

THE EFFECT OF SOCIAL PROGRESS ON FOREIGN DIRECT INVESTMENTS: A DYNAMIC PANEL DATA ANALYSIS FOR AFRICAN COUNTRIES

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ABSTRACT

A strand in the empirical literature on development economics investigates the dependence of foreign direct investments on recipient countries' economic, institutional and structural characteristics. This paper builds upon this literature by examining the role of a country's social progress as a pull factor for inward foreign investments. It applies the dynamic panel data methodology to an unbalanced panel dataset from African countries for the 2011-2019 period. The findings suggest that social progress is a significant determinant of foreign direct investments in Africa, supporting a positive social progress-foreign direct investments nexus. For the dimensions of social progress, while access to basic needs and foundations of well-being are important factors, opportunity exhibits superior influence on foreign direct investments. Findings provide evidence for a policy that recognises the social progress in shaping a host country's attractiveness to foreign investments.

Keywords: African countries, foreign direct investment, panel data, social progress.

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1. INTRODUCTION

Reaching the Sustainable Development Goals (SDGs), adopted by the United Nations in 2015, has become the lodestar of development policymaking. The 2030 Agenda encompasses environmental, social, and economic factors. Focusing on social factors may facilitate the implementation of the SDGs (Suehrer, 2019). In this context, social progress allows governments to monitor and report social and environmental outcomes partly. Social progress can be defined as achieving numerous economic and non-economic goals such as poverty, inequality, education, health and freedom that countries should pursue (United Nations General Assembly, 1969). It is an outcome that emphasises the changing capacity of countries to satisfy citizens' needs, including material and social needs (Estes & Morgan, 1976). It results from the interaction of three levels—individual, represented by capabilities; organisational, associated with productive outcomes; and

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environmental, due to the institutional configuration (Stern et al., 2014). On this ground, social progress captures the dimensions ignored by GDP-based metrics. It reflects *"the capacity of a society to meet the basic human needs of its citizens, establish the building blocks that allow citizens and communities to enhance and sustain the quality of their lives, and create the conditions for all individuals to reach their full potential"* (Social Progress Imperative, 2020a, p.4). A growing number of initiatives measuring social progress at the national or local level follow up on the recommendations of the Stiglitz-Sen-Fitoussi Commission established by the French government in 2008. In 2013, Social Progress Imperative proposed the social progress index (SPI), which compiles three dimensions of non-economic societal performance: basic human needs (BHN), foundations of well-being (FW), and opportunity (OPP). In Latin American countries, namely Brazil, Colombia, Costa Rica and Paraguay, the SPI has been adopted alongside GDP as a key indicator for the National Development Strategy of 2030.

In recent years, policymakers in Africa have directed economic development focus to combat poverty through facilitating access to basic needs and improving a range of other socioeconomic constructs measured by GDP-based metrics. While domestic funds may not be sufficient to finance the 2030 Agenda for Sustainable Development, many countries in Africa have resorted to foreign capital, such as obtaining foreign debt and attracting more foreign direct investments (FDIs). FDIs can take the form of the direct entry of nonresident firms or the acquisition of existing resident firms by foreign firms (Mattoo et al., 2004). The role of the FDIs in stimulating economic growth has been confirmed in the empirical literature as well as in policymaking circles. Many works (e.g., Blomström et al., 1994; Borensztein et al., 1995; Blomström, 2002; Mutascu & Tiwari, 2011; Bunte et al., 2018) found that FDIs bring about positive effects, and this is emphasised in the areas of employment, productivity and technology transfer.

On this ground, various reform policies supported by relatively sound economic performance may have prompted many African countries to reposition themselves as "FDIs-pull centres" (Musabeh & Zouaoui, 2020). Governments have focused on forming the appropriate institutional foundations for the conditions necessary for the FDIs to come, function, and survive, ultimately preparing for future growth and development (Adams, 2009; Ezeoha & Cattaneo, 2012; Goswami & Haider, 2014; Gossel, 2018; Bunte et al., 2018; Asongu & Odhiambo, 2020; Grekou & Owoundi, 2020).

Nevertheless, although the return on FDIs is higher in Africa than in other continents, available data show that the size of inward foreign investment does not match the expected volumes, creating an unfavourable gap (Asiedu, 2004; UNCTAD, 2019, 2020a, 2020b). In 2000, Africa accounted for 1% of global FDI inflows and increased to 3% by 2018 (Qiang et al., 2021). In this context, literature has intensified its quest for the rationales behind the tepid response of FDIs to these countries' call to come and reside. A large body of literature has spawned to explain how a wide range of economic and structural factors in Africa and other developing countries play pull factors for the FDIs (Kumari & Sharma, 2017; Jaiblai & Shenai, 2019; Musabeh & Zouaoui, 2020). Two traditional views have emerged: the macroeconomic view and the institutional view. Under the macroeconomic view, FDIs are sensitive to macroeconomic and GDP-linked conditions. Alternatively, based on North's (1990, 1994) institutional view, empirical studies emphasised the role of the institutional factors in the FDIs destination map (Kolstad & Tøndel, 2002; Kolstad & Villanger, 2004; Ezeoha & Cattaneo, 2012; Lucke & Eichler, 2016; Peres et al., 2018; Sabir et al., 2019). Despite the substantial body of research on how FDIs shape growth, the ambiguity of the empirical findings leaves more scope for further research (Farole & Deborah, 2014).

