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The Enabling Environment for Official Development Assistance and FDI Inflows: An Empirical Evidence from Djibouti

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Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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ABSTRACT

By leveraging the best of its strategic and economic advantage and investing in transportation and port facilities, Djibouti has seen amazing progress over the past ten years. However, there are reservations regarding the inclusivity and stability of this expansion in the future. The current research investigates the enabling environment for official development assistance and FDI inflows in Djibouti from the period 1997 until 2020. To examine the impact of key socioeconomic and governance indicators on ODA and FDI inflows, the study used simple ordinary least squares and quantile regression. The results showed that, in the case of official development assistance, variables like GDP and multilateral debt maximize foreign aid to Djibouti. Contrarily, the country's regulatory environment and government effectiveness do not support international assistance. However, the results of FDI showed that Djibouti is more attractive to FDI inflows when there is a greater level of transparency in the rule of law and spending in the health sector. Additionally, the country's regulatory quality, voice accountability, and low population growth rate all contribute to a decline in FDI inflows. Last but not least, the GDP and domestic credit to the private sector indicate

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a negligible influence in creating a desirable climate for FDI inflows, which is somewhat accurate given the weak economic position of the nation. According to the conclusions, Djibouti should modify its governance structure and implement suitable structural transformations that preserve and appeal to multinational collaboration rather than concentrating primarily on domestic businesses. Finally, the government must liberalize the market, enabling international businesses to freely operate there, while also offering them the support they require, such as fair taxation and stability.

Keywords: Official development assistance; FDI inflows; Djibouti; governance; socioeconomic.

JEL classification: F35; F43; F55.

1. INTRODUCTION

In the midst of a nomadic culture, Djibouti has embraced several contemporary organizations that are still developing. In light of the results of the World Bank's National Strategy and Organizational Assessment, the nation is categorized as being in a fragile condition (CPIA). Djibouti is a relatively small country with an economically disadvantaged population that plays a crucial role in commerce and stability between the Gulf of Aden and the Horn of Africa. The nation is located conveniently at the hub of international marine trade, with entrance to the Mediterranean and the Indian Ocean, and serves as a vital link connecting Africa, Asia, and Europe.

For every nation, foreign direct investment and official development assistance are crucial factors to assist economic growth. And Djibouti is no exception. The sentiments and practices of the host nation regarding corporate foreign capital in overall and international capital inflows (FDI) in particular have seen a significant transformation during the past 15 years. Studies that aim to show the net advantages over expenses of these movements have been conducted in parallel with this, and in certain circumstances even as a result of it [1]. Besides the fact that FDI significantly raises gross wealth creation and the equilibrium of payments without the risk involved with supplemental existing loans, it is also frequently claimed to encourage rivalry, result in advantageous innovation externalities, and have spillover effects, all of which enhance productive capacity [2].

Badwan N [3] contends that the lack of sufficient saving rates to fund expenditures is among the economic issues facing emerging nations. They have an ongoing demand for foreign investment money, including direct and indirect investments. Originally countries borrowed money from foreign commercial banks. However, the credit crisis of the 1980s caused many nations to change their financial policies in order to draw more reliable sources of international capital, and FDI seemed to be among the simplest methods to do so without bearing on any risks associated with the debt. As a result, it gained popularity as a viable substitute for credit facilities as a provider of financial inflows. In order to oversee a company's production, sales, and other operations in the host nation, people of the origin country acquire property of certain assets through the procedure known as foreign direct investment [4].

Kang HJ [5] suggest in less developed (LDC) nations, such as Djibouti, the authority plays a significant role in fostering progress, if only in the brief term. Government fiscal policies, which incorporate income tax, spending, addressing economic problems, and delivering public goods, have emerged as essential tools for economic progress in these nations, whereas the efficiency of the money supply is less important because these markets have financial dualism and are largely non-monetized. In addition, the lack of adequate infrastructure and public assistance hampered the growth of private businesses and the efficient operation of the economy. This suggests that authorities should build both social and institutional infrastructures to encourage private-sector participation [6].

Moreover, it is believed that fiscal government action is crucial in the pursuit of these objectives. For this reason, the global community has been assisting poor economies by providing them with guidance on the creation and use of financial assets to aid them to accomplish their objectives [7]. The authorities of developing nations frequently struggle with a lack of funding for development-related programs. Because of the small private sector's contribution to the economy and the inefficiency of the tax-collecting mechanism as a whole, Djibouti's prospective tax income streams are limited [8]. As a consequence, the authority has less money to

spend on infrastructure construction. In order to do this, external financial sources like loans and help are crucial [9].

