was measured as the total portfolio inflows from the International Financial Statistics database. We also measure country-level CG using the five private governance measures from the Global Competitiveness Index (GCI) Report by the World Economic Forum (WEF). These are the Strength of Auditing and Reporting Standards (SARS), Efficacy of Corporate Boards (ECB), Ethical Behaviour of Firms (EB), Protection of Minority Shareholder Interests (POMI), and the Regulation of Securities and Exchanges (RESE). These variables are measured on a scale of 1 to 7, with 1 considered among the worst in the world and 7 considered among the best in the world (Global Competitiveness Index [GCI], 2018).

Institutional quality was measured using the average of the six World Governance Indicators (WGI) by Kaufmann et al. (2011). The indicators include rule of law, government effectiveness, regulatory quality, political stability and absence of violence and terrorism, voice and accountability, and control of corruption. The study also controlled for other macroeconomic indicators and country-specific factors such as real GDP, inflation, exchange rate, trade openness, financial development, and natural resource endowments, because they are relevant to FPI. As per the endogenous growth theory, economies with larger market size presents foreign investors with more opportunities and are expected to grow faster and benefit from economies of scale. Some studies have measured the size of the market in a country using real GDP and found a positive effect on FPI inflows (Adhikary, 2017; Al-Smadi, 2018; Mengistu & Adhikary, 2011).

Again, foreign portfolio investors prefer to be associated with economies with stable and lower levels of inflation (Al-Smadi, 2018; Appiah-Kubi et al., 2020; Lysandrou et al., 2016) because the inflation rate is an indication of the real returns they will derive from their foreign investments. Higher inflation leads to lower returns on investments and subsequently, shrinking foreign portfolio investments (Mangal & Liu, 2020). Exchange rate volatilities can also pose adverse effects on FPI attraction due to the increased uncertainty about the returns foreign portfolio investors expect to gain from their investments since foreign stocks and debts are mostly denominated in foreign currencies (Al-Smadi, 2018; Dua & Garg, 2013; Ogundipe et al., 2019; Rashid & Khalid, 2017).

In addition, developed financial markets are germane to the attraction of FPI as they provide safer and more liquid investment opportunities to foreign portfolio investors (Lysandrou et al., 2016; Makoni, 2018) whereas resource-seeking investors would also be attracted to economies that are highly endowed with natural resources (Makoni (2018). Finally, economies that are open to international trade and allow free movement of capital and other resources from other economies encourage foreign investors to participate in the economic activities of that nation. We, therefore, controlled for trade openness as a determinant of FPI (Lysandrou et al., 2016; Mangal & Liu, 2020). Table 1 provides a summary of variables and their measurements.

3.2. Model specification

Following the detailed review of literature, the baseline model for the study was specified as:

$$LFPI_{it} = \beta_1 LFPI_{it-1} + \beta_2 CG_{it} + \beta_3 INST_{it} + \sum_{h=4}^{10} \beta_h Z_{it} + \theta_i + \mu_t + \varepsilon_{it} \quad (1)$$

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Table 1. Variables, measurement and sources

Variable	Symbol	Measurement	Source
Foreign Portfolio Investments	FPI	Net inflows	IMF
Ethical Behaviour of Firms	EB	"In your country, how do you rate the corporate ethics of companies on a scale of 1 to 7?"	World Economic Forum (WEF)
Efficacy of Corporate Boards	ECB	"In your country, to what extent is management accountable to investors and boards of directors?"	WEF
Strength of Auditing and Reporting Standards	SARS	"In your country, how strong are financial auditing and reporting standards?"	WEF
Protection of Minority Shareholders' Interests	POMI	"In your country, to what extent are the interests of minority shareholders protected by the legal system?"	WEF
Regulation of Securities Exchanges	RESE	"In your country, to what extent do regulators ensure the stability of the financial market on a scale of 1–7?"	WEF
Country-level Corporate Governance	CG	Simple average of the five governance indicators	Author's computation
Institutional Structures	INST	Simple average of the Six World Governance Indicators	Author's computation
Market size		Real GDP	World Development Indicators (WDI)
Natural Resource Endowment	Natr	Natural resource rent as % of GDP	WDI
Trade openness	TRADE	Total exports and imports as a % of GDP	WDI
Financial Development	FD	Domestic credit to private sector	WDI
Inflation	INF	Annual CPI	WDI
Exchange rate	ER	Official exchange rate of local currency per US$	WDI

To examine the moderating effect of institutional quality on country-level CG—FPI nexus, an interaction term between the governance variables and institutional variable (*CG*INST*) was introduced in the model as an additional independent variable. It is worth noting that the lagged dependent variable was included to allow for the partial adjustment of FPI to its long-run equilibrium value. This is because former levels of FPI do affect current levels (Ogundipe et al., 2019).