Based on the aforementioned facts, social progress can be viewed as a broader framework that captures formal as well as informal institutions in a country. We argue that because countries show different social progress traits, this can contribute to shaping the quality of the FDI-pull policies and institutions to place the country as a preferred destination for foreign investors. Thus, social progress may potentially shape and influence the future of FDI significantly. At this point, a key question is whether frameworks on social progress-FDI nexus exist. Empirically, the role of social progress in attracting FDI and enabling progress toward SDGs is still widely untapped (Suehrer, 2019). Perhaps the difficulty in defining and measuring social progress is one reason for the shortage of work (Giovannin et al., 2011). Deloitte's (2015) review may provide a point of departure for new empirical results on the statistical relationships between social progress and FDI. It revealed the existence of a bidirectional relationship.

Against this background, situated within the current trend of declining FDI flows, this paper seeks to answer two questions: Does social progress affect FDI? If yes, then what dimension of social progress is the most relevant?

The paper contributes to the literature in four ways. First, it complements the extant works on the institutional factors influencing inward foreign investment in developing markets. Second, it takes advantage of recent data on African countries to draw evidence on the impact of social progress on FDI. Third, it employs the SPI compiled by Social Progress Imperative (2020b). According to Deloitte (2015), the SPI enables the relationship between FDI and social progress to be quantified. Fourth, in the presence of a social progress effect on FDI, the paper seeks to identify the dimensions through which the effect is propagated to FDI.

The remainder of this work is structured as follows: Section II suggests links between social progress and FDI. Section III presents the sample, data and methodology. Section IV presents and discusses the results, and section V concludes and recommends.

2. EMPIRICAL EVIDENCE THAT PAYS LITTLE ATTENTION TO SOCIAL PROGRESS

2.1. Impact of Social Progress on FDI

Social progress may constitute a significant factor in forming geographical investment decisions. While prior works underline the influence of the institutional, legal, political and GDP-based metrics on FDI, we extend this range of factors to social progress. We point to a publication by Deloitte (2015), which provides insights germane to the current study. It explicitly revealed that FDI and social progress fall into a virtuous cycle across a sample of 132 countries. This section briefly discusses how the different dimensions of social progress may affect FDI inflows.

2.1.1. Human needs dimension and FDI

The basic human needs dimension of social progress refers to the capacity of a country to establish the fundamental building blocks of life that keep individuals alive and healthy. There are four components: nutrition and basic medical care, water and sanitation, shelter and personal safety.

Foreign investors may settle in an environment characterised by better access to improved infrastructure services. This is because the investment cost can be subsidised, increasing the return rate (Deloitte, 2015). Among studies on developing countries confirming these aspects are those of Babatunde (2011), Asongu et al. (2018), Jaiblai and Shenai (2019), and Désiré and Ghislain (2020). Besides, meeting the population's basic needs is a powerful factor influencing FDI, even if its indirect impact is moderated by productivity performance.

2.1.2. Foundation of Well-Being Dimension and FDI

FDIs may also be associated with the foundation of well-being, which covers four components: access to basic knowledge, information and communications, health and wellness and environmental quality. This dimension measures the capacity of a country to enact the fundamental pillars that enable individuals and communities to improve the quality of their lives.

Access to information and communication can help attract FDI into more technology-driven sectors, enabling countries to move away from agriculture (Deloitte, 2015). According to Grafton et al. (2002, p.218), "*Agglomeration economies that explain why firms of a similar type locate near each other may simply be manifestations of spillovers that arise when social barriers to communication are lowered due to proximity and increased social exchange*".

2.1.3. Opportunity Dimension and FDI

Opportunity is the third dimension of social progress, which encompasses four components: personal rights, personal freedom and choice, inclusiveness and access to advanced education. It shows the capacity of a society to prepare the conditions for all individuals to reach their full potential.

FDIs embed an element of risk. Foreign investors are susceptible to changes in the political stability of an economy (Hayakawa et al., 2013; Kurecic & Kokotović, 2017). A better system of legal and political institutions favouring political stability, protecting all types of rights, depressing all forms of corruption, embodiments of values of honesty, transparency, accountability tolerance, and inclusiveness, equality, freedoms and access to finance matter significantly in determining FDI inflows (Deloitte, 2015). This statement is consistent with empirical studies grounded in institutional theory. Using panel data from 61 developing countries from 1989 to 2000, Kolstad and Tøndel (2002) investigated the relationship between disaggregate socio-political indices and FDI. They stated that FDI flows are affected by factors associated with investors' perception of long term stability, namely political rights, civil liberties, democratic accountability, religious and ethnic tensions and internal conflict. Whereas government stability, bureaucracy, external conflict, law and order, and the military being in Politics have limited impact on overall FDI. Kolstad and Villanger's (2004) findings also showed that improvements in political rights and civil liberties tend to increase FDI. In contrast, religious tensions appear to deter FDI.

