

ORIGINAL ARTICLE

Trade openness, FDI, and income inequality: Evidence from sub-Saharan Africa

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Abstract

The motivation for this study stems from the United Nations Sustainable Development Goals (UN-SDGs) and their impact by 2030. The UN highlights 17 SDGs that address pertinent local and global issues, one of which—SDG-10—has been devoted to reducing inequality. This study investigates the nexus between trade openness, foreign direct investment (FDI), and income inequality in sub-Saharan Africa using panel data from 2000 to 2015 and the generalized method of moment (GMM) technique approach. The findings show that FDI and income have a negative, statistically significant relationship with income inequality, signifying that as FDI and income per capita increase, the level of income inequality decreases. However, trade openness, education, political stability, corruption, and rule of law have a positive, statistically significant relationship with inequality. This study, therefore, offers some recommendations that will help policymakers. First, develop good policies to attract more foreign investors, which will contribute to creating employment opportunities in the region. Second, create more infrastructures to provide good quality education. Third, implement a good policy to motivate local production which will contribute to creating jobs. Fourth, build a strong institution(s) to fight against corruption.

1 | INTRODUCTION

The positioning of this paper builds on four points in the literature, notably: (i) challenge of inequality to the achievement of Sustainable Development Goals (SDGs) in sub-Saharan Africa (SSA); (ii) growing trends of foreign direct investment (FDI) and its effects on economic growth in SSA; (iii) concerns about trade in SSA and its effects on economic growth; and (iv) gaps in the inequality literature.

First, despite the resurgence of growth in Africa over the last two decades, inequality still remains high in the continent (Anyanwu, 2016; Bigsten, 2016; Fosu, 2010, 2015; Kunawotor et al., 2020; Odusola, 2017). For example, according to the United Nations Development Programme (2017), among the 19 most unequal countries in the world, 10 are in Africa. Furthermore, a recent report by the United Nations Department of Economic and Social Affairs (2019) argued that the SSA continent lags just behind Latin America and the Caribbean in global inequality distribution. As documented by Bigsten (2016) and Odedokun and Round (2004), several factors determine the persistence of income inequality in Africa. Among these factors, we have: (i) the highly dualistic

economic structure; (ii) the high concentration of physical capital, human capital, and land; (iii) structural change; (iv) distortion of the labor market; and (v) social stratification. Moreover, Anyanwu (2016) empirically shows that globalization (foreign direct investment and trade openness) also determines income inequality in Africa, especially in West Africa. Recently, several studies have investigated the relationship between foreign direct investment and income inequality (Chen, 2016; Loureiro, 2019; Mahutga & Bandelj, 2008; Wu & Hsu, 2012;) and the nexus between trade liberalization and income inequality (Bayar & Sezgin, 2017; Brueckner & Vespignani, 2017; Bukhari & Munir, 2016; Getachew, 2015; Jaumotte et al., 2013; Rivas, 2007; Topuz & Dağdemir, 2020; Weyl, 2016; Zakaria & Fida, 2016). To the best of our knowledge, two pieces of evidence have been supported by these studies. First, some studies concluded that foreign direct investment and trade liberalization contribute to exacerbating income inequality. Second, other studies support the view that foreign direct investment and trade liberalization contribute to reducing income inequality.

Second, many studies have concluded that foreign direct investment has a positive and statistically significant effect on economic growth in developing countries (Abdalla & Samira SidAhmed, 2018; De Gregorio & Lee, 2002; Khaliq & Noy, 2007; Malikane & Chitambara, 2017). For example, according to the United Nations Conference on Trade and Development (UNCTAD, 2019), in Africa, FDI flows increased by 11% to \$46 billion in 2018. This increase is due to Africa's natural resources and recent discovery of oil in many countries in the region (Aust et al., 2019). Several ways in which foreign direct investment promotes economic growth have been identified, notably: (1) FDI provides capital; (2) FDI removes the balance-of-payments constraint; (3) FDI brings technology, management and marketing skills; (4) FDI generates a competitive environment in the host country; (5) FDI provides increased employment; (6) FDI results in higher wages; and (7) FDI promotes exports of the host developing country.

Third, a vast literature has investigated the role of trade on economic growth and the conclusion of most studies is that trade promotes economic growth (Awokuse, 2008; Kim, 2011; Muhammad et al., 2015; Sakyi et al., 2014, 2015; Ula, 2015; Zahonogo, 2017). For instance, in his study, Zahonogo (2017) shows that trade openness has a positive relationship with economic growth in Africa. Moreover, he has pointed out several channels from openness at the country level. Notable channels include: specialization, investment in innovation, productivity improvement, or enhanced resource allocation.