$$LFPI_{it} = \beta_1 LFPI_{it-1} + \beta_2 CG_{it} + \beta_3 INST_{it} + \beta_4 CG * INST_{it} + \sum_{h=5}^{11} \beta_h Z_{it} + \theta_i + \mu_t + \varepsilon_{it} \quad (2)$$

Where LFPI is the natural log of FPI, CG represents each of the five as well as the composite index for the country-level CG; INST is the average of the six institutional indicators;

Table 2. Descriptive statistics

Variable	Obs	Mean	Median	*SD*	Min	Max
FPI	308	$4.285 M	$1.59 M	$1.722 M	0	$9.959B
CG	246	4.184	4.061	.674	2.675	6.376
ECB	278	4.502	4.549	.572	2.337	6.122
SARS	278	4.225	4.122	.838	2.134	6.727
EB	278	3.750	3.709	.574	2.378	5.283
POMI	278	4.104	4.077	.674	1.998	6.222
RESE	278	3.738	3.826	.94	1.172	6.558
INST	314	35.104	32.539	17.889	5.387	76.923
GDP	315	$40.58B	$12.52B	$91.21B	$847.4 M	$568.5B
ER	306	774.376	149.589	1521.114	1.405	9088.319
INF	314	5.986	5.551	7.354	−60.496	32.378
FD	286	25.343	17.044	28.145	2.66	150.974
TRADE	313	75.350	65.343	33.847	20.723	225.023
Natr	315	11.318	8.719	9.349	.001	53.625

Note. FPI is foreign portfolio investment, CG is country-level CG, ECB is the efficacy of corporate boards, SARS is the strength of auditing and reporting standards, EB is ethical behaviour of firms, POMI is the protection of minority shareholders' interests, RESE is regulation of securities and exchanges, INST is institutional quality, GDP is Gross Domestic Product, ER is the exchange rate, INF is inflation, FD is financial development, TRADE is trade openness, Natr is Natural resource endowment. Variable names apply to all abbreviations throughout the text.

CG*INST = Interaction between country-level governance and institutions; Z is a vector of control variables; θ is the country-specific effect; μ is time-specific effect, *it* is country *i* in year *t*.

3.3. Estimation technique

The Generalised Method of Moments (GMM) estimator developed by Holtz-Eakin and Rosen (1990) with further advancements by Arellano and Bond (1991) was employed to estimate the model. Arellano and Bond's (1991) approach uses the first difference of the variables and the lagged levels of the independent variables to avert any problems of country-specific effects and unobservable simultaneity bias (Obuobi et al., 2022). Arellano and Bover (1995) contended that such an approach would lead to specious conclusions if there is persistence in the independent variables. They, therefore, proposed a systems GMM (SGMM) estimator which merges the levels and the differences equations and uses the lagged independent variables as additional instruments for the level equation.

The SGMM comes in two forms; the one-step and two-step. Evidence from the empirical literature suggests that the two-step estimator is more efficient than the one-step estimator (Tchamyou, 2020). For instance, unlike the one-step SGMM, the two-step deals with autocorrelation and heteroscedasticity more efficiently (Abeka et al., 2021b). The choice of the two-step GMM is also justified for at least five reasons. First, the technique is appropriate when the time dimension (years) is lesser than the cross-sectional observations (countries). The number of years for this study is 9 while the countries studied are 33. Second, in instances where the dependent variable is persistent (the rule of thumb is that the correlation between the dependent variable and its lag should be greater than 0.800), this approach is more appropriate (Agyei et al., 2020). The correlation between the dependent variable (FPI) and its lag (L.LFPI) is 0.916. Third, the approach also deals with possible endogeneity problems by controlling for time-invariant omitted variables and simultaneity bias. The fourth reason is that the problem of over-proliferation of instruments is also checked. Finally, the approach also accounts for unobserved heterogeneity problems (Roodman, 2009).

Table 3. Correlation matrix

	LFPI	L.LFPI	ECB	SARS	EB	POMI	RESE	INST	LGDP	ER	INF	FD	TRADE	NatR
LFPI	**1.000**													
L.LFPI	0.916*	1.000												
ECB	0.393*	0.379*	1.000											
SARS	0.474*	0.471*	0.758*	1.000										
EB	0.243*	0.279*	0.656*	0.727*	1.000									
POMI	0.400*	0.430*	0.733*	0.829*	0.742*	1.000								
RESE	0.547*	0.557*	0.748*	0.860*	0.693*	0.817*	1.000							
INST	0.292*	0.299*	0.458*	0.526*	0.570*	0.584*	0.531*	1.000						
LGDP	0.542*	0.534*	0.183*	0.208*	−0.076	0.211*	0.335*	0.037*	1.000					
ER	−0.294*	−0.302*	−0.017	−0.248*	−0.242*	−0.346*	−0.276*	−0.306*	−0.103*	1.000				
INF	0.009	0.019	0.103	0.085	−0.015	0.072	0.121*	−0.047	0.040	0.140*	1.000			
FD	0.511*	0.508*	0.425*	0.598*	0.411*	0.561*	0.610*	0.437*	0.297*	−0.259*	−0.134*	1.000		
TRADE	0.016	−0.006	−0.149*	0.045	0.101	−0.009	0.007	0.262*	−0.468*	−0.141*	−0.064	0.102	1.000	
Natr	−0.064	−0.079	−0.389*	−0.459*	−0.439*	−0.399*	−0.477*	−0.455*	0.055	0.210*	0.048	−0.339*	−0.006	1.000