Within this framework, the paper is conducted to identify the enabling environment for the official development assistance and FDI inflows in Djibouti from the period 1997 to 2020. To proceed with the study factors such as economic growth, Multilateral debt service, Domestic credit to the private sector, Government Effectiveness, Regulatory Quality, Rule of Law, Voice and Accountability, Population growth, and Current health expenditure are nominated. The study performed an ordinary least squares and quantiles regression to capture the impact of the explanatory factors on the researched phenomena. The present paper will contribute to existing knowledge of the literature by providing insights from the perspective of an understudied region over time which is eastern Africa. The empirical findings will also provide evidence to the Djiboutian authorities and any other country on how to capitalize on the factors that attract ODA and FDI inflow and create an adequate environment for oversea capital flows.

2. SURVEY OF THE LITERATURE

Mphuka C [10] states that the main challenge for poor nations to reach their permanent economic goals is to find sufficient foreign funding sources to break free from the continuous cycle of inadequate savings and poor economic growth. Poor nations often begin their productivity expansion with modest domestic degrees of resources and per capita spending. As per [11], capital gain intake from outside provides a potential breakout from the cycle of slow economic progress and poor reserves for such emerging nations, where the requirement for expenditure in development tends to surpass national saving capacity. Consequently, foreign direct investment (FDI) and official development aid (ODA) not only constitute the main funding sources in poor countries with underdeveloped banking systems, but they also give beneficiary countries an opportunity to accumulate intellectual capital and convey technologies [12].

2.1 FDI Determinants

The financing of development cycles through foreign direct investment is seen as a positive and secure method of global capital flows. Because of this, for multiple decades now, nations throughout the world have been extremely inclined to open up their markets and provide favorable circumstances to draw FDI, which are seen as crucial stimuli for improving productivity, advancing technology, and creating jobs [13]. Circumstances that are conducive to performing economic operations in a certain place are factors in FDI location. These characteristics determine the economic outlook in certain places [14].

A lot of research has been done on the connection between FDI and how well the institutional framework is maintained. Its prominence was previously noted quite some time ago, but during the past 20 years, FDI scholars have started to place more emphasis on it [15]. For a variety of factors, international investors care about the integrity of institutions. Starters, the institutional hypothesis argued that because businesses function in an uncertain and multifaceted environment, a significant portion of their actions is influenced by the conduct of institutions that have an effect on the evolution of the financial climate. By preventing corruption, enacting high-quality laws, and promoting the legal system regulators may have an impact on the capital system and investment choices, and subsequently on the capital budgeting and firm value. Secondly, because regulators have an influence on how businesses' capital structures are structured, they may also influence how well corporations are governed. Finally, and perhaps most crucially, the existence of a top-notch institutional environment contributes to providing MNEs a greater sense of legitimacy and safety, which converts into reduced investment trading costs, including losses [16]. In other words, (1) strong institutional quality could further cause confusion, increasing companies' susceptibility; (2) underperforming institutions can raise more costs by acting as a levy on FDI investors; and (3) bad institutional performance might produce additional expenses.

By improving the reliability and predictability of the previous, current, and prospective conditions of public finances, the release of fiscal information can support investor sentiment and market views of national budget soundness. For international corporations, this knowledge is crucial (MNEs). Certainly, stepping into a new market involves considerable unpredictability, therefore MNEs wanting to expand overseas must deal with the alleged risk of foreignness [17].

Economic freedom has a beneficial effect on FDI inflows in affluent nations and statistically negligible outcomes in developing ones,

according to [18] analysis of the institutional environment as measured by the IEF in 20 countries from 2004 to 2013. The research on developing markets in global commerce and economics has concentrated on two qualities of the parent nation. The first emphasizes the efficacy or integrity of a country's legal system or property ownership and assumes that multinational corporations are worried about preserving their copyrights and expertise in developing nations [19]. The second body of research concentrates more on how businesses first enter markets or are established, and how entry restrictions that raise startup costs might deter multinational corporations from entering developing countries [20].