The positive effect of foreign direct investment and trade openness on economic growth is expected to translate into economic development (Malikane & Chitambara, 2017; Zahonogo, 2017). Thus, recent studies in the field of trade openness and foreign direct investment explore the spill-over of trade openness and foreign direct investment on human capital (Intisar et al., 2020; Kheng et al., 2017; Ma et al., 2019; Su & Liu, 2016; Zhuang, 2016) and poverty (Le & Jan, 2014; Magombeyi & Odhiambo, 2018). Unfortunately, the attendant literature has not investigated the relationship between trade openness, FDI, and income inequality in Africa, especially in SSA.

Four, to the best of our knowledge, the extant literature on inequality in Africa has fundamentally focused on 15 main strands, notably: the determinant of income inequality (Anyanwu, 2016; Bigsten, 2016); the relationship between economic structure, growth, and evolution of inequality and poverty (Fosu (2018)); the relationship between inequality, information and communication technology (ICT), and financial access (Tchamyou et al., 2019a); the effect of ICT, education and lifelong learning on income inequality and economic growth (Tchamyou et al., 2019b); the nexus between inequality, poverty and growth (Fosu, 2015); the relationship between FDI and inequality (Kaulihowa & Adjasi, 2018); the relationship between inequality, ICT and inclusive education (Asongu et al., 2019); the linkage between inequality, gender inclusion and ICT (Asongu & Odhiambo, 2019c); the nexus between inequality, governance and gender economic inclusion (Odhiambo & Asongu, 2020); the relationship between education, lifelong learning, inequality and financial access (Tchamyou, 2018); the relationship between finance, inequality and inclusive education (Asongu et al., 2020); the effect of finance and CO₂ emissions thresholds on inequality (Asongu & Vo, 2020); the relationship between structural transformation and income inequality (Ibrahim et al., 2020) and the impact of mobile phone penetration on African inequality (Asongu, 2015). Thus, the relationship between trade openness, FDI and inequality is missing in contemporary African inequality literature.

The motivation behind this study can be explained as follows. Recently, in their empirical work, Asongu and Odhiambo (2019a, 2019b, 2019c) and Zahonogo (2017) have shown that both foreign direct investment and trade liberalization can positively affect economic growth in Africa. It is important to highlight that the level of export diversification and foreign direct investment is increasing, according to Asongu and Odhiambo (2019a). Therefore, the current study is trying to investigate the impact of foreign direct investment and trade on income inequality. As we mentioned above, income inequality in Africa still remains high. However, as documented by Asongu and Odhiambo

(2019a, 2019b, 2019c), to achieve successfully the SDGs in developing countries, especially in Africa, inequality must be targeted and reduced (Asongu & Odhiambo, 2019c). Additionally, our study adds to the inequality–FDI and economic growth debate—Acemoglu and Robinson (2010) discussed the pertinent role of institutional quality in sustainable economic development and also in closing the inequality gap. To this end, the current study incorporated institutional covariates such as education, control of corruption, rule of law and political stability into the current theme. This inclusion will help circumvent the shortcoming of model misspecification, that is, omitted variable bias. This study draws strength from the Simeon Kuznets hypothesis that highlights the trade-off between inequality and income level for theoretical strength. Also, our study draws strength from the Greenwood–Jovanovic hypothesis. Both hypotheses explain the connection between the study variables. Furthermore, the study by Kunawotor et al. (2020) lends support to modernization theory and dependency theory, which are also in alignment with our current study.

The major contributions of this study are twofold. First, this study provides empirical evidence into the relationship between trade openness, FDI and inequality in SSA, which has received little attention in the literature. This study examines these relationships by extending the generalized method of moments (GMM) technique to inequality function to include trade openness and FDI. Furthermore, to circumvent for omitted and regional specific variables, the present study accounts for institutional variables (such as education, rule of law, control of corruption, and political stability). It is noteworthy that credible and strong institutions will reduce the inequality gap in the region and foster sustainable economic growth (Acemoglu & Robinson, 2010). Second, this article contributes to the literature by not only classifying the sample countries into developing countries such as SSA, but also by focusing on major determinants of inequality. Given that, our study aims to fill these important research gaps in the empirical literature and to offer constructive policy recommendations for the SSA economies.

The remainder of this article is organized as follows. Section 2 provides a brief literature review on inequality in Africa, and the data and methodology are presented in Section 3. Section 4 presents and discuss the findings and Section 5 concludes with implications.

