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Foreign direct investment, governance and inclusive growth in sub-Saharan Africa

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WP/21/038

Foreign Direct Investment, Governance and Inclusive Growth in Sub-Saharan Africa

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Research Department

Foreign Direct Investment, Governance and Inclusive Growth in Sub-Saharan Africa

Isaac K. Ofori & Simplice A. Asongu

June 2021

Abstract

Motivated by the projected rebound of foreign direct investment (FDI) inflow to sub-Saharan Africa (SSA) following the implementation of the AfCFTA and the finalization of the Africa Investment Protocol, we examine how FDI modulates the effects of various governance dynamics on inclusive growth in SSA. We do this by testing two hypotheses— first, whether unconditionally FDI and various governance indicators (*rule of law, control of corruption, regulatory quality, governance effectiveness, political stability, and voice and accountability*) foster inclusive growth in SSA; and second, whether these governance dynamics engender positive synergy with FDI on inclusive growth in SSA. Using data from the World Bank's World Governance Indicators and the World Development Indicators for the period 1990–2020, we employ several fixed effects, random effects, and the system GMM estimators for the analysis. First, we find that FDI and all our governance dynamics are significant inclusive growth enhancers in SSA. Second, though FDI amplifies the effects of all our governance dynamics on inclusive growth in SSA, governance effectiveness, voice and accountability, and political stability are keys. Policy recommendations are provided.

Keywords: AfCFTA; Economic Integration; FDI; Governance; Inclusive Growth; Africa

JEL Codes: F6; F15; O43; O55; R58

1.0 Introduction

Even before the unprecedented tumbling of sub-Saharan Africa (SSA) into recession in 2020 was the agenda to spur inclusive growth in the sub-region. Despite gains in terms of reduction in extreme poverty levels in SSA from 1990 to 2015, income inequality and unemployment are still rising. Of particular concern is the observation by Bergstrom (2020) and World Bank (2020) that the coronavirus disease (COVID-19) has inflicted poverty and inequality setbacks in the world's most unequal regions like the SSA and South Asia. This has rekindled the debate on how policymakers interested in the SSA agenda can foster and sustain shared prosperity. One key factor that SSA countries have identified as a means for spurring inclusive growth is economic integration, evidenced by the coming into force of the African Continental Free Trade Area (AfCFTA) in 2019. The optimism with economic integration is that it can generate durable and equitable wealth through technological transfer, innovation diffusion, employment, macroeconomic stability, and industrialization (Obeng *et al.* 2021; Adeleye *et al.* 2020; Asongu and Odhiambo 2020; Opoku *et al.* 2019; Sakyi *et al.* 2015; Tchamyou *et al*. 2019a). Moreover, with inflow of foreign direct investment (FDI) set to rebound in 2022 following a slump in 2019 and 2020 (UNCTAD 2020) as a result of the geopolitical fragility of the region and COVID-19, expectations are rising. *Inter alia*, the fulcrum on which economic integration and other potential inclusive growth drivers rest and evolve is good governance. Indeed, the words of the former UN Secretary General Kofi Annan, labelling *good governance* as '*perhaps the most single important factor in eradicating poverty and promoting development*' underscores the relevance of quality political, economic and institutional setting in inclusive growth. Good governance is imperative for building inclusive growth through the enhancement of conducive political and socioeconomic climate that promotes accountability, fair redistribution, and social cohesion (see, UNDP 2017; OECD 2016, 2014; World Bank2013; Stiglitz, 2012).

Though gains have been chalked, long-standing hydra-headed problems of sociopolitical unrest, corruption, and economic mismanagement still linger in SSA (Adegboye *et al.* 2020; Asongu and Kodila-Tedika 2016). Examining the linkages between governance and economic integration has thus become imperative in particular considering the region's unprecedented trade pact and ambitious Agenda 2063[1]. For instance, for inclusive growth to be enhanced, sound political governance is required to set the tone for peaceful coexistence, socioeconomic transformation and social cohesion (Asongu and

[1] Established in 2015, the African Agenda 2063 forms the continent's resolve for achieving inclusive and sustainable development.

Nwachukwu 2016; Khan 2012; Kaufmann and Aart 2002; White and Anderson 2001). Prudent economic governance is also necessary to formulate, drive and sustain economic transformation—one that puts the private sector and the masses in general at the forefront of investment, innovation and wealth accumulation (Pritchett and Werker 2012). Particularly, strong institutional governance is also imperative for spearheading accountability, social inclusion, protection of public purse, and to level the playing field for all manner of people to have a chance of descent living and contribute to national development (Ivanyna and Salerno 2021; Doumbia 2020; Kaufmann *et al.* 2005; Dollar and Kraay 2002; Zhuang *et al.* 2010). In another breath, governance matters also for attracting, integrating and sustaining FDI into recipient economies. Though FDI can contribute to the region's quest for inclusive growth, governance remains a worthwhile mechanism and the 'lubricant to turn the turbines on'. Particularly, strong economic governance is required to reduce investment risk while strong legal frameworks are needed to safeguard and guarantee investment returns. Further, for the inclusive growth-inducing effect of FDI to be realized, governance effectiveness can be crucial not only for building friendly climate for sustaining foreign investors but also for fostering social inclusion and redistribution. Despite these FDI-governance linkages, the lacuna in the literature on SSA is that empirical works exploring the extent to which FDI modulates the effect of governance on inclusive growth in SSA are hard to find. This is the basis of our contribution to knowledge where we examine how various governance dynamics[2]— economic governance (composed of governance effectiveness, and regulatory quality); political governance (comprising political stability, and voice and accountability); and institutional governance (rule of law, and control of corruption) are mediated by FDI to influence inclusive growth in SSA.

The rest of the paper is organized as follows: the next section is dedicated to a review of the literature on the linkages between FDI, governance and inclusive growth. Section 3 also presents the data and methodological foundation of the paper. The results and discussions are presented in section 4 while chapter 5 concludes with some policy implications.

2.0 The theoretical link between FDI, governance and inclusive growth

The theoretical exposition on the effect of economic integration/globalisation on inclusive growth is viewed from two perspectives. First is the indubitable consensus that in countries

[2]Our focus on the various aspects of governance is from policy sense.

where there is abundant labour, trade, of which FDI is a key component in contemporary cross-border relations, shared income growth can be apparent. The theoretical underpinnings of this stem from the Ohlin (1933), Samuelson (1939), the theories of globalization and modernization, and the Bhagwati hypothesis that FDI contributes to socioeconomic development through the augmentation of recipient countries' productive capacity, global value chain participation, job creation, technological transfer and foreign exchange (see, Obeng *et al*. 2021; Sakyi and Egyir 2017; Reyes 2001; Bhagwati 1973). Second is the intuition that FDI can widen the income distribution gap due to new technologies, automation and associated skill set mismatch (e.g., Corak 2013; Krugman 2008; IMF 2007), and rent-seeking, crowding out/floundering of domestic firms, and macroeconomic fluctuations (Alvaredo *et al.* 2013). It is in this context that IMF (2016), OCED (2014), World Bank (2013), and UNDP (2011) reckon that unless appropriate political, institutional and economic frameworks are built, the inclusive growth-effect of FDI/globalisation will prove elusive. Thus, good governance is essential not only for attracting FDI but for its sustenance, equitable distribution of gains, and economic transformation. On the basis of the foregoing theoretical connections between FDI, governance and inclusive growth, we test two main hypotheses— (1) whether FDI and governance (decomposed into political stability, regulatory quality, control of corruption, rule of law, voice and accountability, and governance effectiveness) foster inclusive growth in SSA, and (2) whether these 6 governance indicators engender positive synergy with FDI on inclusive growth in SSA.

2.1 The FDI-governance-inclusive growth nexus

Despite the much-emphasized dark sides of FDI, information gleaned from UNCTAD (2017; 2019) indicate that the recent economic development of Africa has been at the backdrop of significant FDI inflows[3]. Indeed, FDI inflow to SSA has been remarkable in the last two decades—an increase from a modest US$18 billion in 2004 to US$98 billion in 2013 though this value fell to US$54 billion in 2015 (UNCTAD2016). Though overall, FDI took a 11 per cent nose dive in 2020 to US$28 billion from 2019 levels, countries such as Nigeria, South Africa, Ethiopia, Senegal, Rwanda and Mozambique are tipped to recover quickly as top FDI destinations in SSA (UNCTAD 2020). In a setting where capital/savings accumulation is inadequate but the population is youthful and innovative, infrastructure is being developed, and untapped natural resources/raw materials abound, FDI can be a game changer in fostering

[3]Empirical evidence is found in Asamoah *et al.*(2019), Opoku *et al.*(2019) and Sakyi*et al.*(2015).

shared prosperity. The optimism with FDI centres on the observation byUNCTAD (2013) that, compared to other regions of the world, FDI inflows to SSA remained remarkably high since the turn of the Millennium and even after the global financial crisis of 2008/09 (see, Figure 1).