According to [21], FDI may foster economic development since it allows a nation access to financial resources and boosts its performance on the world market. In principle, FDI helps a nation prepare and gives it a foothold in the international market so it can expand globally. Nevertheless, FDI may speed up development as long as its contributions are well controlled. As host nations assess the exchange related to foreign entrance, the link involving FDI and socioeconomic development, as well as the consistency of this development, is a key factor. Although [22] discovered a favorable association involving FDI and economic development, they note that in order to reap the benefits of the entry of foreign capital, the development of human capital in the host nation must be sufficient. [23] also did comparable studies according to how FDI in the basic, manufacturing, and business areas affect economic development, and they highlighted the reality that the impact of FDI influx on economic expansion will vary depending on the sector.

2.2 The Controversy behind the Official Development Assistance

Foreign aid, commonly referred to as official development assistance (ODA), is the distribution of resources from public organizations to poor nations mostly in the guise of subsidies and financing with favorable terms [24]. After World War Two, ODA was established in response to the necessity for rebuilding in both Europe and Asia. Mostly with the sovereignty of various African nations beginning in the 1960s, the economic advancement of the African people was greatly anticipated. The mishandling of public financing, which has worsened the populace's precarious circumstances, rapidly destroyed the enthusiasm. The fact that poverty still exists in Africa shows that the many tactics used in sequence by various contributors have not produced the expected outcomes [25].

Foreign assistance performance has always been a contentious issue. Shleifer A [26] as well as other analysts, have criticized foreign assistance, alleging that it has fueled the growth of government administration, sustained weak governance, benefited the ruling class in developing nations, or merely been mismanaged. They point out that following a half-century of international assistance, poverty is still pervasive in South Asia, Africa, and a few other nations that have obtained sizable amounts of help. Those economic experts who are critical of foreign aid suggest that government assistance programs be drastically scaled back or perhaps completely discontinued.

According to academics who advocate international aid, opponents' arguments tend to be exaggerated. A number of people, including [27] and [28], have claimed that, notwithstanding occasional setbacks, support has helped some nations expand and reduce poverty. Some nations' outcomes might have been substantially catastrophic without international help. Advocates of assistance concepts also contend that many of its flaws are greater the responsibility of funders than of beneficiaries, particularly given that help is primarily intended to forge geopolitical connections instead of funding development. As an illustration, consider the achievements of several recipient nations, including Botswana, Korea, Taiwan, Indonesia, and most notably, Uganda and Mozambique. They note that during the preceding 40 years, while assistance has been dispersed widely, levels of poverty have decreased in numerous nations while healthcare and literacy metrics have grown at a rate unheard of in human history [29].

Chheang V [30] conducted research to examine how foreign aid affects economic development and fraud in poor nations. Two fixed-effects models employing panel data from 67 nations between 1986 and 2005 revealed that assistance had no beneficial impact on economic development. Parallel to this, [31] used pooled yearly time series to examine the efficacy of international assistance and foreign investment in eastern Europe. According to the researchers, there is no discernible relationship between international assistance and real GDP. Yiew TH

[32] discovered that there is a U-shaped link connecting international assistance and the economy after looking at the function and effects of international assistance (ODA) on economic progress (GDP) employing 95 emerging economies as the dataset. International assistance initially has a detrimental effect on a country's development but eventually helps the economy expand.

For a number of reasons, help might not spur growth, say academics. First, it's possible that help is simply consumed by the administration's vehicles and mansions. Moreover, it could promote corruption, not just in the environment produced by sponsor initiatives but also generally. Third, it's possible that the assistance deters private industry growth or output. Assistance may cause the currency to appreciate, which would make it less profitable to produce marketable commodities. If not properly handled, food assistance may result in reduced costs for agricultural goods and decreased farmer earnings. Fourth, assistance flows can alter lending rates and lower both state and individual assets by harming the nation's earnings. Fifth, by sustaining terrible macroeconomic strategies and postponing changes, assistance can help oppressive regimes maintain power [33,34].