However, the literature found that institutional quality differs in its impact on FDI between developing and developed countries. For instance, Lucke and Eichler (2016), Peres et al. (2018), and Sabir et al. (2019) investigated the effect of institutional quality on FDI inflows by categorising the countries as developed or developing to measure the importance of institutions in attracting FDI inflows more accurately. Lucke and Eichler (2016) found a positive association between

institutions and FDI in developing countries, suggesting that foreign investors prefer to invest in politically unstable countries and have less diverse societies. Peres et al. (2018) and Sabir et al. (2019) found that the weaker structure of institutions in developing countries did not constitute a significant barrier for stimulating further FDIs. However, institutional quality has a positive and significant impact on developed countries.

Besides, according to Deloitte (2015), educational opportunities help attract FDI by providing the skilled workforce necessary for businesses to develop. This proposition is confirmed by some attempts to investigate the relationship between human capital and FDI (Kheng et al., 2017; Kumari & Sharma, 2017).

Research has also shed light on the social risks that businesses face, such as crime and violence. Organised crime, one form of institutional risk, in foreign host locations increases operating costs (Anderson & Marcoullier, 2002; Hallward-Driemer & Stewart, 2004). According to Ramos and Ashby (2017), organised crime has grown globally. It can affect a firm's assets in host locations and the well-being and life of its employees, who can be robbed, kidnapped or murdered. The findings revealed that the highest number of state homicides is associated with lower FDI across states. Brown and Hibbert (2017) mentioned that violent crime acts, proxied by homicide rates, deter foreign direct investment inflows in 62 countries from 1997 to 2012. This result remained robust for a sub-sample of developing countries. To fight crime, governments should reduce income inequality and increase the educational attainments of the population.

2.2. *Effects of FDI on Social Progress*

Some studies suggested that the reverse causality may be at work: FDI contributes to the well-being of society in developing countries. Deloitte (2015) mentioned that FDI inflows could improve a country's future social progress through specific support – such as investments in healthcare and education – and indirectly through employment and higher incomes. Governments must put in place complementary policies to drive social progress through FDI. In this line of thinking, Rusu (2016) stated that governments need to address their policies at both the general and FDI-specific levels to attract FDI. "*Choosing to invest in a country because of its financial benefits could also determine social progress, but this is a cycle because a good social climate also has the capacity to attract important investments. These two coordinates are in a mutual relation most of the time*" (Rusu 2016, p.186). Along similar lines, Dechprom and Jermsittiparsert (2018) mentioned that governments should enhance FDIs and be less dependent on foreign aid to improve social progress.

2.3. *Hypothesis*

Supported by the results from the empirical literature and the view of Deloitte (2015), we may hypothesise that:

H1: Social Progress and its three dimensions are positively associated with FDI.

3. METHODOLOGY

3.1. *Econometric Model*

Following Topal and Gül (2016) and Sabir et al. (2019), the following regression is adopted:

$$FDIC_{it} = \alpha + \beta_1 FDIC_{it-1} + \beta_2 SP_{it} + \sum_{j=3}^6 \beta_j X_{jit} + \gamma_i + \varepsilon_{it} \quad (1)$$

where $FDIC_{it}$ is the log of FDI per capita of country i ($i = 1, 2, \dots, N$) in period t ($t = 1, 2, \dots, T$), SP is defined by social progress indicator, X_j is a vector of other explanatory variables, β_j is a vector of associated unknown parameters, γ_i represents the time-invariant country-specific effects, and ε_{it} represents the error terms. The lagged level of FDI per capita “ $FDIC_{t-1}$ ” is introduced in the model as an explanatory variable to examine persistence effects.

3.2. *Estimation Method*

This paper uses the dynamic panel data method in estimating Equation (1). This method is suitable as it can address the endogeneity issue which arises from i) the possible correlation between the independent variables and the lagged dependent variable and ii) the presence of unobservable effects (Baltagi, 2014). Furthermore, as earlier discussed in section 2.2, reverse causation from dependent variable FDI onto independent variable SP is also possible, hence making SP variable potentially endogenous. Following Topal and Gül (2016) and Sabir et al. (2019), we employ the generalized methods of moment (GMM) system estimator proposed by Arellano and Bover (1995) and Blundell and Bond (1998), which is asymptotically efficient and robust to all kinds of heteroskedasticity (Sabir et al., 2019) and capable of overcoming the endogeneity issue. In addition, Roodman (2009) praises the system GMM for being applicable to panel datasets, characterised by cross-sections, N , outnumbering periods, T which in our analysis $T = 9$ less than $N = 45$.