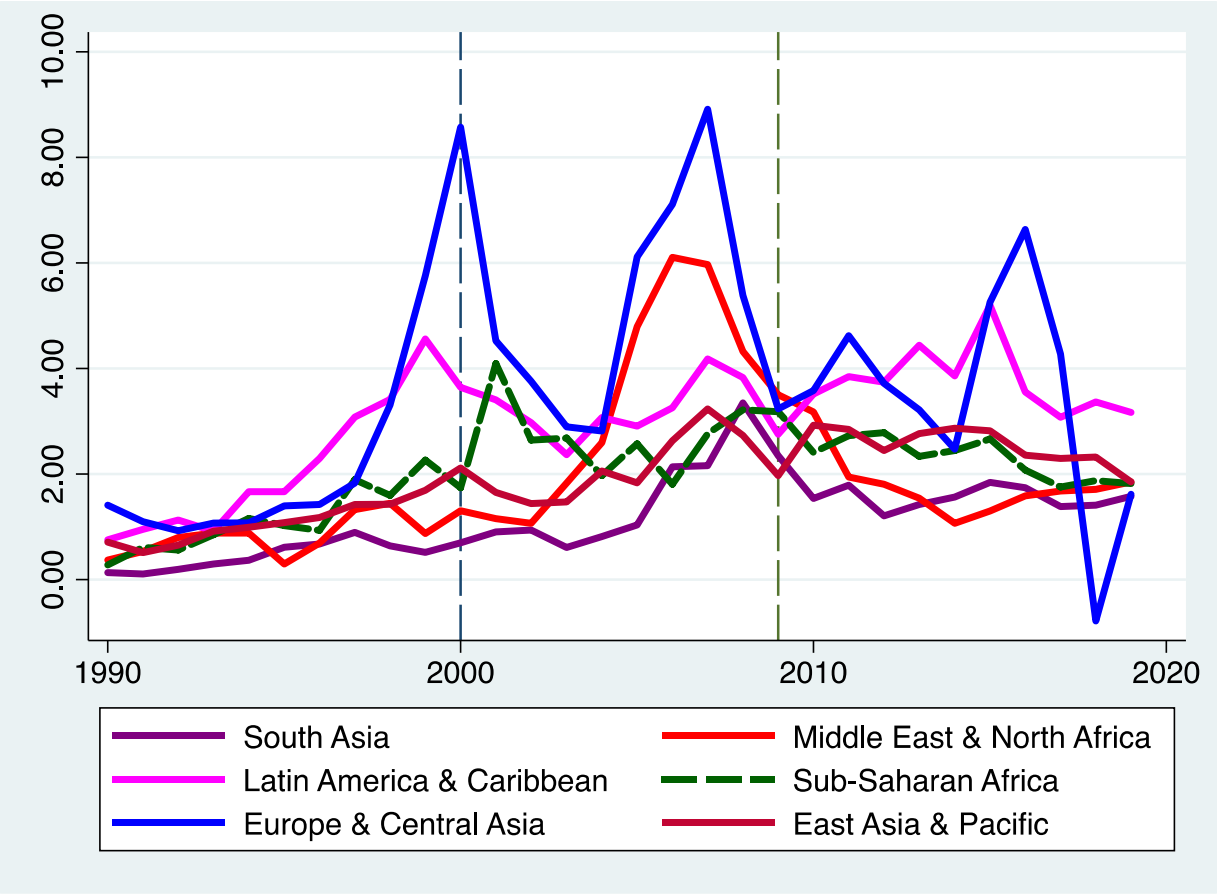

Figure 1: Trend of FDI Inflow (%GDP) Across Regions, 1990 – 2020
Source: Authors' construct (2021)

Compared to regions like South Asia and the Middle East and North Africa (MENA), the gains of SSA as we show in Figure 1 are largely attributed to fact that in 2006, countries in the region adopted 57 strategies of which 49 targeted FDI. And with FDI inflow to the region set to rebound in 2022 following the implementation of the AfCFTA and finalization of its Investment Protocol, the grounds are fertile for SSA to pursue growth trajectories that possibly defeat the Kuznets hypothesis. The commitment on the part of African leaders to this effect is captured in the Africa Agenda 2063 dubbed, '*The Africa We Want'*. Out of the

seven aspirations enshrined in Agenda 2063, three[4] are devoted to good governance while two[5] are dedicated to inclusive and sustainable development. It is an Agenda that feeds into the absolute definition of inclusive growth (i.e., growth that is beneficial to the poor) (see, Ravallion and Chen 2004); and the relative lens of inclusive growth (i.e., growth in incomes of the poor relative to the rest of the population) (see, IMF 2011; Ali and Son 2007). A more comprehensive definition is seen in Rauniyar and Kanbur (2010) and Anand *et al.* (2013) who reckon that inclusive growth encompasses both the absolute and relative perspectives of growth. All this boils down to good governance—one that FDI can complement to address the region's inequality of opportunities, income inequality, and inequality of wealth. Though a number of countries in the SSA sub-region (see e.g., Burundi, Sudan, Guinea-Bissau and Congo DR) lag behind with respect to the World Governance measuring rod of Kaufmann, Kraay and Mastruzzi (2010), the general trend as we show in Figure 2 is one that is encouraging.

[4](i) An integrated continent, united from a political perspective, within the remit of Pan-Africanism ideals and on the vision of the African Renaissance;(ii) An Africa of democracy, good governance, the rule of law, justice and respect for human rights; and (iii) A peaceful and safe Africa.

[5] (i) A prosperous Africa driven by inclusive growth and sustainable development, and (ii) An Africa as a united, resilient, strong and influential global partner and actor.

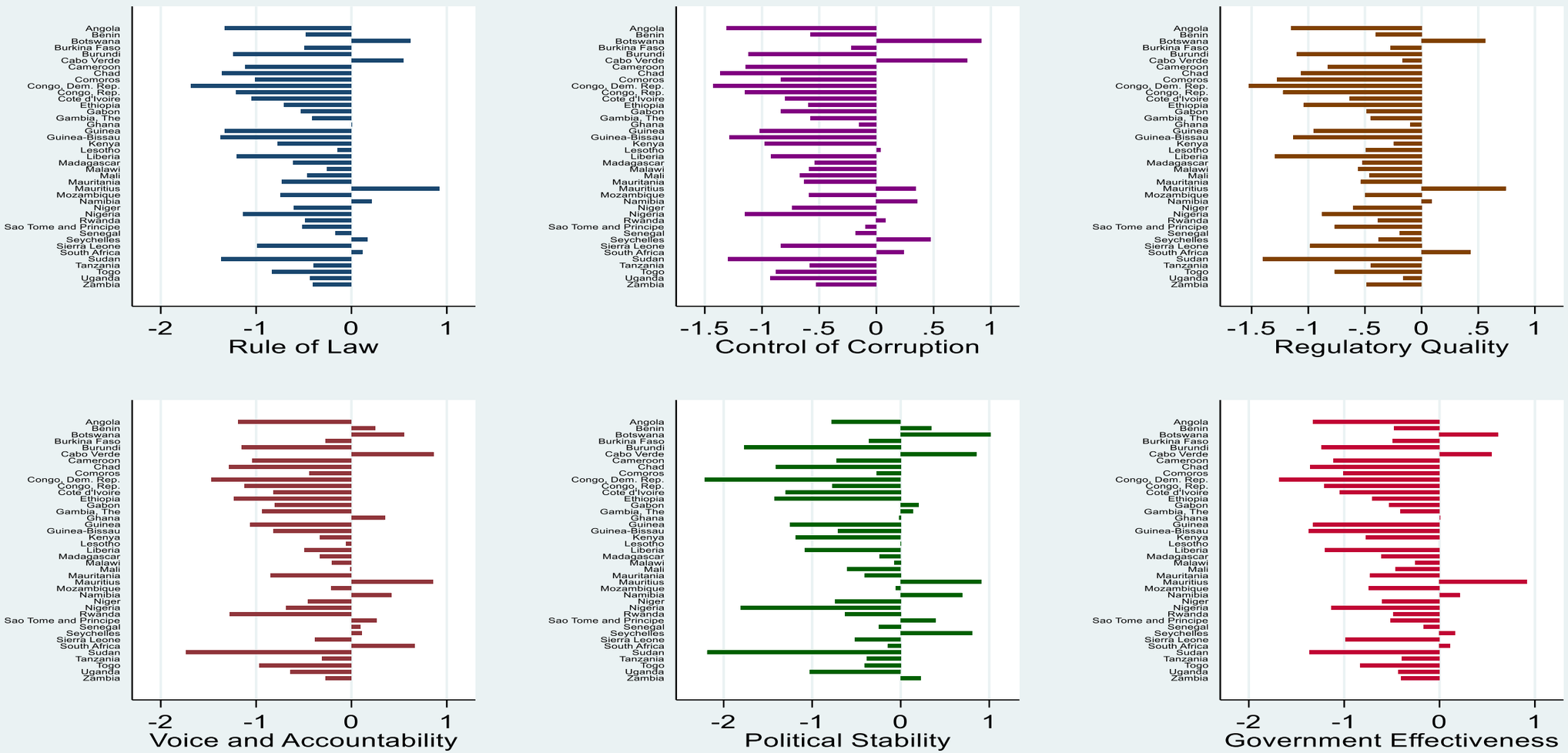

Figure 2: Within Country Governance Performance(Average) In SSA, 1996 – 2020
Source: Authors' construct (2021)

Indeed, the graphical relationships between FDI and inclusive growth on the one hand (see, Figure A.1), and governance and inclusive growth on the other hand (see, Figure A.2) are positive, signifying their potential inclusive growth-inducing effect which we explore next.

3.0 Data and methodology

3.1 Data

The study employs macro data spanning 1990 – 2020 for a sample of 42 SSA countries[6] for the analysis. Data[7] on the outcome variable, inclusive growth, are generated following the approach of Anand *et al.* (2013) (see calculation in the Supplementary Material: '*Measurement of Inclusive Growth by Anand et al. (2013)'*). In the calculation of inclusive growth, the income growth variable is GDP per capita, and that of the income distribution is the Gini index. There are some missing observations in the latter, which we take care of using data from the Global Consumption and Income Project (Lahoti *et al.* 2016). We check the robustness of our estimates on our inclusive growth variable by calculating another measure of inclusive growth using the Principal Component Analysis (PCA). The approach, which we elaborate in Section 4.4 is based on the Asian Development Bank (2013) framework of inclusive growth. The independent variables of interest in this study are FDI and governance. While the latter is denoted by six (6)key indicators—*rule of law, control of corruption, regulatory quality, governance effectiveness, political stability, and voice and accountability*, the former is measured as the net inflow of foreign direct investment to SSA as a percentage of GDP. Some variables controlled for in the estimation are vulnerable employment, inflation, human capital, ICT access and financial development. The motivation for the selection of variables in the conditioning information set is discussed in what follows.

The choice of 'vulnerable employment' centres on the structure of the economies in our analysis while inflation also signifies the implication of macroeconomic stability characteristic of the economies under consideration (Ofori *et al.* 2021; Ofori *et al.* 2018). We include financial development as it forms the pivot on which the private sector evolves, expands and realizes innovative ideas (Peprah *et al.* 2019). Considering the crucial implication of digital infrastructure in the current information age, ICT access is also

[6]Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo DR., Congo, Cote d'Ivoire, Ethiopia, Gabon, The Gambia, Guinea, Ghana, Guinea Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Sudan, South Africa, Tanzania, Togo, Uganda, Zambia.

[7]Our panel is unbalanced.

included in the estimation (Ofori and Asongu 2021). But for financial development and governance indicators, which are sourced from the International Monetary Fund's Financial Development Index (Svirydzenka 2016) and the World Bank's World Governance Indicators (Kaufmann and Kraay 2010; Tchamyou, 2021), respectively, all the variables are drawn from the Word Development Indicators (World Bank 2021).