*Significance at 5%.

Following the approaches employed by Agyei et al. (2020) and Tchamyou (2020), all independent variables are treated as predetermined or suspected endogenous variables, hence, the use of *SGMM*. The approach also treats the years as strictly exogenous, thereby allowing the use of *ivstyle*. Roodman (2009) argues that the time-invariant variables may not become endogenous in the first difference. The standard two-step GMM model for this study is specified based on Agyei et al. (2020) as;

$$LFPI_{it} = \beta_0 + \beta_1 LFPI_{it-\tau} + \sum_{h=1}^{10} \beta_h Z_{h,it-\tau} + \theta_i + \mu_t + \varepsilon_{it} \quad (3)$$

$$LFPI_{it} - LFPI_{it-\tau} = \beta_1 (LFPI_{it-\tau} - LFPI_{it-2\tau}) + \sum_{h=1}^{10} \beta_i (Z_{h,it-\tau} - Z_{h,it-2\tau}) + (\mu_t - \mu_{t-\tau}) + \varepsilon_{it-}\tau \quad (4)$$

where τ is the autoregression coefficient, which is 1 in this model

Θ is the country-specific effect

μ is the time-specific factors

4. Empirical results

We present the descriptive statistics of the variables employed in this study in Table 2, followed by the correlation analysis between the variables in Table 3. The discussion of the regression analyses is subsequently presented.

It is observed from Table 2 that the dependent variable for the study, the total inflows of FPI (FPI) depicts an average of $4.285million, with minimum and maximum values of 0 and $9.959billion respectively, with a wide variation (*SD* = 1.722 M) in FPI receipts into the respective countries under study. The composite CG index had a mean of 4.184, which is above the midpoint of 3.5 based on the measurement scale of 1–7. This implies that the CG measures employed in this study are relatively better, looking at the minimum and maximum values of 2.675 and 6.376 respectively.

In the sampled economies, ECB averaged 4.5, implying that corporate boards in SSA have been, to some extent, effective over the sampled period. SARS recorded an average of 4.225. This can also be likened to the popularity of the use of accounting and auditing standards in financial reporting in most African countries in recent times. For instance, Tawiah and Boolaky (2020) reported that over 38 countries in Africa either require and or permit the use of IFRS in financial reporting of domestic public companies.

Furthermore, EB had an average of 3.75, slightly above the mid-scale, ranging between 2.378 and 5.283. The implication is that the level at which firms behave ethically is satisfactory, albeit low (Agyemang et al., 2019). With a mean of 4.104, we infer that POMI is gaining ground as an indication of good governance in Africa. RESE recorded the least average among the country-level governance measures, with a moderate average of 3.738 on a scale of 1–7. This is not too good a statistic since the efficiency of the financial markets largely depends on the level of effectiveness of the security exchange regulation (Agyemang et al., 2019).

The institutional index averaged 35%. This is a true reflection of the quality of institutions in sub-Saharan Africa. As suggested by Agbloyor et al. (2016) and Agyemang et al. (2018), institutions in Africa are generally weak, especially as the average of the indicators does not exceed 40%. Concerning the control variables, GDP recorded an average of $40.58B while ER averaged 774.376 local currency relative to a dollar, highlighting how weak some African currencies have performed against the dollar in the sampled period. The average rate of inflation (INF) approximated 6%, implying that inflation has been relatively low in some African countries while financial development

(FD) registered an average of 25.343. Trade openness (TRADE) recorded an average of 75.35% of GDP, whiles natural resource rent (NatR) to GDP averaged 11.318%, with a minimum rent of 0.001%.