System GMM estimation combines two estimations, and first is the estimation of level equation (Equation 1 above), and second is the estimation of differenced equation, as Equation (2) below:

$$FDIC_{it} - FDIC_{it-1} = \alpha + \beta_1 (FDIC_{it-1} - FDIC_{it-2}) + \beta_2 (SP_{it} - SP_{it-1}) + \sum_{j=3}^6 \beta_j (X_{jit} - X_{jit-1}) + (\varepsilon_{it} - \varepsilon_{it-1}) \quad (2)$$

To overcome endogeneity issue in the regressors, system GMM estimation employs instrumentation technique using the endogenous variable’s lagged values, i.e. lagged levels for the differenced equation, and lagged differences for the equation in level.

The system GMM requires that the autocorrelation at the first-order autoregressive AR(1) process be significant and that autocorrelation at the second-order autoregressive AR(2) be insignificant. We perform the Arellano and Bond (1991) test for serial correlation in the first-differenced errors. An additional condition is to employ valid moment conditions. We can test whether the over-identifying moment conditions are valid by performing the Hansen (1982) J test, and the p-values

are reported accordingly. Given the relatively small number of periods available, we restrict to a maximum of three lags of the endogenous explanatory variables as instruments until the results pass the Hansen J test.

3.3. *Sample*

Our panel sample comprises annual observations covering 45 countries in Africa (Table 1). We study the post-financial crisis 2008 period from 2011 to 2019. During this period, African countries have become increasingly reliant on FDIs. The extractive industries, such as oil and mining, attract the most FDI inflows (UNCTAD, 2020b).

Table 1: Countries in the Sample

| Countries | Code | Countries | Code | Countries | Code | Countries | Code |
|----------------------------|-------------|------------------|-------------|-------------------|-------------|------------------|-------------|
| Algeria | DZA | Kenya | KEN | Ivory Coast | CIV | Nigeria | NGA |
| Angola | AGO | Lesotho | LSO | Egypt | EGY | Senegal | SEN |
| Benin | BEN | Liberia | LBR | Equatorial Guinea | GNQ | Sierra Leone | SLE |
| Botswana | BWA | Madagascar | MDG | Eswatini | SWZ | South Africa | ZAF |
| Burkina Faso | BFA | Malawi | MWI | Ethiopia | ETH | Sudan | SDN |
| Burundi | BDI | Mali | MLI | Gabon | GAB | Tanzania | TZA |
| Cabo Verde | CPV | Mauritania | MRT | Gambia | GMB | Togo | TGO |
| Cameroon | CMR | Mauritius | MUS | Ghana | GHA | Tunisia | TUN |
| Central African Republic | CAF | Morocco | MAR | Guinea | GIN | Uganda | UGA |
| Chad | TCD | Mozambique | MOZ | Guinea-Bissau | GNB | Zambia | ZMB |
| Congo, Democratic Republic | COD | Namibia | NAM | | | Zimbabwe | ZWE |
| Congo, Republic of | COG | Niger | NER | | | | |

3.4. *Data*

Table 2 presents the variables employed in the analysis, their sources and abbreviations.

Following Kolstad and Tøndel (2002), Kolstad and Villanger (2004) and Wacker (2013), this paper retains the per capita FDI inflows as the primary dependent variable for Equations (1) and (2). Data for this variable are available in the UNCTAD database. The database depends on a set of criteria to define the “foreignness” character of investment. First, the initiator uses a mode of FDIs entry to acquire a lasting interest or control an entity. Second, the recipient country investment is not the home residence of the party initiating the investment. Third, the investor can take any form, such as a foreign direct investor, a parent company, or a local or foreign affiliate.

Additionally, we consider the country’s social progress as the main determinant of inward foreign investment. We use the database compiled by Social Progress Imperative (2020b) to extract historical information on the SPI. Countries are ranked from 0 (the worst case) to 100 (the best case).

For control variables, we rely on previous studies that employ a set of factors instrumental for enticing FDIs. This process enables the reduction of omitted variable bias. The information on the control variables is availed by the World Bank (2020) through the World Development Indicators (WDI). We consider four dimensions for the control variables: degree of openness, macroeconomic stability, purchasing power of citizens, and endowment in natural resources.

First, we control for the degree of openness of the economy. Developing countries have significantly liberalised their trade regimes. The countries that apply relatively restricted trade policies will eventually discourage FDI inflow compared with those that adopt free trade policies. The openness eases the movement of capital in and out of the country (Suleiman et al., 2015; Asongu et al., 2018; Bouchoucha & Benammou, 2018). As is common practice, we use trade openness, measured by the share of foreign trade in GDP, to proxy market-seeking FDIs. It is expected to have a positive effect on FDIs.