Table 1: Variables' descriptions and sources

Variables	**Descriptions**	**Sources**
Inclusive Growth	Income growth and distribution	Authors
Foreign Direct Investment	Net foreign direct inflow (%GDP)	WDI
Gini index	Gini income inequality coefficient	WDI; GCIP
Financial development	Financial development index capturing the depth, access, and efficiency of financial institutions and markets	Findex
GDP per capita	Real GDP divided by population	WDI
Inflation	Consumer price index (2010=100)	WDI
Vulnerable employment	Total contributing family and own-account workers as a share of total employment	WDI
ICT access	Fixed telephone subscriptions (per 100 people)	WDI
Rule of law	Rule of law perception estimate	WGI
Control of corruption	Control of corruption perception estimate	WGI
Government effectiveness	Government effectiveness perception estimate	WGI
Regulatory quality	Regulatory quality perception estimate	WGI
Political stability	Political stability perception estimate	WGI
Voice and accountability	Voice and accountability perception estimate	WGI

Note: WDI is World Development Indicators; Findex is IMF's Financial Development Index; GCIP is Global Consumption and Income Project; WGI is World Government Indicators.
Source: Authors' construct, 2021

3.2 Estimation strategy

The study rests on the intuition that shared prosperity thrives on good governance, which requires stronger institutions, mechanisms and processes that level the playing field for the masses to benefit not only from globalization/economic integration but several facets of national development (OECD 2017; World Bank 2013; Asian Development Bank 2013; Acemoglu and Robinson 2012; UNDP 2011; Kaufmann *et al.* 1999). The empirical strategy therefore focuses on the exploration of the conditional and unconditional pathways through which FDI and governance affect inclusive growth in SSA. We begin by specifying several bivariate models where the relationships between the variables of interest and inclusive growth are explored. Next, we specify a baseline model where only the control variables are estimated before introducing FDI and the various governance dynamics in the model. Finally, per our hypothesized joint effect of FDI and our governance indicators, a pairwise interaction

between these variables is introduced but step wisely in the model. We specify our bivariate models as follows:

$$ln(igrowth_{it}) = \lambda_0 + \delta_1 ln(fdi_{it}) \quad (1)$$

$$ln(igrowth_{it}) = \lambda_0 + \delta_1 ln(gov_{it}) \quad (2)$$

We specify our baseline model as:

$$ln(igrowth_{it}) = \lambda_0 + \delta_1 ln(igrowth_{it-1}) + \delta_2 ln(hci_{it}) + \delta_3 ln(inf_{it}) + \delta_4 ln(vul_{it}) + \delta_5 ln(fin_{it}) + \delta_6 ln(ict_{it}) + \mu_i + \mu_t + \epsilon_{it} \quad (3)$$

Finally, we modify equation (3) to capture the conditional and unconditional effects of FDI and governance on inclusive growth as seen in (4):

$$ln(igrowth_{it}) = \varphi_0 + \beta_1 ln(igrowth_{it-1}) + \beta_2 ln(hci_{it}) + \beta_3 ln(inf_{it}) + \beta_4 ln(vul_{it}) + \beta_5 ln(fin_{it}) + \beta_6 ln(ict_{it}) + \beta_7 ln(fdi_{it}) + \beta_8 ln(gov_{it}) + \beta_9 ln(fdi_{it} \times gov_{it}) + \mu_i + \mu_t + \epsilon_{it} \quad (4)$$

Where ***igrowth*** is inclusive growth; ***hci*** is human capital index; ***vul*** is vulnerable employment; ***inf*** is inflation; ***ict*** is ICT usage; and ***fin*** is financial development. Also, ***fdi*** is foreign direct investment; ***gov*** is our governance[8] indicator for *rule of law, control of corruption, regulatory quality, governance effectiveness, political stability, and voice and accountability*; ***i*** is country; ***t*** is time; ***ln*** is the natural logarithm; $\boldsymbol{\mu_i}$ is the country-specific effects; and $\boldsymbol{\epsilon_{it}}$ is the idiosyncratic error term. A suspicion of endogeneity may be apparent due to: (1) the introduction of the lag of inclusive growth, and (2) the simultaneity between inclusive growth and governance, particularly, political stability. The endogeneity problem arises since $igrowth_{it-1}$ depends on ε_{it-1}, which depends on the country-specific impactϵ_i. Given that the concern of endogeneity can bias corresponding estimates, the attendant concern is addressed by applying the system GMM technique[9]put forward by Arellano and Bover (1995). The net effects from the interaction term for FDI and governance in (4) is expressed as:

$$\frac{\partial(ln(igrowth))}{\partial(ln(gov))} = \beta_8 + \beta_9\overline{(fdi)} \quad (5)$$

[8]Our governance variables are introduced stepwisely in the model.

[9] In estimating our system GMM models, the instruments are the lags of the regressors for the difference equation and the first difference of the regressors for the level equation.

where $\overline{fdi}$ is the mean of foreign direct investment.

4.0 Results and discussion

4.1 Summary statistics

In Table 2, the overview of our data is presented. The data shows an average GDP per capita of US$3819.61 for the subregion. Interestingly, the value of inclusive growth (shared prosperity) is a modest US$ 343.71, and as we show in Figure A.3, requires much effort to improve.

Table 2: Summary statistics of variables, 1990 – 2020

Variables	N	Mean	Std. Dev.	Minimum	Maximum
Inclusive growth	1,260	343.708	835.271	10.834	14647.05
FDI	1,260	2.894	6.392	-28.624	103.337
GDP per capita	1,260	3819.609	4401.845	0	29223.47
Vulnerable employment	1,260	70.927	22.867	8.826	94.759
Inflation	1,260	58.382	46.466	0	410.94
Human capital	1,260	.394	.073	0	.678
ICT access	1,260	2.178	4.855	0	34.273
Financial development	1,260	.124	.089	0	.648
Corruption control	860	-.567	.62	-1.723	1.217
Political Stability	881	-.359	1.165	-2.845	8.057
Regulatory quality	881	-.417	1.33	-2.298	15.344
Rule of Law	881	-.341	1.934	-2.13	21.196
Voice	881	-.296	1.36	-1.859	16.337
Gov. effectiveness	881	-.608	.621	-2.13	1.077

Note: Obs is Observation (N × T); Std. Dev. is Standard deviation
Source: Authors' construct, 2021

The data also shows an average vulnerable employment value of 70.92 per cent, which is a clear indication of the precarious nature of employment in SSA. Quite revealing, we observe that all the governance indicators are below the average of zero. For instance, for our institutional feature of governance, we observe an average score of -0.56 and -0.34 for control of corruption and rule of law, respectively. Also, the average values of FDI[10], inflation and ICT access are 2.89 per cent, 58.38 per cent and 2.17 per cent, respectively. The correlations between these variables are reported in Table A.1

[10]See the level of within-country FDI inflow to SSA over the study period in Figure A.4

4.2 Preliminary results on social equity, economic integration and inclusive growth in SSA

The presentation of our results begins with a test of the bivariate relationships between inclusive growth and the variables of interest—FDI and the six governance indicators. The results are presented in Table 3.

Table 3: Summary statistics

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
FDI	0.0191***						
	(0.0045)						
Corruption control		0.3223***					
		(0.0675)					
Political stability			0.1828***				
			(0.0463)				
Regulatory quality				0.1473**			
				(0.0639)			
Rule of law					0.0671*		
					(0.0384)		
Voice						0.0427	
						(0.0471)	
Gov. effectiveness							0.2088***
							(0.0341)
Constant	4.9117***	6.2886***	5.7339***	5.7935***	5.7909***	5.6191***	3.9430***
	(0.0315)	(0.1039)	(0.0785)	(0.1012)	(0.0820)	(0.0756)	(0.2000)
Observations	1,260	881	881	881	881	881	881
R-squared	0.010	0.126	0.048	0.043	0.017	0.003	0.040
Adj. R-Squared	0.009	0.121	0.045	0.035	0.011	-0.0007	0.039

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

First, the results in Table 3 show that FDI has a strong positive relationship with inclusive growth. Second, with the exception of voice and accountability, all our governance indicators are statistically significant in driving inclusive growth in SSA. Albeit statistically insignificant, voice and accountability is positively related to inclusive growth. Our bivariate results indicate that controlling the prevalence and depth of corruption, and governance effectiveness are keys for governance modules in spurring shared prosperity in SSA.

4.3 Effect of FDI and governance on inclusive growth in sub-Saharan Africa

In this section, our main results on the effects of governance and FDI on inclusive growth in SSA based on the Anand *et al.* (2013) measure are presented. The effects of FDI and governance on inclusive growth are similar from the fixed effects estimator (see, Table A.2), random effects estimator (see, Table A.3), and the system GMM estimator in Table 4, which we provide next. Our baseline results in Column 1 of Table 4 show that despite moderate effects, both inflation and vulnerable employment are inimical to shared growth in SSA. However, we find that human capital development and financial development are inclusive

growth-inducing. The magnitudes of the coefficients show that for every 1 per cent improvement in human capital and financial development of the region, inclusive growth is enhanced by a remarkable 0.86 per cent and 0.11 per cent, respectively. Though we do not find empirical significance for ICT access, the results show that it is positively associated with inclusive growth.