3. METHODOLOGY

3.1 Data Sources and Variables

The study is undertaken to investigate the enabling environment for Official development assistance and Foreign direct investment inflows in Djibouti from the period 1997 until 2020. The reason for selecting the study period is that Djibouti obtained it is independence in 1977 which is recent. The colonialism left the country with prominent instability and economic downturn. Following a period of civil war (1991–1995), there was a considerable shift in government spending from social and developmental services to military requirements. However, since 2001, Djibouti has developed into a capital investment magnet for the private sector, with inflows that today amount to an average of more than $200 million. Its financial situation has been greatly improved, with current salaries being paid, reserves being kept, and a growth rate of around 4.5% in 2006. With almost $600 million in dollar deposits, Djibouti has emerged as a major regional financial center. Joining several international organizations, establishing the finest maritime position in the continent even ahead of Egypt, and receiving development aid from many countries particularly Japan has contributed to shifting dramatically the economic landscape of the country. Further, the paper considered Djibouti as a focus nation because of its slow development, largely unskilled labor, and restricted natural resource. These mentioned factors are enough to attract development assistance from developed countries. Additionally, the maritime strategic position of the country attracts FDI inflows from many countries. Interestingly, the country has zero FDI outflows due to the inability of the local firms to invest outside the country. Hereby, to analyze the enabling factors that attract ODA and FDI inflows, various factors are selected namely economic growth (GDP), Multilateral debt service (MD), Domestic credit to the private sector (DC), Government Effectiveness (GE), Regulatory Quality (RQ), Rule of Law (RL), Voice and Accountability (VA), Population growth (PG), Current health expenditure (HX). Accordingly, the study considered the mentioned indicators of good governance and socioeconomic factors as proxies to assess their impact on ODA and FDI inflows which are the dependent variables. Moreover, to carry on with the study and examine the influence of the selected factors on the researched phenomenon simple Ordinary least squares, and Quantile regression are performed. Finally, all the data were extracted from World Development Indicators, and World Governance Indicators.

3.2 Model Presentation

To conduct the research ordinary least squares (OLS) and quantile regression (QREG) were performed to explore the enabling factors for ODA and FDI attraction in Djibouti. The OLS equation is described as the following:

$$Y_i = \beta_0 + \beta_1 x_{it} + \beta_2 x_{it} + \cdots + \beta_n x_{it} + \varepsilon_i \quad (1)$$

$$ODA_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 MD_{it} + \beta_3 GE_{it} + \beta_4 RQ_{it} + \varepsilon_i \quad (2)$$

$$FDI_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 DC_{it} + \beta_3 RL_{it} + \beta_4 RQ_{it} + \beta_5 HX_{it} + \beta_6 VA_{it} + \beta_7 PG_{it} + \varepsilon_i \quad (3)$$

y is the regression coefficient in this model, whereas x is the causative factor. Finally, β denotes the mean regression bounds. While ε stands for the residual in this equation. See [35]. Subsequently, the quantile regression approach employed in this study is expressed by the

preceding equation, which shows the basic linear regression of quantile Q [36].

$$y_i = \beta_0^q + \beta_1^q x_i + \varepsilon_i \quad (4)$$

Following the presentation of the basic quantile regression, the evaluation for this instance now incorporates the minimizing of the weighted sum of the absolute values of the residuals for quantile q. We notice that $\hat{y}_i^q = \beta_0^q + \beta_1^q x_i$ are the weight. While ε denotes the error.

A more sophisticated format for the quantile regression suggested by [37] is presented below.

$$\text{argmin}\left[\sum_{i=1}^{N} \rho_\tau\left(y_i - \hat{y}_i^q\right)\right] \quad (5)$$

Equation 4 can be rewritten as the following format:

$$(\beta_0^\tau, \beta_1^\tau, \beta_2^\tau, \beta_3^\tau, \beta_4^\tau, \beta_5^\tau) = \text{argmin} \sum_i \rho_\tau[y_i - \beta 0 + \beta 1 \text{ODA} + \beta 2 \text{GDP} + \beta 3 \text{MD} + \beta 4 \text{GE} + \beta 5 \text{RQ} \quad (6)$$

$$(\beta_0^\tau, \beta_1^\tau, \beta_2^\tau, \beta_3^\tau, \beta_4^\tau, \beta_5^\tau, \beta_6^\tau, \beta_7^\tau, \beta_8^\tau) = \text{argmin} \sum_i \rho_\tau[y_i - \beta 0 + \beta 1 \text{FDI} + \beta 2 \text{GDP} + \beta 3 \text{DC} + \beta 4 \text{RL} + \beta 5 \text{RQ} + \beta 6 \text{HX} + \beta 7 \text{VA} + \beta 8 \text{PS} \quad (7)$$

As we can see above, $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9, \beta_{10}$ indicate the average regressors employed in the research. y_i is the reliant variable that the study is seeking.