Second, we control for general economic conditions following Jaiblai and Shenai (2019), who found that FDIs are influenced by business cycles. We consider three metrics: GDP growth rate, unemployment rate, and inflation rate. GDP growth and unemployment are direct proxies for the business cycle. We expect FDIs to expand during the expansion phase of the business cycle with higher GDP growth rates and lower unemployment rates. Chakrabarti (2001) mentions that the growth hypothesis developed by Lim (1983) maintains that a rapidly growing economy provides relatively better opportunities for making profits than those growing slowly or not growing. GDP growth is a proxy for host countries' future potential for expansion, growth, and resource utilisation (Walsh & Yu, 2010; Jaiblai & Shenai, 2019). Unemployment can also be positively associated with FDIs because it may signal labour abundance and a willingness to work for a lower wage. For inflation, a negative relationship is expected with FDIs. When inflation is controlled, it may reduce investors' uncertainty and heighten confidence in the host country (Fiodendji, 2013; Bbale & Nyanzi, 2016).

Table 2: Summary of the Variables

| Dimension | Variables | Code | Description | Expected sign | Source |
|--------------------|--------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------|
| Dependent variable | FDI inflows | FDIC | FDI US dollars at current prices per capita. | | UNCTAD (2021) |
| Social Progress | Social Progress Index | SPI | The extent to which countries provide for their citizens' social and environmental needs. | + | Social Progress Imperative's database (2020b) |
| | Basic human needs | BHN | Assess how well a country provides for its people's essential needs by measuring access to nutrition and basic medical care, if they have access to safe drinking water, adequate housing with basic utilities, and if society is safe and secure. | + | |
| | Foundation of well-being | FW | Assesses whether citizens have access to basic education, can access information and knowledge from both inside and outside their country, and if there are conditions for living healthy lives. Foundations of well-being also measure a country's protection of its natural environment. | + | |

| | | | | | |
|--------------------------------------------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------------------|
| | | | air, water, and land, which are critical for current and future well-being. | | |
| | Opportunity | OPP | Measures the degree to which a country's citizens have personal rights and freedoms and can make their own decisions and whether prejudices or hostilities within a society prohibit individuals from reaching their potential. Opportunity also includes the degree to which advanced forms of education are accessible to those in a country who wish to further their knowledge and skills, creating the potential for wide-ranging personal opportunities. | + | |
| Control variables | Trade openness | TRADE | The sum of exports and imports of goods and services measured as a share of gross domestic product. | + | World Bank (2020) |
| | Inflation, consumer prices (annual %) | INF | The consumer price index reflects the annual percentage change in the cost to the average consumer acquiring a basket of goods and services fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used. | - | |
| | GDP growth (annual %) | GDPG | The annual percentage growth rate of GDP at market prices is based on constant local currency. Aggregates are based on constant 2010 US dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without deductions for depreciation of fabricated assets or depletion and degradation of natural resources. | + | |
| | GDP per capita (constant 2010 US\$) | GDPPC | Gross domestic product divided by midyear population. | + | |
| | Total natural resources rents (% of GDP) | NATRE | The sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents. | + | |
| Unemployment, total (% of the total labor force) | UN | Unemployment refers to the share of the labour force without work but available for and seeking employment. | + | | |

Third, we use GDP per capita as it measures the purchasing power of citizens, while it enables to capture the type of FDI that is more appropriate as an entry strategy for a specific market (Jaiblai & Shenai, 2019). A large market implies greater demand for goods and services, which may pull market-seeking and opportunities-expanding FDI (Fiodendji, 2013; Bbale & Nnyanzi, 2016). According to Asiedu (2002), FDI will go to countries with larger and expanding markets and

greater purchasing power of citizens, where firms can potentially receive a higher return on their capital.

Fourth, Africa is endowed with abundant natural resources whose extraction and exploitation are dominated by multinational corporations (MNCs) at the expense of the less capitalised domestic companies. These international organisations enjoy comparative advantages over local corporations in many attributes. For instance, they have the capacity to buffer against the high capital costs required for investment in the extraction industry. Supported by the most advanced technology, they can face various categories of risk, such as institutional and investment risks (Ndikumana & Mare, 2019). In this sense, we retain the ratio of total natural resources rents as a percentage of GDP as a proxy for the importance of the attraction sector, with a positive sign being expected.

4. RESULTS AND DISCUSSION

4.1. Descriptive Statistics

Table 3 reports descriptive statistics for the variable under consideration. The mean values of trade, GDP growth, unemployment, inflation, GDP per capita and total natural resources rents are 71.57%, 3.78%, 8.18%, 6.30%, \$2,513.03, and 10.78%, respectively. In real terms, FDIs vary between a minimum of -\$273.68 for Angola (in 2013) to a maximum value of \$2,001.29 for Equatorial Guinea (in 2011). Negative values indicate reserve FDIs and disinvestment because of shocks such as war, civil war and financial meltdown. Other reasons include reinvestment outside the country, discharges of liabilities, advance and redemption of inter-company loans, short-term credit movements, dividends exceeding recorded income over a given period or company operations being at a loss.