Table 4: System GMM results on the effects of FDI and governance on inclusive growth in sub-Saharan Africa (Dependent variable: Inclusive growth)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Inclusive growth (lag)	0.8068***	0.8228***	0.8430***	0.8752***	0.8667***	0.8667***	0.8615***	0.8696***	0.8094***	0.8622***	0.7972***	0.8267***	0.8314***	0.8304***
	(0.0076)	(0.0094)	(0.0105)	(0.0042)	(0.0078)	(0.0052)	(0.0046)	(0.0057)	(0.0103)	(0.0049)	(0.0132)	(0.0058)	(0.0054)	(0.0113)
Vulnerable employment	-0.0029***	-0.0028***	-0.0044***	-0.0023***	-0.0018***	-0.0018***	-0.0022***	-0.0020***	-0.0033***	-0.0019***	-0.0027***	-0.0023***	-0.0021***	-0.0018**
	(0.0004)	(0.0006)	(0.0011)	(0.0004)	(0.0004)	(0.0003)	(0.0004)	(0.0003)	(0.0007)	(0.0005)	(0.0005)	(0.0006)	(0.0006)	(0.0007)
Inflation	-0.0003***	-0.0010***	-0.0003***	0.0001**	0.0001	0.0001**	0.0000	0.0000	-0.0002**	-0.0001	-0.0001	-0.0000	-0.0001*	-0.0002**
	(0.0000)	(0.0001)	(0.0001)	(0.0000)	(0.0001)	(0.0001)	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0000)	(0.0001)	(0.0001)
Human capital	0.8659***	0.9335***	0.1681	0.1539	0.4400***	0.6184**	0.3549**	0.3443	0.6173***	0.4498***	0.0561	0.1158	0.3195	0.4170
	(0.2074)	(0.3358)	(0.4047)	(0.1387)	(0.0949)	(0.2688)	(0.1567)	(0.3375)	(0.0952)	(0.0933)	(0.3725)	(0.2648)	(0.4286)	(0.3672)
ICT access	0.0043	0.0015	0.0251***	0.0143***	0.0155***	0.0199***	0.0165***	-0.0002	0.0310***	0.0168***	0.0261***	0.0256***	0.0143***	0.0034
	(0.0030)	(0.0042)	(0.0041)	(0.0038)	(0.0013)	(0.0030)	(0.0024)	(0.0028)	(0.0069)	(0.0053)	(0.0050)	(0.0049)	(0.0042)	(0.0050)
Financial development	0.1104*	0.1114	0.1675*	0.1315**	0.0430	0.0268	0.0209	0.1768*	0.1077	0.1562*	0.1204	0.2146*	0.0407	0.0704
	(0.0560)	(0.1905)	(0.0989)	(0.0569)	(0.0851)	(0.0322)	(0.0825)	(0.1040)	(0.1153)	(0.0879)	(0.0980)	(0.1141)	(0.0789)	(0.0597)
FDI		0.0252***							0.0238***	0.0036***	0.0497***	0.0252***	0.0054**	0.0164***
		(0.0041)							(0.0039)	(0.0010)	(0.0050)	(0.0031)	(0.0023)	(0.0012)
Corruption control			0.2269**						-0.0118					
			(0.0949)						(0.0629)					
Political stability				0.0990***						0.0177*				
				(0.0158)						(0.0100)				
Regulatory quality					0.1451***						0.0181			
					(0.0156)						(0.0202)			
Rule of law						0.1512***						0.0200		
						(0.0131)						(0.0141)		
Voice							0.1195***						0.0387*	
							(0.0171)						(0.0220)	
Gov. effectiveness								0.0003***						0.0004***
								(0.0001)						(0.0001)
FDI × Corruption control									0.0613***					
									(0.0056)					
FDI ×Political stability										0.0282***				
										(0.0023)				
FDI × Regulatory quality											0.0700***			
											(0.0061)			
FDI × Rule of law												0.0465***		
												(0.0033)		
FDI × Voice													0.0542***	
													(0.0037)	
FDI × Gov. effectiveness														0.0832***
														(0.0101)
Constant	0.8443***	0.6982***	0.8156***	0.7492***	0.8239***	0.9026***	0.8815***	0.5378***	0.8412***	0.5419***	1.1882***	0.9236***	0.7544***	1.0686***
	(0.1170)	(0.1964)	(0.1377)	(0.0495)	(0.0587)	(0.1057)	(0.0716)	(0.1105)	(0.0778)	(0.0630)	(0.1264)	(0.0983)	(0.1514)	(0.1677)
Observations	1,260	1,260	860	881	881	881	881	881	860	881	881	881	881	838
Countries	42	42	41	42	42	42	42	42	41	42	42	42	42	42
Instruments	39	39	39	39	39	39	39	39	39	39	39	39	39	39
Net-effect	–	–	–	–	–	–	–	–	–	0.0993	–	–	0.1956	0.2411
Sign. Test Stats. [P-value]	–	–	–	–	–	–	–	–	–	7.34[0.012]	–	–	5.93[0.019]	50.01[0.00]
Wald statistic	375653	2.060e+07	88763	129923	2.130e+06	1.009e+06	1.009e+06	721707	52960	596023	590232	470950	80760	429089
Wald P-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hansen P-Value	0.338	0.311	0.792	0.470	0.406	0.359	0.488	0.461	0.537	0.563	0.525	0.432	0.615	0.436
AR(1)	0.000	0.000	0.005	0.002	0.002	0.003	0.003	0.002	0.004	0.003	0.001	0.002	0.004	0.001
AR(2)	0.662	0.683	0.250	0.184	0.235	0.135	0.179	0.160	0.270	0.173	0.171	0.244	0.127	0.803

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

We shift focus to our first objective, which we find that both FDI and governance matter for inclusive growth in SSA. The results in Column 2 show that FDI inflow to SSA enhances shared prosperity by 0.02 per cent. The effect of FDI is modest and suggests that there are untapped avenues for FDI to contribute to the region's quest for durable and equitable growth plausibly through investment, employment creation, foreign exchange, and revenue mobilization. These opportunities arise as FDI can (1) augment the region's productive capacity, (2) revive the region's floundering industries, and (3) spur technological transfer, innovation, and enhanced global value chain participation. The sheer optimism regarding our results on FDI is that conditions in SSA are fertile for natural resource-seeking, market-seeking, efficiency-seeking, and strategic asset-seeking investors to profit and contribute to the region's quest for industrialization, poverty alleviation and reduction of income equality. Also, our results in Columns 3 – 8 provide evidence on the relevance of governance in fostering inclusive growth in SSA. We find that our institutional governance measures of corruption control and rule of law are remarkable in spurring inclusive growth in SSA. The results indicate that while the latter induces shared prosperity by 0.15 per cent, the former enhances inclusive growth by 0.11 per cent. We reckon that for growth to be durable and equitable, quality institutional governance is needed to deliver the core functions of the State— to address the region's levels of poverty, income inequality and porous growth trajectories. It requires that States run on systems that are built to put the interest of all at hand—to protect property rights and ensure that public resources benefit society as a whole. Realizing this will rest on robust, transparent and politically-free legal systems and civil society that ensures the protection of the public purse, accountability of public officials, and the protection of the ordinary from arbitrary rules. On economic governance, we provide strong empirical evidence to show that for every 1 per cent improvement in regulatory quality, and governance effectiveness, the region enhances its inclusive growth gains by 0.08 per cent and 0.04 per cent, respectively. The results suggest that if SSA can achieve high rates of shared income growth, there is the need to provide a conducive environment that does not stifle private sector growth and innovation. Prudent economic governance is also required to address inequality in opportunities, income, and wealth through the institution of robust social equity regimes that cushion vulnerable groups in society to realistically participate and gain from growth. Similarly, for our political governance indicators of political stability, and voice and accountability, we report a rise in inclusive growth of 0.01 per cent and 0.09 per cent, respectively. One of the key drawbacks to durable shared growth

in SSA has been the geopolitical frailties of the region, fueled by a lack of concrete political framework that: (1) incorporates the concerns, freedoms, wills and opinions of the masses in decision-making, and (2) the tendency for incumbent governments to manipulate institutions to hold onto power. The added advantage of pursuing inclusive growth is that it can promote social cohesion/political stability if political landscapes are fair, non-oppressive and inclusive.

For our second objective, we find that out of the three broad categories of governance—political, economic and institutional governance, only the first two engender positive synergy with FDI on inclusive growth in SSA (see, Columns 9 – 14). First, we find that, for every 1 per cent improvement in political stability, the power of FDI in fostering shared prosperity in SSA is enhanced by 0.09 per cent. Similarly, we report a net effect of 0.19 per cent for the FDI and voice and accountability pathway (see, Column 13). These net effects are computed as follows taking into account the average FDI($\overline{fdi}$) inflow of 2.894.

$$\frac{\partial ln(igrowth)}{\partial ln(pol)} = 0.0177 + \left(0.0282 \times \overline{fdi}\right) = 0.0177 + (0.0282 \times 2.894) = 0.0993$$

$$\frac{\partial ln(igrowth)}{\partial ln(voice)} = 0.0387 + \left(0.0542 \times \overline{fdi}\right) = 0.0387 + (0.0542 \times 2.894) = 0.1956$$

Second, from the calculations we provide next, it is evident that for our economic governance indicators of regulatory quality and governance effectiveness, only the latter forms a significant complementary channel with FDI on inclusive growth. The net effect of 0.24 per cent for this pathway is calculated as:

$$\frac{\partial\, ln(igrowth)}{\partial\, ln(govef)} = 0.0004 + \left(0.0832 \times \overline{fdi}\right) = 0.0004 + (0.0832 \times 2.894) = 0.2411$$

Albeit statistically insignificant, the regulatory quality–FDI pathway is also positive, signifying inclusive-growth inducing potential if regulatory quality is improved upon. Finally, though the direction of the pathways for both rule of law–FDI, and control of corruption–FDI depicts a case of positive synergy on inclusive growth, statistical evidence eludes us.

The uniqueness of our results is that, out of the six economic integration and governance channels, only three—the governance effectiveness–FDI, the political stability–FDI, and the voice and accountability–FDI channels are significant pathways to shared prosperity in SSA. The optimism regarding our findings is that, with FDI inflow to SSA expected to recover in 2022 (UNTAD 2020) in line with the AfCFTA, political stability, and governance effectiveness are crucial for sharing growth dividends. For the expected inclusivity potential of FDI to be realized, the effectiveness of the State in shaping markets, influencing investment opportunities, and building conducive macroeconomic atmosphere for the private sector to invest and innovate is crucial. Indeed, the governance effectiveness–FDI interaction term is the most pronounced pathway, signifying the need to build coordinated policy instruments and efficient economic administration that can ease the burden of foreign investors to grow and transform the informally predominant real sector of the region to an industrial one. This will require a strong policy framework, particularly, one that can manage and lessen the impact of market failures, financial and socioeconomic crises. Further, the slump in FDI inflow to the MENA following the Arab uprising in 2011 underscores the relevance/seriousness of our result on the FDI–political stability, and FDI–voice and accountability pathways. The concomitant positive synergy from both pathways on inclusive growth stems from the fact that freer legal systems, civil societies, media, and respect for rights and freedoms of people attract FDI as it (1) guarantees investments returns, and (2) eliminates politically coordinated/motivated interference in FDI-related innovation and growth. Finally, albeit not statistically significant, the sign of the interaction terms for our institutional governance indicators (control of corruption, rule of law) and FDI is one that is complementary in spurring shared prosperity in SSA. The results point to a case of weak institutional settings in SSA, signifying the need for the region to build systems with robust checks and balances. It also requires a legal framework that (1) punishes crimes and misappropriation of the public purse, and (2) safeguards investors and ensures that returns from investments accrue to their holders.

The auxiliary findings are also in order— a 1 per cent improvement in human capital development and ICT access boosts inclusive growth in SSA by 0.56 per cent and 0.006 per cent, respectively (see, Column 10). Indeed, the relevance of digital infrastructure and human capital in this information era is crucial for shared opportunities (see, Ofori and Asongu 2021; Asongu and Odhiambo 2020). Be it in educational sector, civil service, financial service, trade and innovation, the power of ICTs is being leveraged to foster gender impartial

opportunities, ideation and inclusive governance. Though vulnerable employment and inflation are harmful to shared prosperity in SSA, the effects are modest. Finally, our results show that irrespective of the type of model specification, the lag of inclusive growth is strong in amplifying the effect of current year's inclusive growth efforts. The appropriateness of the system GMM estimates lies in the satisfaction of a number of diagnostic tests, particularly the absence of proliferated instrument, (see Sargan P-values) and the absence of second-order serial correlation (see AR (2) statistics).