4.1. Correlation analysis

The pairwise correlation matrix for the variables employed in the study is presented in this section. As a rule of thumb to use the SGMM, the correlation between the dependent variable (LFPI) and its lag (L.LFPI) should be above 0.8 (Agyei et al., 2020; Tchamyou, 2020), suggesting that the dependent variable is persistent. From the results in Table 3, the correlation between LFPI and L. FPI is 0.916, indicating a high level of persistence in FPI inflows into SSA, substantiating the use of GMM for the analysis. Unsurprisingly, the correlation between the country-level CG measures is relatively high, ranging from 0.656 to 0.860. This could create multicollinearity issues if all these variables were included in the same model. However, since only one of the indicators entered each model, the problem of multicollinearity is avoided. This also helps to avoid overlapping results and interpretations (Gossel & Beard, 2019). Furthermore, a closer look at the other explanatory variables in the correlation matrix also shows that the correlation between the other variables is moderate and not too high to pose any multicollinearity issues.

4.2. Discussion of regression results

The results from the GMM estimations are reported in Tables 4 and 5 respectively. Table 4 represents the baseline model whereas the moderation analysis is reported in Table 5. Columns 1 to 6 of Table 4 show the results of the analysis when SARS, ECB, EB, POMI, RESE, and CG were used as the main explanatory variables respectively.

From Table 4, we find the lag-dependent variable (L.LFPI) to be highly significant and positive at a 1% significance level in all six models. This is theoretically so because past volumes of FPI are deemed to influence the current levels of FPI inflows into a country. This suggests that FPI responds positively to the immediate past period's values (Ogundipe et al., 2019). Our results in models 1 to 6 show that all our country-level CG indicators are statistically significant and mostly positive, except for model 4 which depicts a negative effect. This confirms our initial argument that sound CG structures are required to attract more foreign investments. This finding generally supports the governance branch of the NIE theory that governance institutions at the micro or firm level are germane in structuring economic activities and outcomes such as foreign investments.

In model 1, the Strength of Auditing and Reporting Standards (SARS) was found to have a significantly positive effect on FPI at 10%. This suggests that all things being equal, adherence to auditing and reporting standards in SSA can increase FPI inflows, confirming our hypothesis *H1*. Our results are consistent with Ho and Iyke (2017), Das (2014), and Jinadu et al. (2017) who suggested that the adoption of auditing and reporting standards can enhance the comparability of financial statements, increase investor confidence, reduce the cost of doing business, improve the quality of disclosures thereby attracting more foreign investors.

Model 2 also shows that ECB has a positive (5%) impact on FPI. This implies that when corporate boards are effective, their role could improve FPI attraction into the sub-region. In this regard, *H2* is also confirmed, suggesting that when corporate boards are effective in the discharge of their duties as directors, they ensure better monitoring of managers and help to reduce the level of information asymmetry that foreign investors are likely to be confronted with, thereby boosting a firm's chances of attracting more foreign portfolio investors. Our finding is corroborated by those of Miletkov et al. (2014), Agyemang et al. (2019), and Appiah-Kubi et al. (2020).

We also found EB to be positively related to FPI to suggest that, as SSA firms behave more ethically, they can appeal to foreign investors and attract more foreign investments. This is because, ethically behaved firms treat all shareholders equally and also practice fair business dealings with other stakeholders (Bardy et al., 2012). More so, being unethical is costly, as firms

Table 4. Results on country-level CG, institutional quality and FPI

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	SARS	**ECB**	**EB**	**POMI**	**RESE**	**CG**
L.LFPIn	0.757***	0.727***	0.700***	0.777***	0.726***	0.733***
	(0.0378)	(0.0359)	(0.0464)	(0.0317)	(0.0333)	(0.0365)
SARS	0.142*					
	(0.0832)					
ECB		0.224**				
		(0.0942)				
EB			0.440**			
			(0.1830)			
POMI				−0.360***		
				(0.0801)		
RESE					0.287***	
					(0.0682)	
CG						0.277*
						(0.141)
INST	−0.0021	0.0061	0.0019	0.0218*	0.0037	0.0023
	(0.0087)	(0.0065)	(0.0046)	(0.0112)	(0.0085)	(0.0077)
Controls						
LGDP	0.854***	0.580***	0.874***	0.687***	0.540***	0.686***
	(0.120)	(0.0971)	(0.131)	(0.128)	(0.124)	(0.0959)
ER	0.0022	−0.0066**	0.0042	−0.0029	−0.0005	−0.0010
	(0.0027)	(0.0025)	(0.0030)	(0.0033)	(0.0022)	(0.0020)
INF	0.0190	0.0145	0.0191	0.0216**	0.00382	0.0106
	(0.0116)	(0.0121)	(0.0134)	(0.00907)	(0.0117)	(0.0123)
FD	0.0139*	−0.0044	0.0171**	0.0016	−0.0080	−0.0028
	(0.0075)	(0.0075)	(0.0082)	(0.089)	(0.0606)	(0.0070)
TRADE	0.0183***	0.0105**	0.0110	0.0122**	0.0150**	0.0183***
	(0.0057)	(0.0048)	(0.0070)	(0.0049)	(0.0062)	(0.0046)
Natr	0.0084	−0.0112	0.0003	0.0125	0.0029	−0.0138
	(0.0099)	(0.0138)	(0.0153)	(0.0116)	(0.0122)	(0.0125)
_cons	−20.64***	−13.47***	−21.46***	−15.01***	−13.03***	−16.52***
	(3.031)	(2.457)	(3.277)	(3.365)	(3.249)	(2.403)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Mean VIF	1.87	1.76	1.76	1.93	1.90	2.19
AR1	0.024	0.032	0.029	0.020	0.033	0.030
AR2	0.141	0.187	0.235	0.115	0.144	0.161
Sargan OIR	0.538	0.265	0.397	0.527	0.477	0.476
Hansen OIR	0.383	0.252	0.242	0.424	0.196	0.267
DHT for instruments						
(a) Instruments in levels						
H excluding group	0.536	0.713	0.810	0.862	0.421	0.459
Diff(null, H = exogenous)	0.302	0.129	0.101	0.207	0.160	0.217
(b)*IV(years, eq(diff)*						