2 | LITERATURE REVIEW

In light of the fourth point discussed in the Introduction, inequality literature in Africa has fundamentally focused on 15 main strands. For example, Bigsten (2016) examines the determinants of inequality in Africa. His empirical evidence shows that the highly dualistic economic structure, the high concentration of physical capital, human capital, and land, the structural change, the distortion of the labor market and the social stratification explain the persistence of high inequality in Africa. Likewise, focusing on West Africa, Anyanwu (2016) identified the main drivers of inequality for a panel of 17 West African countries. Among them, we have foreign direct investment and trade liberalization. Similarly, in his study, Fosu (2018) has pointed out poor governance as a determinant of high inequality in Africa. In the same vein, Tchamyou et al. (2019b) use a sample of 48 African countries to investigate the relationship between inequality, ICT and financial access over the period 1996–2004. Their results show that as the level of digital finance increases, the level of inequality decreases. Likewise, Tchamyou et al. (2019a) investigate the moderating impact of ICT on the nexus between education and inequality and economic growth in 48 African countries during the period 2004–2014. Their following findings show that digital education could contribute to reducing inequality in Africa. By conducting a study on the relationship between structural transformation and income inequality in Africa, Ibrahim et al. (2020) found that structural transformation contributes to exacerbating income inequality in the selected countries. Also, the relationship between growth, inequality and poverty has been investigated by Fosu (2015). His results showed that income growth might be considered as the main determinant of poverty reduction in SSA. The nexus between foreign direct investment and income inequality has been examined by Kaulihowa and Adjasi (2018). Focusing on 16 African countries over the period 1980–2013, the authors concluded that foreign direct investment contributes to reducing inequality in the selected countries. Asongu et al. (2019) also examine the relationship between inequality, gender inclusion and ICT for a panel set covering 42 SSA countries over the period 2004–2014. They use three inequality indicators, namely the Gini coefficient, Atkinson index and Palma ratio. The empirical results of GMM for dynamic panel data analysis show ICT as an important factor that could promote gender inclusion to contribute to reducing inequality. Similarly, Asongu and Odhiambo (2019a, 2019b, 2019c) using panel data regression of a sample of 42 SSA countries from 2004 to 2014 confirm that ICT could mitigate income inequality through promoting female employment. Odhiambo and Asongu (2020) with a sample of 42 SSA countries over the period 2004–2014, show that income inequality could be mitigated through good governance on gender economic inclusion. Likewise, the relationship between education, lifelong

learning, inequality and financial access has been investigated by Tchamyou (2018). Focusing on 48 African countries from 1996 to 2014, her corresponding finding shows that, first, the interaction between school enrolment and all financial channels has a negative effect on inequality; second, the connection between lifelong learning and financial deposits has a negative effect on income inequality; finally, the relationship between educational levels and financial access channels has no effect on inequality. Asongu et al. (2020) also show that inequality could be reduced through the impact of financial access on education inclusion in the region. Asongu and Vo (2020) examined the relationship between financial development, inequality and CO₂ emissions in 39 SSA countries over the period 2004–2014. Using an interactive quantile, their corresponding findings show that financial development could unconditionally mitigate inequality. However, the opposite result has been found when they consider the interaction between financial development and CO₂ emissions. The impact of mobile phone penetration on African inequality has been investigated by Asongu (2015). Focusing on 52 African countries and using ordinary least squares (OLS) and two-stage least squares empirical strategies (2SLS), the result shows that mobile phone penetration can be used to reduce inequality.

An empirical investigation into the interaction between trade openness, FDI, and inequality has so far been largely ignored in the region. Moreover, literature on empirical investigations into the relationship between trade openness, FDI, and inequality using GMM techniques is virtually non-existent. This study addresses the relationship between trade openness, FDI, and inequality in SSA using GMM techniques. The findings will contribute to the existing literature in this regard and will be significant to African economies and policymakers for the achievement of SDGs.

3 | DATA AND METHODOLOGY

3.1 | Data and variable description

The sample employed in the study consists of 38 SSA countries from 2000 to 2015 (Table 1). The considered sample of countries and periodicity of this investigation are constrained by issue of availability data at the time of the research. Several sources have been used to collect the data, notably: (i) United Nations of Development Programme for income inequality variable; (ii) United Nations Conference on Trade and Development for foreign direct investment variable; (iii) World Development Indicators of the World Bank for education and gross domestic product variable; and (iv) World Governance Indicators of the World Bank for political stability, rule of law, and control of corruption.