4.4 Robustness checks for inclusive growth results

We evaluate the robustness of our estimates in Table 4 by using a new measure of inclusive growth index generated via the PCA technique. We do so by following the recommendation of the Asian Development Bank (2013) on variables key for driving inclusive growth in the developing world. As we show in Table 5, we use a total of 12 variables taking into consideration the relevance of the real sector, energy supply, social transfers, and income growth and distribution in inclusive growth.

Table 5: Variables used in constructing inclusive growth index

Variable	Variable Definition	Source
Poverty headcount	International poverty headcount (US$1.90)	PED
GDP per capita	GDP per capita (US$' 2017 PPP)	WDI
Social protection	Effectiveness of institutions for social protection rating (1=low to 6=high)	WDI
Electricity access	Electricity access (overall population)	WDI
Clean fuel	Access to clean fuels and technologies for cooking is the proportion of total population primarily using clean cooking fuels and technologies for cooking.	WDI
Gini	Gini index	WDI
Ease of doing Business	Rule of law (estimate)	WDI
Health expenditure	Government expenditure on health (%GDP)	WDI
Education expenditure	Government expenditure on education (%GDP)	WDI
Wages/salaries	Human Capital Index (HCI) (scale 0-1)	WDI
Labour force	Labour force participation rate total (% of total population ages 15-64)	WDI
Under-5 Mortality	Under-5 mortality per 1000 live births	WDI

Note: WDI is World Development Indicators; PED is Poverty and Equity Database.
Source: Authors' construct, 2021

We present the eigenvalues of the 12 components of inclusive growth in Table 5 while highlighting the key components used in constructing the final index in Figure 4. Per the eigenvalue rule of at least 1 (Tchamyou *et al*. 2019b; Tchamyou, 2020), our inclusive growth

index is calculated based on the first three components, which cummulatively explain 62.5 per cent information in our inclusive growth dataset (see results in Table A.4).

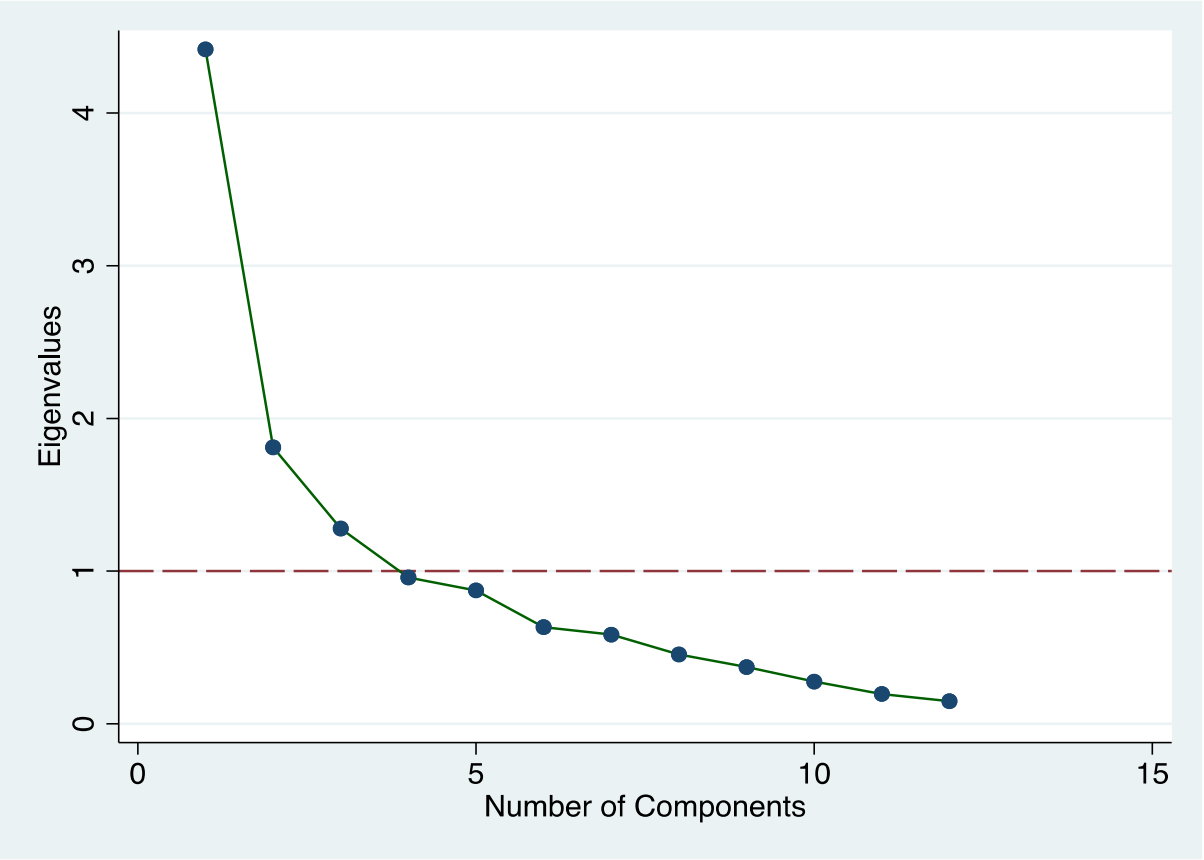

Figure 4: Screeplot of Principal Components of Inclusive Growth

4.4.1 Robustness check results based on inclusive growth index

We begin the presentation of our results by paying particular attention to the baseline results in Table 6. The results as shown in Column 1 indicate that human capital, financial development, and ICT access are important drivers of inclusive growth in SSA. The results however show that vulnerable employment and inflation are deleterious to inclusive growth efforts in SSA. We also find that irrespective of model specification type, the lag of inclusive growth is remarkable and statistically significant at 1 per cent, signifying the relevance of previous year's inclusive growth momentum in current shared growth efforts.

Table 6: System GMM results on the effects of FDI and governance on inclusive growth in sub-Saharan Africa (Dependent variable: Inclusive growth index)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Inclusive growth index (lag)	1.0341***	1.0330***	1.0045***	1.0412***	1.0370***	1.0357***	1.0338***	1.0224***	1.0055***	1.0376***	1.0244***	1.0325***	1.0351***	1.0180***
	(0.0009)	(0.0020)	(0.0016)	(0.0019)	(0.0031)	(0.0010)	(0.0010)	(0.0020)	(0.0026)	(0.0023)	(0.0022)	(0.0010)	(0.0014)	(0.0023)
Vulnerable employment	-0.0004***	-0.0004***	-0.0010***	-0.0008***	-0.0004***	-0.0004***	-0.0004***	-0.0005***	-0.0011***	-0.0009***	-0.0004***	-0.0004***	-0.0005***	-0.0005***
	(0.0000)	(0.0000)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0000)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Inflation	-0.0001***	-0.0001***	-0.0001***	-0.0001*	-0.0001***	-0.0001***	-0.0001	-0.0001	0.0001***	-0.0001	-0.0001**	-0.0001***	-0.0001	-0.0001
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Human capital	0.1211***	0.1288***	0.0455***	0.0499***	0.3779***	0.0814***	0.1264***	0.2207***	0.0360**	0.0394**	0.3467***	0.1048***	0.1853***	0.2202***
	(0.0038)	(0.0048)	(0.0144)	(0.0150)	(0.0274)	(0.0062)	(0.0092)	(0.0085)	(0.0173)	(0.0160)	(0.0226)	(0.0093)	(0.0116)	(0.0223)
ICT access	0.0015***	0.0018***	0.0007**	0.0042***	0.0052***	0.0010***	0.0014***	0.0062***	0.0005	0.0042***	0.0044***	0.0015***	0.0025***	0.0070***
	(0.0001)	(0.0003)	(0.0003)	(0.0007)	(0.0006)	(0.0002)	(0.0003)	(0.0003)	(0.0004)	(0.0008)	(0.0005)	(0.0003)	(0.0002)	(0.0004)
Financial development	0.0157***	-0.0067	0.0886***	0.0378***	0.1523***	0.0331***	0.0914***	0.0742***	0.0815***	0.0615***	0.1004***	0.0157**	0.0818***	0.0991***
	(0.0048)	(0.0043)	(0.0080)	(0.0109)	(0.0100)	(0.0054)	(0.0091)	(0.0089)	(0.0102)	(0.0134)	(0.0086)	(0.0062)	(0.0092)	(0.0103)
FDI		0.0012***							0.0016***	0.0014***	0.0034***	0.0003***	0.0019***	0.0022***
		(0.0001)							(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0002)
Corruption control			0.1091***						0.1167***					
			(0.0048)						(0.0056)					
Political Stability				0.0617***						0.0601***				
				(0.0088)						(0.0075)				
Regulatory quality					0.1113***						0.0891***			
					(0.0031)						(0.0028)			
Rule of law						0.0232***						0.0261***		
						(0.0023)						(0.0036)		
Voice							0.0426***						0.0539***	
							(0.0025)						(0.0034)	
Gov. effectiveness								0.0002***						0.0002***
								(0.0000)						(0.0000)
FDI× Corruption control									0.0004*					
									(0.0002)					
FDI×Political stability										0.0013***				
										(0.0002)				
FDI× Regulatory quality											0.0071***			
											(0.0005)			
FDI× Rule of law												0.0020***		
												(0.0002)		
FDI× Voice													0.0010***	
													(0.0003)	
FDI× Gov. effectiveness														0.0131***
														(0.0008)
Constant	0.0272***	0.0288***	0.0064	-0.0335***	-0.0657***	-0.0271***	-0.0341***	0.1200***	0.0083	-0.0260***	-0.0702***	-0.0291***	-0.0507***	0.0631***
	(0.0049)	(0.0038)	(0.0056)	(0.0073)	(0.0097)	(0.0040)	(0.0042)	(0.0054)	(0.0053)	(0.0070)	(0.0072)	(0.0043)	(0.0034)	(0.0092)
Observations	1,260	1,260	860	881	881	881	881	881	860	881	881	881	881	838
Countries	42	42	41	42	42	42	42	42	41	42	42	42	42	42
Instruments	39	39	39	39	39	39	39	39	39	39	39	39	39	39
Net-effect	–	–	–	–	–	–	–	–	0.1178	0.0638	0.1096	0.0318	0.0568	0.0381
Sign. Test Stats [P-value]	–	–	–	–	–	–	–	–	5.88[0.022]	1531.0[0.00]	3.67[0.073]	6.17[0.024]	3.56[0.077]	556.4[0.00]
Wald statistic	6.119e+06	8.217e+06	362866	635833	1.809e+06	2.765e+06	1.350e+07	5.806e+06	91094	278643	847437	3.396e+06	2.438e+06	1.068e+06
Wald P-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hansen P-Value	0.557	0.382	0.535	0.438	0.458	0.388	0.499	0.487	0.499	0.401	0.399	0.306	0.554	0.350
AR(1)	0.019	0.019	0.033	0.038	0.021	0.033	0.040	0.034	0.026	0.031	0.017	0.026	0.038	0.027
AR(2)	0.313	0.342	0.729	0.370	0.932	0.124	0.115	0.323	0.793	0.517	0.120	0.167	0.113	0.150

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.