(*Continued*)

Table4. (*Continued*)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	SARS	**ECB**	**EB**	**POMI**	**RESE**	**CG**
H excluding group	0.365	0.349	0.203	0.430	0.240	0.331
Diff(null, H = exogenous)	0.386	0.083	0.663	0.287	0.137	0.126
Fisher	422.48***	560.96***	451.92***	362.13***	264.79***	253.86***
Instruments	30	30	30	30	30	30
Countries	33	33	33	33	33	33
Observations	213	213	213	213	213	213

Standard errors in parenthesis; ***, ** and * represent 1%, 5% and 10% significance levels.

that engage in unethical practices are exposed to civil attacks and interference from the government and other social organisations (Agyemang et al., 2019). Such firms become unattractive and unappealing to foreign investors and would not want to associate themselves with such firms (Appiah-Kubi et al., 2020).

Contrary to *H4*, we found POMI to be negatively related to FPI. Albeit surprising, the result could explain a crucial issue related to most African firms. Most African and developing country firms are small in nature and family-owned and controlled (Bodnaruk et al., 2017), leaving both ownership and management entrenched in the hands of a few related people (Pindado & Requejo, 2015). Under such circumstances, Liu et al. (2012) contend that the propensity of majority family owners and managers to expropriate the benefits of non-family minority shareholders is higher, causing minority shareholders and non-family members to withdraw from such firms. Similarly, Lskavyan and Spatareanu (2011) reported that in jurisdictions of weaker shareholder protection, disclosure of corporate information is more protective and this weakens the soundness of governance in such firms. This allows corporate managers to conceal unpleasant information from investors and also indulge in misconduct of various degrees. This would ultimately make firms in such economies unattractive to foreign investors, thereby discouraging FPI.

Our results also document a positive association between Regulation of Security Exchanges and FPI in SSA. This confirms *H5* that societies, where security exchanges are effectively regulated, attract more FPI inflows. This finding implies that portfolio investors would prefer to invest in economies where their security markets are effectively regulated since the stocks and other debt instruments they invest in are mostly traded on these exchanges. This is also because, effectively regulated security exchanges enhance the efficiency of the market, ensure markets' fairness or integrity, and protect investors and markets from systematic risks (Austin, 2017).

Again, Table 4 also reveals that INST was mostly positive in all the models (except model 1) but insignificant. This could be explained by the weak nature of institutions in SSA as evident from the descriptive statistics. The positive but insignificant relationship could mean that the weak institutional structures on their own do not enhance the attraction of FPI into the sub-region, however, they provide some form of leverage for country-level CG to thrive and thereby enhance FPI inflows.

Next, we present our findings on the moderating role institutional quality could play in the relationship between country-level CG and FPI. This was done by introducing the interaction term between each of the country-level CG and institutional quality variables. Table 5 shows the moderating role played by institutional quality on each of the CG indicators.

The results reveal some interesting findings in this regard. The introduction of the interaction term causes all the country-level CG indicators in Models 7 to 12 to attain improved coefficients as