Table 3: Descriptive Statistics of the Variables (2011–2019)

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|----------|-----|----------|-----------|---------|-----------|
| FDIC | 404 | 89.30 | 173.17 | -273.68 | 2,001.30 |
| SPI | 405 | 51.41 | 10.47 | 27.60 | 78.46 |
| BHN | 405 | 53.56 | 15.35 | 15.39 | 91.19 |
| FW | 405 | 54.39 | 8.65 | 33.61 | 75.95 |
| OPP | 405 | 46.28 | 10.50 | 25.26 | 69.31 |
| TRADE | 402 | 71.58 | 27.48 | 16.67 | 147.34 |
| INF | 400 | 6.30 | 7.37 | -3.23 | 63.29 |
| GDPG | 405 | 3.78 | 4.29 | -36.39 | 20.72 |
| GDPPC | 405 | 2,513.03 | 2,981.45 | 208.07 | 18,254.10 |
| NATRE | 405 | 10.78 | 9.23 | 0.00 | 56.04 |
| UN | 405 | 8.18 | 6.69 | 0.32 | 28.47 |

The statistics on social progress (Table 3, Figures 1 and 2) reveal that SPI scores range from 27.6 in the Central African Republic (in 2014), indicating a low level of social progress, to 78.46 in Mauritius (in 2019), indicating a high level of social progress. We note that the basic human needs and foundations of well-being dimensions of social progress are the most salient in the focus economies. Opportunity to progress shows relatively the lowest score.

Figure 1: Social Progress by Country in 2019

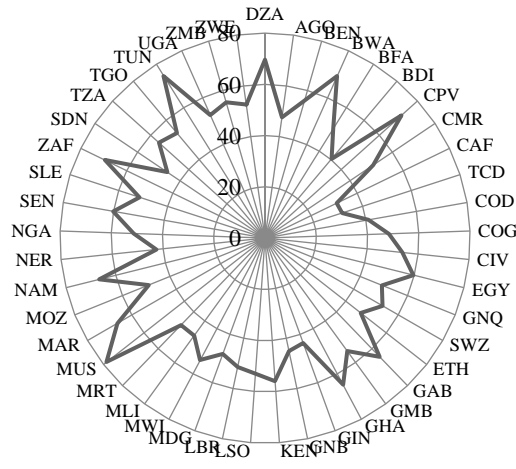


Figure 2: Social progress dimensions by country in 2019

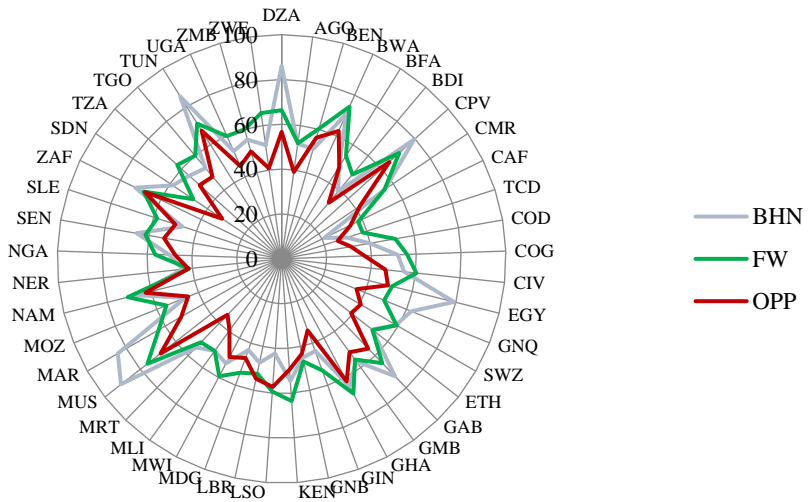


Table 4 indicates a positive relationship between FDIC and our explanatory variables, except for inflation. Social progress dimensions correlate highly with each other. Variance Inflation Factors (VIF) are used to check for multicollinearity. Results indicate a moderate correlation¹ among the dimensions of social progress, so considering all dimensions in a single equation may yield spurious results. We perform a sequential analysis by considering one indicator of social progress in each regression, using a dynamic panel system GMM estimation to account for endogeneity.

¹ The results are not reported here but there are available upon request.

Table 4: Correlation Matrix

| | FDIC | SPI | BHN | FW | OPP | TRADE | INF | GDPG | GDPPC | NATRE | UN |
|--------------|---------|---------|---------|---------|---------|---------|---------|---------|--------|---------|----|
| FDIC | 1 | | | | | | | | | | |
| SPI | 0.2490 | 1 | | | | | | | | | |
| BHN | 0.2834 | 0.9220 | 1 | | | | | | | | |
| FW | 0.1939 | 0.9192 | 0.7548 | 1 | | | | | | | |
| OPP | 0.1713 | 0.8906 | 0.6763 | 0.827 | 1 | | | | | | |
| TRADE | 0.3270 | 0.2633 | 0.1673 | 0.2792 | 0.3151 | 1 | | | | | |
| INF | -0.1426 | -0.1334 | -0.0721 | -0.1369 | -0.1821 | -0.2362 | 1 | | | | |
| GDPG | 0.0219 | -0.0274 | -0.0690 | -0.0149 | 0.0317 | -0.0568 | -0.0511 | 1 | | | |
| GDPPC | 0.6011 | 0.5288 | 0.5858 | 0.4382 | 0.3653 | 0.3371 | -0.1256 | -0.2167 | 1 | | |
| NATRE | 0.1613 | -0.3948 | -0.2850 | -0.4098 | -0.4293 | 0.2079 | 0.0327 | -0.0716 | 0.1004 | 1 | |
| UN | 0.2148 | 0.468 | 0.4411 | 0.3904 | 0.4355 | 0.3323 | 0.0704 | -0.2115 | 0.5301 | -0.1756 | 1 |