In line with the standard inequality literature, we use the Gini coefficient to measure the inequality variable (Fang et al., 2020; Folarin & Adeniyi, 2019; Fosu, 2015; Kaulihowa & Adjasi, 2018; Nguyen et al., 2020; Tchamyou et al., 2019a, 2019b). As argued by Fang et al. (2020), the Gini coefficient is the best indicator—it is calculated based on the disposable income of the selected countries. Following the study by Alvarado et al. (2017b), FDI inflows are used in this study. In accordance with recent literature, trade openness has been used to show the relationship between Africa and the rest of the world in terms of trade. Trade openness is the sum of import and export over gross domestic product (Brueckner & Vespignani, 2017; Bukhari & Munir, 2016).

Based on the main cause of inequality in SSA, we consider four control variables—education, political stability, rule of law, and control of corruption. As documented by Folarin and Adeniyi (2019), the current level of human development in Africa is low, which results in a kind of deprivation. However, to achieve goal 10 of the SDGs, human development must be improved. Moreover, Zhuang (2016) shows education (human capital) as a critical determinant of FDI. The motivation for choosing these control variables is consistent with studies such as Tchamyou et al. (2019) and Tchamyou (2018). In addition, we use GDP per capita as a proxy for economic growth, which plays an important role in the trade openness–FDI–income inequality nexus.

3.2 | Model specification

To investigate the relationship between trade openness, FDI, and inequality, we followed the study by Khan and Nawaz (2019). Our model, however, is different from this study: first, their study focused on the nexus between trade openness, FDI, and inequality in the Commonwealth of Independent States; in our case we focused on SSA. Second, their study considers school enrolment and inflation as a control variable; in our study we consider the major determinants of inequality in the region as control variables, that is, corruption, political stability, education, and rule of law. Moreover, we followed a theory developed by Kuznets (1955), who has shown an inverted

TABLE 1 List of sub-Saharan African countries used for the study

1. Angola	2. Benin	3. Botswana	4. Burkina Faso	5. Burundi	6. Cabo-Verde	7. Cameroon	8. Central African Republic
9. Chad	10. Comoros	11. Congo	12. D.R. of the Congo	13. Ethiopia	14. Gabon	15. Ghana	16. Guinea
17. Guinea Bissau	18. Côte d'Ivoire	19. Kenya	20. Lesotho	21. Liberia	22. Madagascar	23. Malawi	24. Mali
25. Mauritania	26. Mozambique	27. Namibia	28. Niger	29. Nigeria	30. Rwanda	31. Senegal	32. Seychelles
33. Sierra Leone	34. South Africa	35. Tanzania	36. Togo	37. Uganda	38. Zambia		

U-shaped relationship between economic development and income inequality. Thus, we arrived at a trade openness–FDI–inequality equation as follows:

$$inequality_{i,t} = \sigma_0 + \sigma_1 inequality_{i,t-1} + \sigma_2 TOP_{i,t} + \sigma_3 FDI_{i,t} + \sigma_4 income_{i,t} + \sigma_5 income_{i,t}^2 + \sigma_6 X_{i,t} + \eta_i + \xi_t + \varepsilon_{i,t} \quad (1)$$

where $inequality_{i,t}$ depicts an indicator of income inequality (i.e. Gini coefficient) of period i in period t , σ_0 is a constant, $TOP_{i,t}$ represents trade openness, FDI denotes foreign direct investment inflows, $income_{i,t}$ represents the GDP per capita, $X_{i,t}$ is vector of control variables (education, rule of law, control of corruption, and political stability), ξ_t is the time-specific constant, η_i is the country-specific effect, and $\varepsilon_{i,t}$ the error term.

3.3 | Methodology

Based on the nature of our data and the form of our equation, in this study we employed GMM techniques. It is based on Roodman (2009b, 2009a), which is an extension of Arellano and Bover (1995). We choose GMM for three main reasons, first, GMM is suited to assess whether the previous level of inequality is related to the present level of inequality, which explains the persistence of inequality in SSA region. Second, to solve the endogeneity problem, the GMM approach is well suited. Third, the number of observations is higher than the number of periods of each country; in this study, there are 16 periods (i.e. 2000–2015) for 38 countries. Following the study by Asongu and Odhiambo (2020), we choose the two-step procedure of the GMM technique with robust standard errors to ensure and control heteroskedasticity issues. It is important to highlight that the system GMM technique approach has been used in several inequality studies (Tchamyou et al., 2019a; Tchamyou, 2018).