Table 5. Moderating role of institutional quality

	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
	SARS	**ECB**	**EB**	**POMI**	**RESE**	**CG**
L.LFPI	0.787***	0.765***	0.786***	0.711***	0.729***	0.718***
	(0.0406)	(0.0701)	(0.0698)	(0.0375)	(0.0390)	(0.0346)
SARS	1.584***					
	(0.212)					
ECB		1.037***				
		(0.340)				
EB			1.579*			
			(0.828)			
POMI				−1.514**		
				(0.519)		
RESE					1.073***	
					(0.155)	
CG						1.366***
						(0.364)
INST	0.152***	0.0585	0.166**	−0.0764	0.0958***	0.108**
	(0.0322)	(0.0440)	(0.0792)	(0.0496)	(0.0258)	(0.0421)
SARSINST	−0.0391***					
	(0.0077)					
ECBINST		−0.0123				
		(0.0099)				
EBINST			−0.0467**			
			(0.0214)			
POMIINST				0.0250		
				(0.0129)		
RESEINST					−0.0245***	
					(0.0066)	
CGINST						−0.0292***
						(0.0105)
Net Effects	3.1279	1.8207	3.0382	−0.7800	1.3427	2.2784
Controls						
LGDP	0.610***	0.764***	0.670**	0.812***	0.491***	0.601***
	(0.130)	(0.157)	(0.329)	(0.189)	(0.136)	(0.130)
ER	−0.0033	−0.0035	−0.0018*	−0.0076	−0.0002	−0.0035
	(0.0039)	(0.0037)	(0.0009)	(0.0058)	(0.0003)	(0.0033)
INF	−0.0060	−0.0074	0.0142	0.0026	−0.0218	−0.0048
	(0.0119)	(0.0160)	(0.0245)	(0.0303)	(0.0132)	(0.0135)
FD	0.0134**	0.0039	−0.0137	0.0215	0.0040	0.0070
	(0.0051)	(0.0115)	(0.0158)	(0.0130)	(0.0055)	(0.0065)
TRADE	0.0245***	0.0135	0.0112	−0.00638	0.0128	0.0145**
	(0.0063)	(0.0115)	(0.0121)	(0.0105)	(0.0088)	(0.0056)
Natr	0.0212**	0.0210	−0.0130	0.0462*	0.0135	−0.0061
	(0.0101)	(0.0145)	(0.0264)	(0.0243)	(0.0106)	(0.0102)
_cons	−20.90***	−22.08***	−19.74**	−12.50*	−14.54***	−18.15***
	(3.362)	(3.480)	(5.877)	(4.786)	(3.505)	(2.591)

(*Continued*)

Table5. (*Continued*)

	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
	SARS	**ECB**	**EB**	**POMI**	**RESE**	**CG**
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
AR1	0.023	0.036	0.025	0.019	0.037	0.036
AR2	0.206	0.294	0.260	0.196	0.178	0.242
Sargan OIR	0.812	0.358	0.099	0.379	0.635	0.537
Hansen OIR	0.414	0.238	0.563	0.580	0.392	0.419
DHT for instruments						
(a) Instruments in levels						
H excluding group	0.436	0.656	0.890	0.544	0.377	0.322
Diff(null, H = exogenous)	0.389	0.154	0.474	0.516	0.398	0.468
IV(years, eq(diff)						
H excluding group	0.360	0.185	0.552	0.526	0.418	0.433
Diff(null, H = exogenous)	0.702	0.937	0.357	0.595	0.227	0.263
Instruments	30	30	30	30	30	30
Fisher	291.33***	293.78***	78.98***	221.64***	868.73***	314.54***
Countries	33	33	33	33	33	33
N	213	213	213	213	213	213

***, ** and * represent 1%, 5% and 10% significance levels; standard errors in parenthesis

compared to the ones obtained in Table 4. For instance, the coefficient of SARS had improved from 0.142 to 1.584, while ECB exhibited an improved coefficient of 1.037 at 1%. Similarly, the interaction also causes the coefficients of EB, RESE, and CG in models 9, 11, and 12 to attain higher coefficients as compared to their originals. POMI however depicted a higher negative coefficient of −1.514 as compared to −0.360 in model 4.

It is also observed that the introduction of the interaction term causes the institutional quality indicators to attain improved positive and significant coefficients in most of our models in Table 5 (except for models 8 and 10). This confirms our earlier conclusion that quality institutions are required to enhance the capacity of the country-level CG structures to lure more portfolio investors into SSA as suggested by the NIE theory. The above notwithstanding, the moderation terms were mostly negative except for model 10.

This necessitated the determination of the marginal effects of the moderation term on the independent (country-level CG) variables. We evaluated the net effect by partially differentiating FPI relative to the CG indicators in each model (Abeka, Andoh, Gatsi & Kawor, 2021). The marginal effect is computed using the following equation:

$$\frac{\partial\, LFPI_{it}}{\partial\, CG_{it}} \tag{5}$$

Where CG_{it} represents each of the five governance indicators and the composite indicator in models 7 to 12.

The partial differential of SARS in model 7 is computed as

$$\frac{\partial\ LFPI_{it}}{\partial\ SARS_{it}} = 1.584 - 0.0391 * \text{INST} \tag{6}$$

But since the model specified in equations 1 and 2 are log-linear, the actual interpretation would mean that the net effect be computed as;

$$(e^{1.584} - 1) + (e^{-0.0391*35.104} - 1) = 3.1279 \tag{7}$$

where the mean of the institutional quality indicator (INST) is 35.104.