Similar to our results in Table 4, we find strong empirical evidence for our first hypothesis (see Columns 2 – 8). The results show that for every 1 per cent increase in FDI inflow to SSA, inclusive growth is enhanced by a modest 0.001 per cent (see, Column 2). Indeed, the recent momentum of the region has partly been attributed to a quick rebound of FDI into the region after the 2008/09 global financial meltdown (see, UNCTAD 2019). With FDI inflow into SSA set to rebound following the coming into for the AfCFTA and the finalization of the African investment protocol, our results provide real optimism on how policymakers can use trade to provide shared opportunities for teaming the youthful population of the region. This calls for deliberate efforts in building the region's forward and backward linkages, which can put the youthful and innovative workforce to work, boost productivity and enhance the region's global value chain participation. Further, we provide strong evidence irrespective of the type of model specification to show that political, institutional, and economic governance matter for inclusive growth in SSA. In specifics, we find that for every 1 per cent improvement in political stability, regulatory quality, and rule of law, inclusive growth rises by 0.06 per cent (Column 4), 0.11 per cent (Column 5), and 0.02 (Column 6) per cent, respectively. The relevance of voice and accountability, and the fight against corruption are also telling as 1 per cent improvement in these governance indicators fosters shared prosperity in SSA by 0.04 per cent (Column 7) and 0.1 per cent (Column 3), respectively.

We find empirical evidence for our second hypothesis as well. As the results in Columns 9 – 14 indicate, irrespective of the type of model specification, FDI is a complementary pathway through which all our governance mechanisms spur inclusive growth in SSA. First, we report a net effect of 0.06 per cent and 0.05per cent for political stability, and voice and accountability, respectively. These net effects are calculated based on average FDI inflow of 2.893 as follows:

$$\frac{\partial ln(igg)}{\partial ln(pol)} = 0.0601 + \left(0.0013 \times \overline{fdi}\right) = 0.0601 + (0.0013 \times 2.894) = 0.0638$$

$$\frac{\partial ln(igg)}{\partial ln(voice)} = 0.0539 + \left(0.0010 \times \overline{fdi}\right) = 0.0539 + (0.0010 \times 2.894) = 0.0568$$

Second, on economic governance, we find that FDI enhances the inclusive growth effects of regulatory quality and governance effectiveness in SSA. While we find a net effect of 0.11 per cent for the former, the latter shows a net effect of 0.04 per cent on inclusive growth.

$$\frac{\partial ln(igg)}{\partial ln(reg)} = 0.0891 + \left(0.0071 \times \overline{fdi}\right) = 0.0891 + (0.0071 \times 2.894) = 0.1096$$

$$\frac{\partial ln(igg)}{\partial ln(govef)} = 0.0002 + \left(0.0131 \times \overline{fdi}\right) = 0.0002 + (0.0131 \times 2.894) = 0.0381$$

Finally, we now find empirical support for the FDI-institutional governance pathway to inclusive growth. In specifics, we find a net effect of 0.11 per cent for the control of corruption and FDI interaction and 0.03 per cent for the rule of law and FDI interaction term.

$$\frac{\partial ln(igg)}{\partial ln(corrupt)} = 0.1167 + \left(0.0004 \times \overline{fdi}\right) = 0.1167 + (0.0004 \times 2.894) = 0.1178$$

$$\frac{\partial ln(igg)}{\partial ln(rol)} = 0.0261 + \left(0.0020 \times \overline{fdi}\right) = 0.0261 + (0.0020 \times 2.894) = 0.0318$$

For the controls, the results show that while both vulnerable employment and inflation suppress inclusive growth efforts, human capital, ICT access and financial development induce shared prosperity. Particularly, the result on ICT access is positive but weak, implying that channeling resources to boost the regions digital infrastructure can create shared opportunities and wealth that can reverberate throughout the region. Albeit moderate effects, our results on vulnerable employment and inflation mean that sustaining durable growth trajectories can be hampered by macroeconomic mismanagement and precarious employment.

5.0 Conclusion, policy recommendations and future research directions

This study contributes to the debate on how policy makers in SSA can foster shared prosperity. We do so by examining the effect of FDI and several governance dynamics on inclusive growth. We test two main hypotheses— first, whether FDI and three governance indicators (economic, political, and institutional) matter for inclusive growth in SSA, and (2) whether FDI is effective in modulating the effect of our governance indicators on inclusive growth in SSA. We draw on data from the World Bank's World Development Indicators, Worldwide Governance Indicators, Poverty and Equity Database, and the Global Consumption and Income Project for the period 1990 – 2020 for the analysis.

The results show that: (1) FDI and all our governance dynamics are crucial for building shared growth in SSA; and (2) though FDI amplifies the effects of our governance dynamics on inclusive growth in SSA, that of control of corruption, regulatory quality, and rule of law are weak. Particularly, the remarkable mechanism of governance effectiveness, political stability, and voice and accountability on inclusive growth implies that sharing potential gains of FDI will rest more of building open and transparent institutions of high standards and integrity to make resources count for all.

Also, we recommend governments, multilateral and non-governmental institutions (like the World Bank and Africa Development Bank) to provide leadership and assistance in building a vibrant socioeconomic framework/mechanism that ensures social equity. Further, riding at the back of FDI to foster shared growth will require policymakers mapping out strategies that create shared wealth by enhancing technical and vocational education. Finally, going forward, incentivizing and spurring shared prosperity through FDI in SSA will require particular attention to strengthening the effectiveness of legal regimes and the fight against corruption.

The study obviously leaves room for further research especially within the remit of engaging country-specific studies in order to provide more country-oriented policies that are more adapted to the initial development conditions of respective countries. This future research direction builds on the premise that while the panel evidence provided in this study is relevant for cross-country common policy harmonization, more targeted or country-oriented policies should be informed by the relevant time series empirical strategies.