Table 2 provides summary statistics and Table 3 presents the correlation matrix analysis. As shown in Table 2, the mean value of the Gini coefficient is 46.28. This indicates that inequality (Gini coefficient) is relatively higher in the selected African countries between 2000 and 2015. This result is consistent with recent empirical studies (Kunawotor et al., 2020; Shimeles & Nabassaga, 2018), which reveal that 6 out of the 10 most unequal countries were in SSA, with South Africa being the highest, having a Gini coefficient of about 0.7 according to the World Bank. The standard deviation of Gini coefficient is 7%, which is similar to Osabuohien and Bowale (2017) who studied the role of Institutions in the finance–inequality nexus in SSA. The high standard deviation suggests that the level of income inequality in Africa is dispersed. This is further supported by the wide difference between the minimum and the maximum value of the Gini coefficient.

From the correlation analysis presented in Table 3, the results show that there is a positive correlation between foreign direct investment and economic growth across the region. This corroborates the findings of Alvarado et al. (2017a) and Iamsiraroj and Ali (2015), who have studied the effects of FDI on economic growth. Noticeable results from the correlation matrix analysis have shown that FDI could contribute to reduce income inequality in the region. However, trade openness, education, political stability, and control of corruption could be sources of rising inequality in the region.

4 | EMPIRICAL RESULTS AND DISCUSSION

Table 4 presents findings corresponding to the relationship between trade openness, FDI, and inequality. The persistence of inequality measured by the lagged value of the Gini coefficient has a positive and statistically significant effect, implying a high level of inequality in SSA. This is consistent with studies such as Adeleye et al. (2017), who have investigated the moderating role of institutions on the finance–inequality nexus in SSA. Similarly, our finding is in line with Asongu and Odhiambo (2019b) who examine the influence of information and communication technology on income inequality. It is important to note that these studies have used the system GMM (sys-GMM) as their estimation techniques. The finding shows that income has a negative, and statistically significant effect, meaning that an increase in income per capita could contribute to reduce income inequality. This corroborates the findings of Fosu (2015) who emphasized the role of increasing income for reducing inequality. However, the results show that the square of GDP has no effect on income inequality, showing that the Kuznets hypothesis is not valid in our study. This finding is consistent with the finding of Canh et al. (2020) who examined the determinants of income inequality through Kuznets theory. It is important to note that our findings contradict Le et al. (2020) who examined the influence of export diversification on income inequality in 90 countries over the period 2002–2014 and revealed the presence of Kuznets theory.

Similarly, the estimated coefficient of FDI is negative and statistically significant at 10%. This means that increasing the level of FDI could contribute to reducing inequality in the region. This is in line with previous

TABLE 2 Descriptive statistics

Variable	Obs.	Mean	SD	Min.	Max.
Gini index	624	46.28	7.07767	34.40	70.27
FDI	622	5.02	9.25	−5.20	103.33
Trade openness	601	4.34	0.941	3.06	9.42
Income	624	7.70	1.13	3.04	10.09
Education	400	0.90	0.124	0.562	1.07795
Rule of law	624	−0.655	0.623	−2.01	1.078
Control of corruption	624	−0.57	0.617	−1.552	1.22
Political stability	624	−0.483	0.890	−2.47	1.2821

Note: Trade openness and Income are in natural logarithm. Max.: maximum; Min.: minimum; Obs.: observation.

TABLE 3 Correlation matrix analysis

	Gini	FDI	TOP	Income	E	RL	CC	PS
Gini	1							
FDI	−0.0200*	1						
TOP	0.513***	−0.0725	1					
Income	0.0640	0.0755***	0.264***	1				
E	0.175***	0.0605	0.185***	0.432***	1			
RL	0.226***	0.00437	0.241***	0.578***	0.549***	1		
CC	0.284***	0.0420	0.236***	0.484***	0.594***	0.840***	1	
PS	0.174***	0.0616	0.0840	0.529***	0.407***	0.779***	0.714***	1

Note: Trade openness and Income are in natural logarithm. CC: control of corruption; E: education; FDI: foreign direct investment; GDP: gross domestic product; PS: political stability; TOP: trade openness; RL: rule of law.

* $p < .1$.