4.2. Regression Results

Table 5 summarises the system GMM estimation results. The diagnostic tests reveal that two phase-system GMM assumer is consistent. The results of the Hansen J test of overidentifying restrictions show that the choice of instruments seems to be correct. While the AR(1) test rejects the null of no first-order autocorrelation, the AR(2) test does not reject the null hypothesis of no second-order autocorrelation.

In Table 5, the regression results in column 1 indicate a positive and significant coefficient on the SPI variable, implying that countries with higher social progress may entice and facilitate inward foreign investments. We find evidence of social progress as a significant intervention to attract and retain FDIs. Governments should address all social challenges. Social progress should become the end of all policy interventions to attract and retain inward FDIs. According to Almatarneh and Emeagwali (2019) and Ghazaouni and Emeagwali (2021), business regulation and good governance in public and private sectors could enhance social progress.

Table 5: GMM Regression Results

| Variables | Column 1 | Column 2 | Column 3 | Column 4 | Column 5 |
|---------------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|
| α | -8.916*** (-6.15) | -7.662*** (-6.72) | -7.632*** (-6.51) | -11.446*** (-9.43) | -11.883*** (-6.87) |
| FDIC _{t-1} | 0.407*** (27.50) | 0.412*** (23.64) | 0.412*** (27.40) | 0.359*** (22.70) | 0.340*** (18.74) |
| SPI | 0.034*** (2.87) | | | | |
| BHN | | 0.023** (1.95) | | | 0.001 (0.18) |
| FW | | | 0.014** (1.79) | | 0.018* (1.96) |
| OPP | | | | 0.049*** (7.54) | 0.069*** (7.11) |
| TRADE | 0.016*** (13.90) | 0.016*** (13.81) | 0.015*** (13.80) | 0.015*** (9.99) | 0.015*** (8.82) |
| INF | -0.014*** (-7.82) | -0.014*** (-7.19) | -0.012*** (-9.72) | -0.019*** (-8.21) | -0.018*** (-8.46) |
| GDPG | 0.036*** (9.27) | 0.038*** (9.05) | 0.036*** (9.35) | 0.040*** (12.14) | 0.037*** (11.21) |
| GDPPC | 0.866*** (5.70) | 0.778*** (5.87) | 0.855*** (6.04) | 1.114*** (7.13) | 1.208*** (7.54) |
| NATRE | 0.269*** (8.04) | 0.252*** (6.83) | 0.224*** (9.64) | 0.300*** (8.45) | 0.276*** (6.17) |
| UN | 0.127*** (8.16) | 0.123*** (8.40) | 0.119*** (6.33) | 0.152*** (9.69) | 0.162*** (13.36) |
| Observations | 327 | 327 | 327 | 327 | 327 |
| AR(1) | 0.0452 | 0.0430 | 0.0454 | 0.0448 | 0.0409 |
| AR(2) | 0.7300 | 0.7316 | 0.7227 | 0.7953 | 0.8128 |
| Hansen J test | 0.3838 | 0.3684 | 0.4000 | 0.5540 | 0.5223 |

Note: The values in parenthesis represent Standard Errors.

In columns 2 and 3, the coefficients on the BHN and FW indicate a positive and significant link between FDIs and access to basic needs and foundations of well-being. This finding proves that

FDIs cherish an environment where the fundamental building blocks for life and quality of life are established. It is not sufficient for a country to provide infrastructure for the building blocks of life, but also it is significantly important to create conditions where individuals and communities enjoy their lives (Babatunde, 2011; Asongu et al., 2018; Jaiblai & Shenai, 2019; Désiré & Ghislain, 2020). Malnutrition, insufficient healthcare, inadequate water and sanitary management still prevail in Africa. Wellesley et al. (2020) mentioned that malnutrition may hamper the development of individuals, communities, and economies worldwide. Malnutrition among workers in developing countries costs businesses up to \$850bn a year. Across the 19 countries studied, productivity losses due to the underweight of employees are between \$8–38 billion per year (equivalent to 0.2–0.9% of GDP). Therefore, policy should allocate resources to establish an environment capable of providing and enhancing citizens' and communities' basic needs and welfare.

Additionally, prior studies support our results on quality of life. For instance, Désiré and Ghislain (2020) mentioned that Africa should expand investment in the information and communications technology infrastructure to entice FDIs. Dechprom and Jermstittiparsert (2018) highlighted the role of human capital to increase the country's competitiveness in the FDIs international movement. A better education system may attract FDIs in industries with higher growth, value-added, and intense innovation (Brown & Sessions, 2006).