Declaration of conflict of interest

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AppendixA

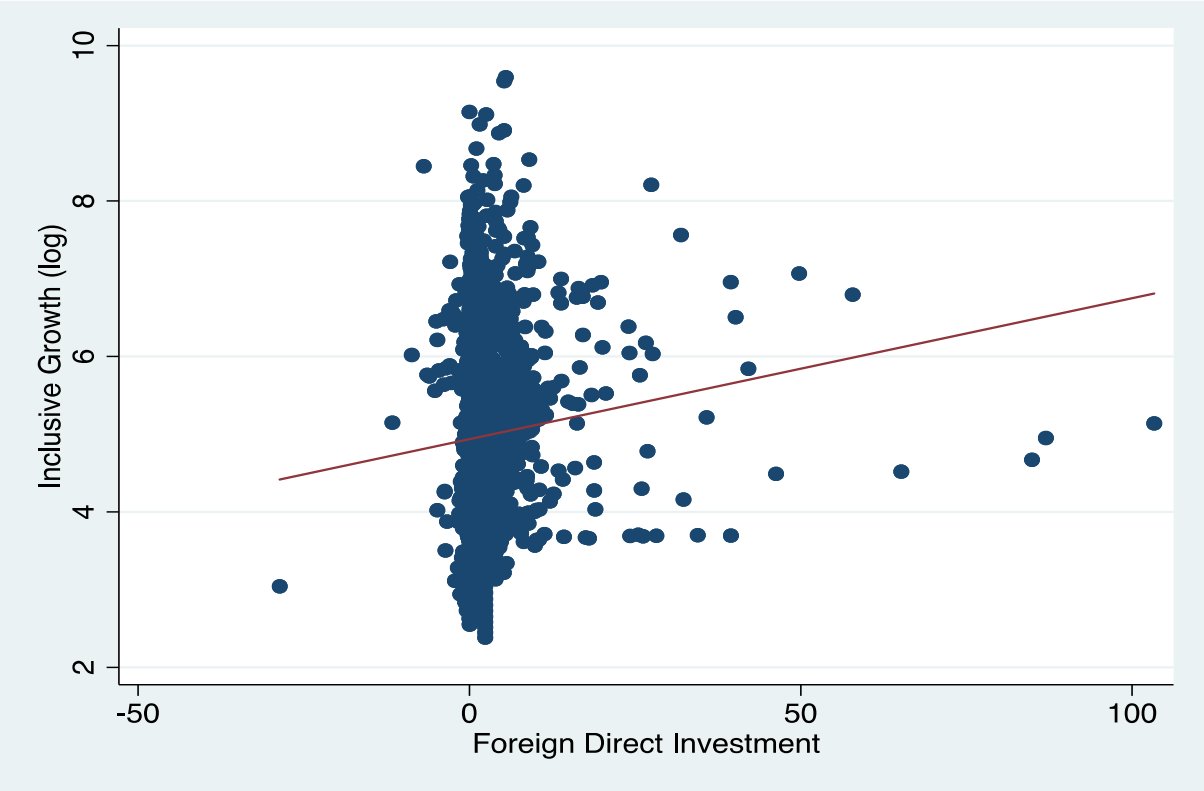

Figure A.1: FDI – Inclusive Growth Nexus

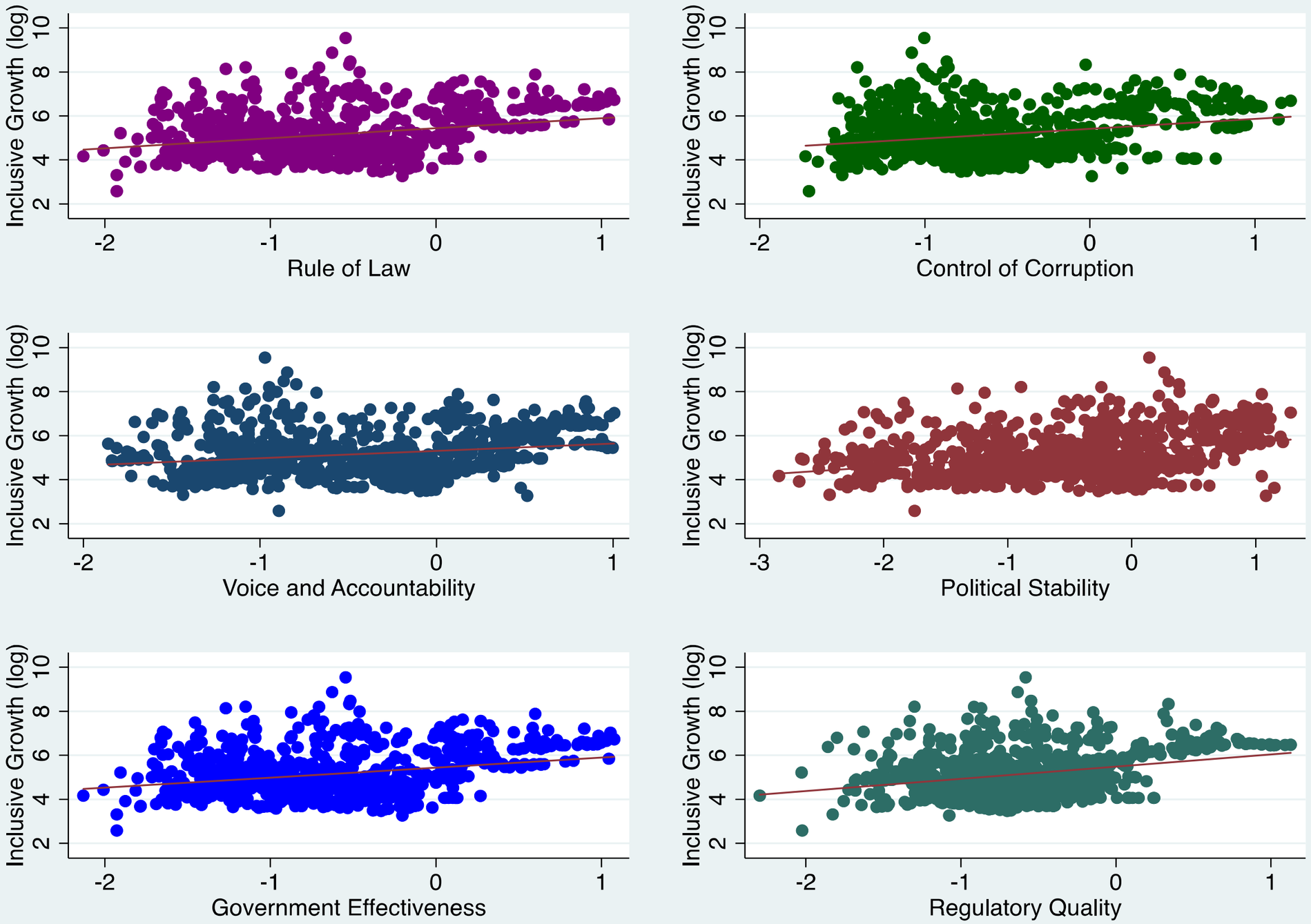

Figure A.2: Governance – Inclusive Growth Nexus

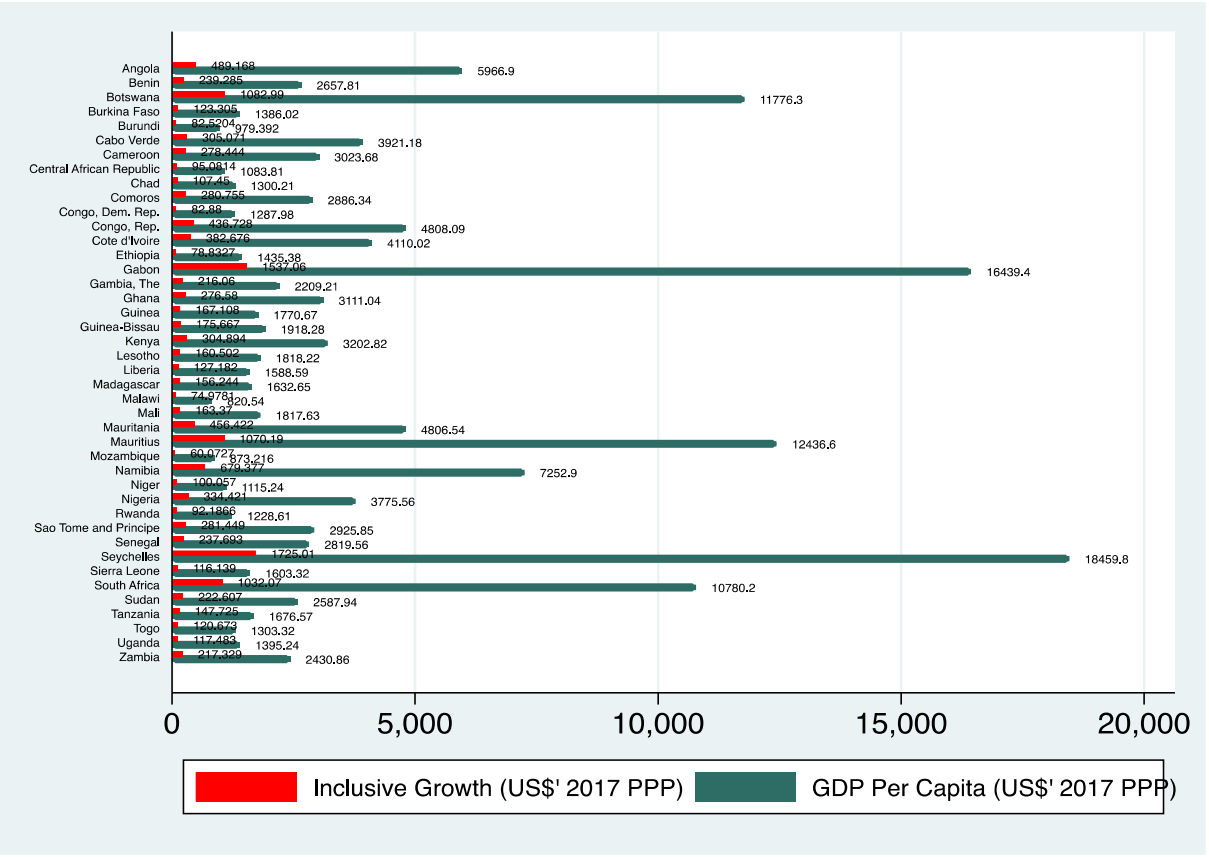

Figure A.3: Average Inclusive Growth and GDP Per Capita In Sub-Saharan Africa, 1990 – 2020.

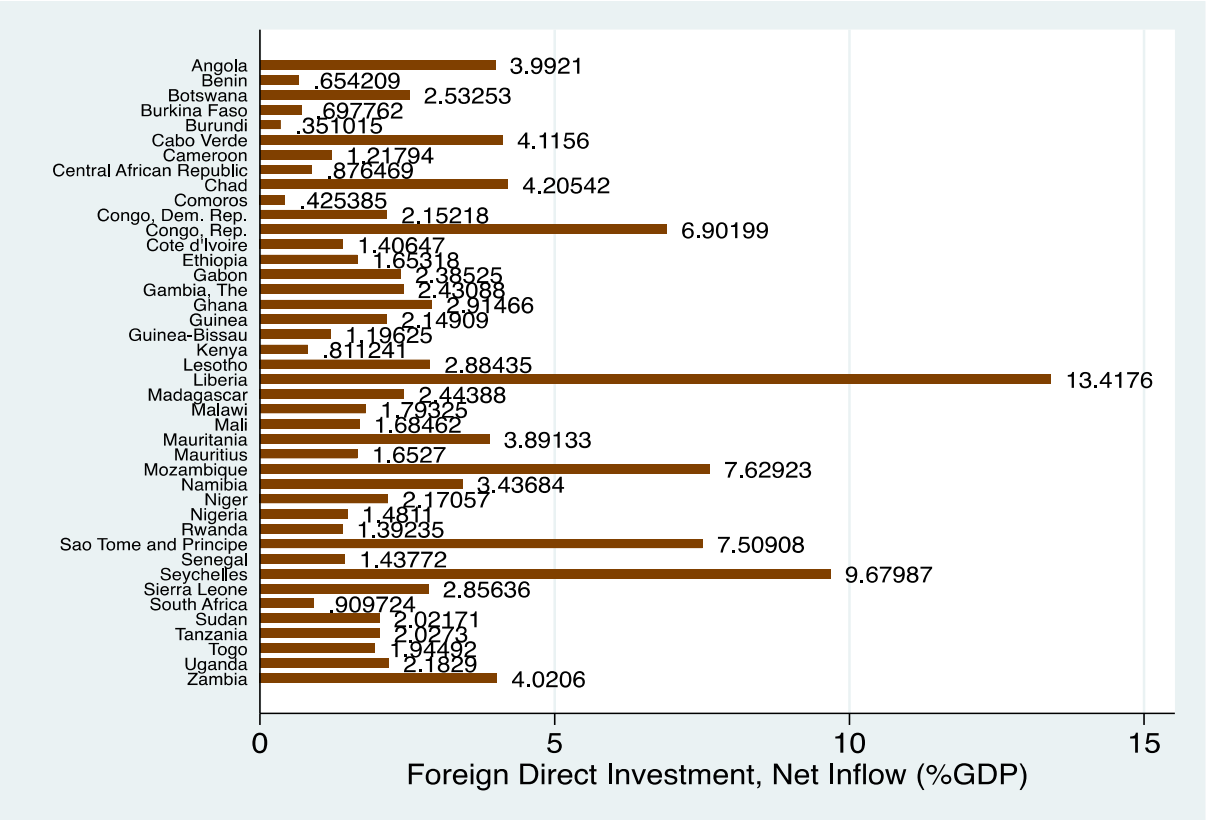

Figure A.4Average Within-Country FDI, Net Inflow (%GDP), 1990 – 2020.