Unit root test

To ensure the stability and reliability of the data the study performed stationarity tests that consist of the Augmented Dickey-Fuller test (ADF) and the Phillips-Perron test (PP). Starting with the augmented Dickey-Fuller test, it assumes that u is a white noise error term. However, if u is autocorrelated we would need a drift version of the test which allows for higher-order lags. Accordingly, the test is augmented using p lags of the original series [38]. Furthermore, the Phillips-Perron test corrects for any serial correlation and heteroskedasticity in the errors by some direct modification to the test statistics [39]. Below the equations for both tests are presented.

$$\Delta y_t = \psi y_{t-1} + \mu + \alpha t + \sum_{i=1}^{p} \beta \Delta y_{t-1} + u_t \quad (8)$$

$$\Delta y_t = \psi y_{t-1} + \mu^* + \delta t + u_t, u_t \backsim I(0), ARMA(p, q) \quad (9)$$

As per equation (8) p is used to augment the past autoregressive lags of the difference term. While μ and αt denotes the time trend parameter and also the intercept. In equation (9) ψy consist of the initial term of the data while the term u_t implies the stationarity at level I(0). Additionally, μ^* expresses the intercept while δt denotes the time trend.

4. FINDINGS AND ANALYSIS

The descriptive statistics of the study are elaborated in Table 1. The outcome indicates that DC, RQ, GE, RL, and HX present the highest maximal values among the variables. In term of standard deviation, we observe that DC, HX, and VA exhibits the highest values which suggest the presence of prominent volatility in these factors. Additionally, the entire series is asymmetric because their kurtosis values are all less than 4. And all the variables are positively skewed except FDI and MD.

4.1 Correlation Results

Table 2 offer insight into the correlation results for the two model. Starting with the FDI outcome, the result display that all the variables except DC, VA, and PG are strongly correlated with the FDI inflows. On the other side, the correlation outcome for ODA presents that GE is negatively correlated with ODA while the rest of the variables appear strongly interlinked with ODA. The pattern of the connection between the variables is consistent with what this study anticipated. Furthermore, there is a minimal association among the explanatory factors. It is significant to note that the reported correlation matrix is not sufficient to draw conclusions about the influence of the explanatory variables on the dependent variables, thus demanding extensive empirical testing of the relationships. As a result, to check the existence of multicollinearity, the Variance inflation factor (VIF) is performed [37]. This test is employed to estimate the degree of variance among the selected variables. Accordingly, If the VIF value is equal to or greater than 10 we will have the presence of multicollinearity between the outcome variable and the explanatory variables. Accordingly, the VIF results indicate a mean value of 5.55 for the FDI inflows and 4.24 value for the ODA. Therefore, we conclude no evident multicollinearity.

Table 1. Descriptive statistics

ITEMS	FDI	ODA	GDP	DC	MD	RQ	GE	RL	HX	VA	PG
Mean	7.634	8.077	9.056	26.11	7.071	24.40	20.14	21.84	54.06	15.63	1.785
Median	8.010	8.134	9.010	22.55	7.158	23.64	19.80	21.02	54.64	13.84	1.620
Maximum	8.456	8.419	9.502	46.06	7.563	35.07	33.33	31.25	82.28	28.35	2.923
Minimum	6.491	7.773	8.70	20.07	6.371	16.30	13.46	15.38	31.04	7.511	1.344
Std. Dev.	0.731	0.188	0.2897	6.974	0.366	4.835	5.173	4.291	16.56	6.580	0.463
Skewness	-0.667	0.028	0.312	1.597	-0.474	0.329	0.943	0.479	0.010	0.603	1.421
Kurtosis	1.791	1.914	1.550	4.887	1.914	2.619	3.252	2.352	1.668	2.095	3.704
Sum	183.2	193.8	217.3	626.66	169.7	585.7	483.5	524.1	1297.4	375.12	42.853
Observations	24	24	24	24	24	24	24	24	24	24	24

Table 2. Correlation matrix

	FDI inflows								VIF
Variables	**FDI**	**DC**	**GDP**	**RQ**	**RL**	**HX**	**VA**	**PG**	
FDI	1.000								
DC	-0.608	1.000							2.97
GDP	0.805	-0.505	1.000						10.04
RQ	0.482	-0.292	0.409	1.000					3.00
RL	0.045	0.122	-0.385	0.298	1.000				2.83
HX	0.841	-0.467	0.898	0.645	-0.180	1.000			11.49
VA	-0.803	0.263	-0.806	-0.536	0.106	-0.832	1.000		4.26
PG	-0.808	0.719	-0.532	-0.434	-0.233	-0.598	0.449	1.000	4.29