** $p < .05$.

*** $p < .01$.

TABLE 4 Trade openness, FDI and income inequality (two-step GMM with standard error)

	(1)	(2)	(3)	(4)	(5)
Inequality (−1)	0.998*** (0.000)	0.997*** (0.000)	0.993*** (0.000)	0.994*** (0.000)	0.992*** (0.000)
FDI	−0.00155*** (0.002)	−0.00192*** (0.000)	−0.00207*** (0.001)	−0.00182*** (0.007)	−0.00189*** (0.002)
TOP	0.00443*** (0.000)	0.00343*** (0.000)	0.00442* (0.044)	0.00139* (0.032)	0.00238** (0.044)
Income	−0.00307*** (0.002)	−0.00409** (0.001)	−0.00230*** (0.004)	−0.00223** (0.002)	−0.00172*** (0.004)
Income ²	0.00409 (0.324)	0.0283 (0.145)	0.0654 (0.202)	0.0262 (0.108)	0.0507 (0.314)
E		0.0127* (0.043)			
RL			0.0154** (0.045)		
CC				0.00229* (0.055)	
PS					0.00235* (0.028)
Constant	−0.0324*** (0.007)	−0.0120* (0.052)	−0.0365** (0.017)	−0.0448** (0.035)	−0.0518** (0.041)
AR (1) <i>p</i> value	0.001	0.003	0.007	0.001	0.004
AR (2) <i>p</i> value	0.742	0.747	0.749	0.765	0.772
Hansen test: <i>p</i> value	0.772	0.703	0.664	0.692	0.629
Wald test	999.14***	954.65***	1665.90***	1654.26***	1668.15***
Instrument/groups	21/36	21/33	21/36	21/36	21/36
No. of obs.	563	563	563	563	563

Note: Values in parentheses are the *p* values.

CC: control of corruption; E: education; FDI: foreign direct investment; obs.: observations; PS: political stability; TOP: trade openness; RL: rule of law.

**p* < .1.

***p* < .05.

****p* < .01.

studies (Jensen & Rosas, 2007; Kaulihowa & Adjasi, 2018; Sharma & Abekah, 2017) that found that FDI contributes to reducing income inequality. Moreover, they point out that most FDI in the region goes to the agriculture sector, which is able to employ low-skilled labor. However, the estimated coefficient of trade openness has a positive impact on inequality, meaning that as the level of trade openness increases, the level of inequality also increases. The result confirms that most African countries export raw material and are unable to manufacture their own products. Moreover, most African countries import more than they export. Exporting from abroad means creating jobs for other countries. So that is why trade contributes to exacerbating inequality in SSA. Likewise, education also contributes to exacerbating inequality in the region. Our findings contradict the findings of Kunawotor et al. (2020) who examined the determinants of income inequality in Africa and found that education can help to reduce income inequality. Such contradiction can be attributed to the variables, sample, estimation techniques, and the period used by different studies.

Moreover, the finding shows that there is a positive relationship between political stability and inequality, meaning that political stability contributes to increased inequality in the region. The result confirms the position of Nguyen et al. (2020) who conclude that a better institution may increase income inequality. Furthermore, rule of law and corruption contribute to increase inequality.

The diagnostic test for the study shows that the Wald test of all models is significant at 1%, indicating that the findings of our study are valid. And the recommendation issued from this study could be used anywhere. Moreover, by considering the Arellano and Bond test for autocorrelation for the result presented in Table 4, the result does not suffer any serial order autocorrelation problem. In addition, the Hansen test of over-identification restrictions shows that the instruments used were robust.

5 | CONCLUSION AND RECOMMENDATIONS

This study investigates the nexus between trade openness, foreign direct investment and income inequality in SSA, using panel data from 2000 to 2015. To achieve these objectives, which are in line with SDGs, we apply the GMM techniques approach. Our findings show that FDI and income have a negative and statistically significant relationship with inequality; as FDI and income per capita increase, the level of inequality decreases. However, trade openness, education, political stability, corruption and rule of law have a positive, statistically significant relationship with inequality; as trade openness, education, political stability, corruption and rule of law increase, the level of inequality also increases. This study, therefore, provides some recommendations that will help policymakers. First, provide some good policies to attract more foreign investors, which constitutes a source to create job opportunities. Second, create more infrastructures to provide good quality education. Third, implement a good policy to motivate local production which will contribute to creating jobs. Fourth, build a strong institution(s) to fight against corruption.

CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

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How to cite this article: Xu, C., Han, M., Dossou, T. A. M., & Bekun, F. V. Trade openness, FDI, and income inequality: Evidence from sub-Saharan Africa. *Afr Dev Rev*. 2021;33:193–203. <https://doi.org/10.1111/1467-8268.12511>