This process was repeated for each of the other five country-level governance indicators in models 8 to 12 and the results are summarised in Table 5 as well. It is observed that the unconditional effect of SARS on LFPI is 0.142 as compared to the conditional effect of 3.1279. Again, the net effect of the interaction between ECB and INST on LFPI is 1.8207, as compared to the unconditional coefficient of 0.224. Furthermore, the interaction of EB and INST produced a net effect of 3.0382, relative to the unconditional coefficient of 0.440. The net effect of RESEINST on RESE and LFPI was also found to be 1.3427 as compared to the original beta of 0.287. The composite country-level CG measure also confirms the positive impact of the interaction with a net effect of 2.2784, greater than the unconditional effect of 0.277. However, the interaction between POMI and INST was still negative even though the net effect had reduced from −1.514 to −0.7800.

The results of this process imply that, although the weak institutions on their own would not provide the needed impact on FPI, they complement the country-level CG indicators to positively improve FPI attraction. This is because the net effect of each of the governance indicators is higher than their original coefficients in Table 4 (compare coefficients with net effects). Following the approach of Huynh et al. (2020), we further replicated the analysis of the marginal effects for each sampled country based on the average institutional quality score for the respective countries. These are shown in the appendix to this study. The analysis further showed that the marginal effect of the country-level CG is higher for countries where the institutional quality is below the continental average (35.104), implying that foreign investors would rely more on the country-level CG mechanisms to protect their investments in weaker institutional regimes.

The intuition is that, since the institutional structures and the CG mechanisms do not exist in isolation, their combined effect is more relevant for the analysis. This could probably mean that all things being equal, the combination of good CG and robust institutional structures are germane for the attraction of FPI into SSA since they could be complementary to each other. Nonetheless, if steps are not taken to improve the institutional setting in SSA, the relatively weak institutional structures in the sub-region (Agbloyor et al., 2016; Agyemang et al., 2018) will dominate and have negative impacts on FPI inflows into SSA, offsetting the gains derived from devising sound CG practices. This is consistent with the proposition in the Hierarchy of Institutions Hypothesis, which suggests that the impact of economic institutions (country-level CG) is likely to be influenced by the political institutions (institutional quality).

4.3. Model diagnostics

The two-step SGMM with robust standard errors as proposed by Roodman (2009) comes with some diagnostics. As stated earlier, the exclusion restriction of the exogenous variable is tested using the Difference in Hansen Test (DHT) while the Sargan Overidentifying Restrictions (OIR) is used to test the validity of the suspected endogenous variables. The Arrellano and Bond first and second-order autocorrelation (AR1 and AR2) tests were also conducted to check the presence of auto-correlation. The null hypothesis of all three tests should not be rejected to indicate their validity, except the AR1 which could be serially correlated in the first order (Agyemang et al., 2018). Consistent with all the models, the diagnostic tests supported the validity of the results reported above. The DHT, OIR and AR2 tests all exhibited p-values greater than 0.05, and therefore, we fail

to reject each of those hypotheses. The Fisher test also depicted significant p-values in all the models to highlight the joint validity of the estimated models in this study.

5. Conclusions, recommendations, and limitations

Following the propositions of the NIE theory and the Hierarchy of Institutions hypothesis, we sought to examine the moderating effect of institutional quality on the relationship between country-level CG and FPI in SSA. The SGMM results revealed that the adoption and adherence to international auditing and reporting standards, ethically behaved firms, effective corporate boards, and well-regulated security exchanges are likely to positively influence FPI inflows into the sub-region. We however found protection of minority shareholder interests to be negatively related to FPI. We attribute this startling result to the numerous family-owned and managed firms in SSA which leaves the management of such firms in the hands of few family members. This increases the risk of expropriation, thereby deterring foreign portfolio investors. Finally, our results revealed that the FPI-Governance nexus is significantly moderated by the quality of institutions, with the impact of both the country-level CG indicators and institutional quality index improving significantly at the introduction of the moderation term, suggesting that robust institutions are needed to enhance the capacity of country-level CG to attract more portfolio inflows. The marginal analysis however shows that in countries with weaker institutional structures, investors tend to rely more on the country-level CG indicators.

We, therefore, recommend that SSA countries take pragmatic steps to ensure the practice and development of sound corporate governance in their firms to send positive signals to foreign investors. It is proposed that internationally recognised auditing and reporting standards like IFRS and ISAs be gradually and fully implemented by organisations and regulators to harmonise financial reporting in these countries. Domestic firms must also be encouraged to transact their businesses ethically and deal with all stakeholders fairly, while corporate boards of these firms maintain their balance and effectiveness in their supervisory and monitoring role of corporate managers. It is further recommended that security exchanges in Africa be regulated efficiently, devoid of unnecessary political interferences to enable the market to function effectively. More so, conscious efforts need to be made by SSA governments to build and strengthen their institutions. This can be done through the formulation and implementation of sound and effective policies, upholding rule of law and ensuring judicial independence, keeping corruption under check, promoting a politically stable environment, and creating an atmosphere of accountability and transparency within the sub-region.