Furthermore, column 4 indicates a positive and significant relationship between OPP and FDIs, suggesting that FDIs settle in an environment characterised by higher opportunities for individuals. This result agrees with Deloitte (2015). FDIs may associate opportunity with institutional and legal conditions in the country and the extent to which laws are respected. Governments should fully enhance and expand the fundamental rights and freedoms to spur FDI.

In column 5 in Table 5, the three components of SPI are held concurrently in the same specification. The estimation results in column 5 show that only the coefficient on OPP retains its significantly positive sign. This result implies that an environment characterised by better conditions of OPP may be considered suitable for FDIs. OPP exhibits a superior influence on FDIs than BHN and FW. Additionally, the coefficient on BHN is significant in column 2, but it is insignificant according to the regression results in column 5. This can be explained by the fact that the dimension, BHN, may have captured the explanatory power of omitted effects from our specifications. Besides, the presence of multicollinearity among the dimensions of social progress may significantly generate high variance of the estimated coefficients and hence, the coefficient estimates corresponding to those interrelated explanatory variables will be inconsistent. They can become very sensitive to small changes in the model.

For the control variables, our results are consistent with the findings of the extant literature.

The coefficient of the lagged level of FDIC is positive and significant, suggesting that foreign investors may be attracted to countries with accumulated foreign investment. The “agglomeration effect” explains this result (Bbale & Nnyanzi, 2016). Existing FDIs may be a signal of favourable investment conditions and a hospitable environment for foreigners.

The coefficient on TRADE is positive and significant, suggesting that a rise in trade openness spurs FDIs. This result conforms to results by Suleiman et al. (2015), Asongu et al. (2018), and Bouchoucha and Benammou (2018). The policy shall consider further liberalisation of foreign

trade to realise trade's potential as a driving force for FDI. However, the policy shall treat many imperfections in the economy, influencing export and import (UNCTAD, 2018a). For instance, data show that Africa's exports are more concentrated than developed countries' export. In addition, many countries in Africa depend on exporting a single or a narrow range of primary goods from the extractive sector. Government should promote vertical and horizontal diversification of the economy to support foreign trade. Africa may intensify the implementation of the industrialisation and transportation strategy to expand and support diversification of the economy and thus foreign trade (UNCTAD, 2018b). Strategies should consider lowering costs for FDI as foreign firms seek economies of scale gains.

Table 5 shows the expected signs on the coefficient on the macroeconomic conditions: GDP growth, unemployment and inflation. This result indicates that a stable macroeconomic environment characterised by high growth and lower inflation promotes FDI. These findings are consistent with Fiodendji (2013) and Bbale and Nnyanzi (2016). However, we find a positive link between unemployment and FDI. Higher unemployment rates may signal lower labour costs in the host country, thus attracting more FDI.

The results in Table 5 show a positive and significant relationship between GDP per capita and FDI. This finding indicates that FDI settle in countries characterised by higher purchasing power. Investment risk may be low in countries with higher GDP per capita (Asiedu, 2002; Jaiblai & Shenai, 2019).

Further, the results show a positive and significant association between NATRE and FDI, implying that FDI may find countries endowed with natural resources enticing to immigrate, probably because of lower cost. This result agrees with Ndikumana and Mare (2019). African countries should pursue effective policy initiatives to mitigate the risks associated with the depletion of resource rents by earning more benefits from resource-seeking FDI and through diversification.

5. CONCLUSION

The role of FDI in the recipient economy is undoubtedly important for economic growth and employment. Countries compete to prepare the appropriate economic and institutional conditions for FDI. This study argues that the economic and institutional characteristics and environmental and social considerations have moderating effects on FDI. In particular, it examines the effect of social progress on FDI using a panel of 45 African countries from 2011 to 2019. The primary result supports the notion that FDI are sensitive to their economic attributes and social progress through its three dimensions. FDI seem to have little appreciation for an environment characterised by limited social progress.

Social progress should be taken to account during the country's development strategy. The governments can enhance the capability to attract and retain FDI by focusing on the citizens' basic needs, enhancing the foundations of their welfare, and creating the conditions for all sections of the society to reach their potential. The role of rich countries is central to this task. Through international organisations and agreements, rich countries can provide finance and expertise to eradicate malnutrition and poor access to water, expand health and education infrastructure and

enhance human capital. The policy shall target improving the quality of life and creating an environment where people can exercise their rights and freedoms to enhance their innovativeness and respect for the law.

This paper may lead the discussion on the social progress-FDIs nexus and invites further research to consider the unprecedented challenges brought about by the COVID-19 outbreak. We suggest further research to shed light on the role of social progress in shielding many countries from further deterioration of national health, economy and country FDIs' status. Future studies should assess the mediating role of the COVID-19 pandemic on FDI through social progress to have a complete and clearer picture of the issues under consideration.

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