Table A.1: Pairwise Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Inclusive growth	1												
(2) FDI	0.0418	1											
(3) Vulnerable employment	-0.263***	0.0402	1										
(4) Inflation	-0.0729*	0.0633	-0.0360	1									
(5) Human capital	0.253***	-0.0162	-0.268***	0.00378	1								
(6) ICT access	0.228***	0.0614	-0.460***	-0.0217	0.672***	1							
(7) Financial development	0.155***	0.0211	-0.600***	0.0652	0.405***	0.623***	1						
(8) Corruption control	0.0958**	0.0428	-0.531***	-0.0405	0.367***	0.598***	0.529***	1					
(9) Governance effectiveness	0.154***	0.0685*	-0.257***	-0.0126	0.165***	0.429***	0.407***	0.104**	1				
(10) Political Stability	0.182***	0.0675*	-0.433***	-0.0174	0.374***	0.497***	0.336***	0.715***	-0.0150	1			
(11) Regulatory quality	0.135***	-0.0770*	-0.512***	0.0101	0.371***	0.518***	0.566***	0.757***	-0.0339	0.646***	1		
(12) Rule of law	0.131***	-0.0126	-0.560***	0.0226	0.441***	0.629***	0.543***	0.882***	-0.0973	0.782***	0.853***	1	
(13) Voice	0.0443	0.0450	-0.491***	-0.0111	0.326***	0.531***	0.538***	0.760***	0.0283	0.729***	0.721***	0.814***	1

*p< 0.05, **p< 0.01, ***p< 0.001

Table A.2: Fixedeffectresults on the effects of FDI and governance on inclusive growth in sub-Saharan Africa (Dependent variable: Inclusive growth)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Vulnerable employment	-0.0111	-0.0135*	-0.0274**	-0.0192	-0.0568	-0.0324*	-0.0542***	-0.0490***	-0.0262**	-0.0139	-0.0633*	-0.0323**	-0.0534***	-0.0443***
	(0.0073)	(0.0073)	(0.0111)	(0.0183)	(0.0381)	(0.0175)	(0.0138)	(0.0076)	(0.0111)	(0.0177)	(0.0337)	(0.0153)	(0.0134)	(0.0078)
Inflation	-0.0025***	-0.0022***	-0.0022***	-0.0012	-0.0001	-0.0010	0.0003	-0.0011**	-0.0022***	-0.0018*	-0.0009	-0.0015*	0.0001	-0.0011**
	(0.0005)	(0.0005)	(0.0008)	(0.0010)	(0.0014)	(0.0009)	(0.0008)	(0.0004)	(0.0008)	(0.0010)	(0.0012)	(0.0008)	(0.0008)	(0.0004)
Human capital	0.1090	0.2359	1.8115***	1.6151**	2.0592	2.0691***	0.8576	0.3050	1.5015***	1.6490**	2.2626*	2.1037***	0.7813	0.4278
	(0.8028)	(0.8008)	(0.4984)	(0.8087)	(1.4955)	(0.7147)	(0.6921)	(0.5597)	(0.5492)	(0.7828)	(1.3119)	(0.6374)	(0.6711)	(0.5636)
ICT access	0.0174*	0.0165*	0.0157	0.0202	0.0229	0.0150	0.0063	0.0132	0.0193	0.0158	0.0312	0.0117	0.0027	0.0002
	(0.0090)	(0.0090)	(0.0113)	(0.0213)	(0.0295)	(0.0153)	(0.0169)	(0.0192)	(0.0118)	(0.0207)	(0.0261)	(0.0135)	(0.0164)	(0.0190)
Financial development	0.0413	0.1773	0.5051	1.6890*	1.5552**	1.7572***	1.1247*	1.4845***	0.4335	1.3975	1.2627**	1.4759***	0.9686*	1.3953**
	(0.4885)	(0.4883)	(0.4222)	(0.9142)	(0.6757)	(0.6278)	(0.5907)	(0.5482)	(0.4251)	(0.8869)	(0.5999)	(0.5534)	(0.5735)	(0.5563)
FDI		0.0130***							0.0085	0.0315***	0.0162	0.0009	0.0060	0.0113***
		(0.0037)							(0.0108)	(0.0094)	(0.0251)	(0.0109)	(0.0063)	(0.0033)
Corruption control			0.1292***						0.1488***					
			(0.0347)						(0.0380)					
Political stability				0.0572						0.0017				
				(0.0418)						(0.0422)				
Regulatory quality					0.0934						0.0259			
					(0.0765)						(0.0687)			
Rule of law						0.0568						0.0258		
						(0.0457)						(0.0404)		
Voice							0.1978***						0.1359***	
							(0.0493)						(0.0502)	
Gov. effectiveness								0.0596**						0.1704***
								(0.0282)						(0.0366)
FDI × Corruption control									0.0275					
									(0.0219)					
FDI × Political stability										0.0610***				
										(0.0134)				
FDI × Regulatory quality											0.0521***			
											(0.0114)			
FDI × Rule of law												0.0344***		
												(0.0051)		
FDI × Voice													0.0454***	
													(0.0112)	
FDI × Gov. effectiveness														0.1145***
														(0.0220)
Constant	3.9753***	3.7477***	4.6338***	6.4665***	2.8193*	4.0070***	2.4812***	1.6082***	4.8922***	6.1838***	2.6017*	4.0819***	2.6478***	1.9172***
	(0.6253)	(0.6263)	(0.5273)	(1.1426)	(1.6042)	(0.8881)	(0.8373)	(0.6054)	(0.5601)	(1.1090)	(1.4157)	(0.7762)	(0.8130)	(0.6147)
Observations	1,260	1,260	159	306	119	174	248	881	159	306	119	174	248	838
R-squared	0.0197	0.0273	0.2360	0.0384	0.1129	0.1648	0.1796	0.0889	0.2472	0.1066	0.3314	0.3747	0.2372	0.1302
Number of id	42	42	12	27	12	15	17	42	12	27	12	15	17	42
Hausman Statistic	26.99	29.48	26.09	9.95	22.85	18.02	165.18	72.65	24.22	8.38	3.44	6.81	105.98	53.28
Hausman [P-Values]	0.0001	0.0000	0.0002	0.1267	0.0000	0.0000	0.0000	0.0000	0.0021	0.3968	0.9037	0.5570	0.0000	0.0000

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.3: Random effectsresults on the effects of FDI and governance on inclusive growth in sub-Saharan Africa (Dependent variable: Inclusive growth)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Vulnerable employment	-0.0131***	-0.0127***	-0.0023	-0.0199***	-0.0093	-0.0092*	-0.0062	-0.0050	-0.0008	-0.0184***	-0.0040	-0.0060	-0.0054	-0.0067*
	(0.0035)	(0.0035)	(0.0058)	(0.0059)	(0.0118)	(0.0055)	(0.0055)	(0.0039)	(0.0062)	(0.0061)	(0.0116)	(0.0059)	(0.0050)	(0.0039)
Inflation	0.0017***	0.0014***	-0.0031***	-0.0017*	-0.0010	-0.0024***	-0.0010	-0.0020***	-0.0029***	-0.0022**	-0.0017	-0.0026***	-0.0013	-0.0020***
	(0.0005)	(0.0005)	(0.0008)	(0.0009)	(0.0013)	(0.0009)	(0.0009)	(0.0004)	(0.0008)	(0.0009)	(0.0011)	(0.0008)	(0.0009)	(0.0005)
Human capital	1.5994**	1.6806**	2.1674***	1.9963***	3.0402**	2.9531***	1.1927*	0.8781	1.9300***	1.9827***	3.0707***	2.7470***	1.0787	0.9814*
	(0.6901)	(0.6909)	(0.5154)	(0.7538)	(1.2292)	(0.6986)	(0.7068)	(0.5540)	(0.5563)	(0.7333)	(1.1095)	(0.6299)	(0.6847)	(0.5544)
ICT access	0.0259***	0.0247***	0.0032	0.0154	0.0311	0.0173	0.0361***	0.0456***	-0.0007	0.0165	0.0362*	0.0116	0.0403***	0.0485***
	(0.0085)	(0.0085)	(0.0104)	(0.0158)	(0.0227)	(0.0123)	(0.0137)	(0.0133)	(0.0108)	(0.0158)	(0.0210)	(0.0119)	(0.0129)	(0.0132)
Financial development	0.1253	0.0187	0.3275	1.2664	1.5980**	1.0036	0.7723	1.2034**	0.3204	-1.0547	1.3272**	1.0202*	0.5670	1.0391*
	(0.4705)	(0.4706)	(0.4432)	(0.8319)	(0.6695)	(0.6324)	(0.6165)	(0.5354)	(0.4436)	(0.8146)	(0.5990)	(0.5634)	(0.5971)	(0.5391)
FDI		0.0116***							0.0036	0.0304***	0.0120	0.0020	0.0072	0.0128***
		(0.0036)							(0.0113)	(0.0093)	(0.0251)	(0.0113)	(0.0069)	(0.0034)
Corruption control			0.1289***						0.1411***					
			(0.0363)						(0.0398)					
Political stability				0.0341						0.0198				
				(0.0399)						(0.0408)				
Regulatory quality					0.0970						0.0304			
					(0.0727)						(0.0668)			
Rule of law						0.0329						0.0057		
						(0.0397)						(0.0374)		
Voice							0.1514***						0.0720	
							(0.0479)						(0.0490)	
Gov. effectiveness								0.0732**						0.2167***
								(0.0287)						(0.0366)
FDI × Corruption control									0.0173					
									(0.0227)					
FDI × Political stability										0.0603***				
										(0.0134)				
FDI × Regulatory quality											0.0533***			
											(0.0115)			
FDI × Rule of law												0.0349***		
												(0.0054)		
FDI × Voice													0.0521***	
													(0.0122)	
FDI × Gov. effectiveness														0.1433***
														(0.0221)
Constant	5.1173***	5.0584***	5.1973***	5.9907***	5.2013***	4.9889***	5.0158***	4.9298***	5.2830***	5.9826***	5.0970***	5.0751***	5.1662***	5.0344***
	(0.4076)	(0.4092)	(0.3998)	(0.5208)	(0.9363)	(0.4373)	(0.4682)	(0.4111)	(0.4452)	(0.5278)	(0.8891)	(0.4490)	(0.4324)	(0.4109)
Observations	1,050	1,050	159	306	119	174	248	881	159	306	119	174	248	838
Number of id	42	42	12	27	12	15	17	42	12	27	12	15	17	42

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Appendix C

Table A.4: Principal components eigenvectors (Inclusive growth index)

Component	Eigenvalue	Difference	Proportion	Cumulative
PC 1	**4.417**	**2.606**	**0.368**	**0.368**
PC 2	**1.811**	**0.532**	**0.151**	**0.519**
PC 3	**1.279**	**0.321**	**0.107**	**0.625**
PC 4	0.958	0.085	0.080	0.705
PC 5	0.873	0.240	0.073	0.778
PC 6	0.633	0.049	0.053	0.831
PC 7	0.584	0.130	0.049	0.880
PC 8	0.454	0.083	0.038	0.917
PC 9	0.371	0.095	0.031	0.948
PC 10	0.276	0.081	0.023	0.971
PC 11	0.196	0.047	0.016	0.988
PC 12	0.148	.	0.012	1.000

Note: PC is Principal Component
Source: Authors' construct, 2021