Our study is not without limitations. The data span is limited to 2017 due to the unavailability of some of the country-level CG indicators beyond 2017. It must also be admitted that even though all the five country-level corporate governance indicators were not included in the model, in reality, they affect FPI simultaneously.

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Appendix A. NET EFFECT FOR SAMPLED COUNTRIES

Country	Average INST	Net Effects: $\beta_2 + \beta_4 * INST$					
		SARS	ECB	EB	POMI	RESE	CG
Angola	15.1255	3.4280	−0.7780	3.3435	−0.7780	1.6145	2.5626
Benin	39.7440	3.0858	−0.7780	3.0064	−0.7780	1.3018	2.2330
Botswana	72.2335	2.9338	−0.7780	2.8844	−0.7780	1.0945	2.0409
Burkina Faso	38.0896	3.0999	−0.7780	3.0189	−0.7780	1.3174	2.2485
Burundi	13.2696	3.4696	−0.7780	3.3882	−0.7780	1.6466	2.5984
Cabo Verde	18.2465	3.3644	−0.7780	3.2766	−0.7780	1.5637	2.5066
Cameroon	66.3283	2.9491	−0.7780	2.8953	−0.7780	1.1210	2.0638
Chad	8.7399	3.5849	−0.7780	3.5150	−0.7780	1.7314	2.6944
Cote d'Ivoire	21.9007	3.2991	−0.7780	3.2097	−0.7780	1.5089	2.4472
Ethiopia	22.7039	3.2860	−0.7780	3.1965	−0.7780	1.4975	2.4349
Gabon	30.9075	3.1731	−0.7780	3.0862	−0.7780	1.3931	2.3252
Gambia, The	31.3061	3.1684	−0.7780	3.0819	−0.7780	1.3885	2.3205
Ghana	54.1383	2.9948	−0.7780	2.9299	−0.7780	1.1896	2.1254
Guinea	13.9663	3.4536	−0.7780	3.3709	−0.7780	1.6344	2.5847
Kenya	29.5793	3.1890	−0.7780	3.1013	−0.7780	1.4086	2.3412
Lesotho	46.2057	3.0386	−0.7780	2.9657	−0.7780	1.2465	2.1791
Liberia	23.2716	3.2770	−0.7780	3.1874	−0.7780	1.4896	2.4265
Madagascar		25.7125	3.2403	−0.7780	3.1516	−0.7780	1.4567
2.3916							
Malawi	37.9165	3.1015	−0.7780	3.0203	−0.7780	1.3191	2.2501
Mali	28.6008	3.2012	−0.7780	3.1131	−0.7780	1.4204	2.3535
Mauritania	21.9071	3.2990	−0.7780	3.2096	−0.7780	1.5088	2.4471
Mauritius	75.2917	2.9271	−0.7780	2.8798	−0.7780	1.0822	2.0306
Mozambique		33.3748	3.1456	−0.7780	3.0605	−0.7780	1.3656
2.2970							
Namibia	62.0104	2.9629	−0.7780	2.9053	−0.7780	1.1430	2.0832
Nigeria	16.5751	3.3975	−0.7780	3.3112	−0.7780	1.5904	2.5360
Rwanda	46.9223	3.0341	−0.7780	2.9619	−0.7780	1.2409	2.1737
Senegal	44.8863	3.0473	−0.7780	2.9730	−0.7780	1.2571	2.1893
Seychelles	59.2964	2.9728	−0.7780	2.9128	−0.7780	1.1581	2.0967
Sierra Leone	25.5687	3.2424	−0.7780	3.1531	−0.7780	1.4586	2.3936

(*Continued*)

Country	Average INST	Net Effects: $\beta_2 + \beta_4 * INST$					
		SARS	ECB	EB	POMI	RESE	CG
South Africa	59.1150	2.9735	−0.7780	2.9133	−0.7780	1.1591	2.0976
Swaziland	33.4104	3.1452	−0.7780	3.0602	−0.7780	1.3652	2.2966
Tanzania	35.9762	3.1194	−0.7780	3.0365	−0.7780	1.3383	2.2694
Uganda	31.6023	3.1651	−0.7780	3.0787	−0.7780	1.3852	2.3170
Zambia	40.2556	3.0816	−0.7780	3.0027	−0.7780	1.2971	2.2283
Zimbabwe	8.5716	3.5896	−0.7780	3.5202	−0.7780	1.73472	2.6982

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