	ODA					VIF
Variables	**ODA**	**GDP**	**MD**	**GE**	**RA**	
ODA	1.000					
GDP	0.905	1.000				6.72
MD	0.914	0.921	1.000			7.25
GE	-0.605	-0.545	-0.565	1.000		1.59
RQ	0.307	0.409	0.474	-0.457	1.000	1.40

Table 3. Unit root test

Variables	**Augmented Dickey-Fuller test (ADF)**					
	At level		**1st Difference**		**Lag order**	**Decision**
	Intercept	**Intercept with Trend**	**Intercept**	**Intercept with Trend**		
FDI	1.599	1.700	-3.368**	-3.534*	1	I(1)
ODA	0.256	-3.046	-4.621***	-4.652***	1	I(1)
GDP	0.231	-2.142	-2.841*	-3.872**	1	I(1)
DC	-4.651***	-3.877**	-3.616**	-2.999	1	I(0) I(1)
MD	-1.103	-2.026	-4.685***	-4.619***	1	I(1)
RQ	-2.335	-1.598	-3.156**	-3.615*	1	I(1)
GE	-1.618	-2.403	-2.845*	-3.949**	1	I(1)
RL	-1.640	-2.065	-3.600**	-3.833**	1	I(1)
HX	-1.400	-1.262	-4.103***	-4.399**	1	I(1)
VA	-1.154	-1.868	-2.883*	-3.468**	1	I(1)
PG	-12.74***	-10.03***	-4.643***	-3.928**	1	I(0) I(1)
Variables	**Phillips–Perron test**					
	At level		**1st Difference**		**Lag order**	**Decision**
	Intercept	**Intercept with Trend**	**Intercept**	**Intercept with Trend**		
FDI	-1.456	-1.550	-4.313***	-4.400**	1	I(1)
ODA	0.296	-2.848	-5.857***	-5.958***	1	I(1)
GDP	0.517	-2.167	-4.005***	-3.973**	1	I(1)
DC	-2.797	-2.486	-5.453***	-5.822***	1	I(1)
MD	-0.994	-2.923	-8.334***	-6.171***	1	I(1)
RQ	-1.913	-1.280	-3.396***	-4.339**	1	I(1)
GE	-1.652	-1.771	-3.987***	-3.906**	1	I(1)
RL	-1.521	-1.815	-4.292***	-4.692***	1	I(1)
HX	-1.294	-1.034	-4.000***	-4.475***	1	I(1)
VA	-1.186	-1.948	-4.275***	-4.178**	1	I(1)
PG	-1.784	-1.318	-3.120**	-3.862**	1	I(1)

**** p<.01, ** p<.05, * p<.1. Source: Author's own work*

4.2 Stationarity Test

Table 3 reveals the stationarity of the factors employed in this study, considering the Augmented Dickey-Fuller test (ADF), and Phillips–Perron tests. Accordingly, as depicted in the table all the variables employed in the study are stationary at the first difference. However, DC and PG demonstrated a simultaneous integration in both the level and first difference. Consequently, based on the stationarity test all the variables do not contain unit roots hence we will proceed with the OLS and QREG regression.

4.3 OLS Results for Both ODA and FDI Inflows

Table 4 presents the outcome of the OLS for both the FDI inflows and ODA. In accordance with the results, RL and HX reveal a positive impact on FDI inflows and they are significant at a 10% level. This implies that an increase in the level of transparent rule of law and expenditure in the health sector increases the attraction of FDI inflows in Djibouti by 0.037% and 0.017%. What is more, RQ, VA, and PG display a negative influence on the FDI inflows. For instance, the regulatory quality of the country as well as the voice accountability and the low level of population growth decrease the FDI inflows by 0.038%, 0.045%, and 0.4% respectively. Unsurprisingly, the GDP and domestic credit to the private sector show an insignificant role in providing an attractive environment for the FDI inflows which is partially true because of the sluggish economic situation in the country. Furthermore, the findings concerning the factors that attract ODA display that the GDP, MD, GE, and RQ have an impact on ODA with a significance level of 1%, 5%, and 10%. Nevertheless, this impact varies across the factors. For instance, an increase of 1% in economic growth and the multilateral debt rises the official development assistance by 0.23% and 0.3%. While the government effectiveness and the regulatory quality of Djibouti are not favorable in providing an adequate environment for official development assistance.

Table 4. Ordinary least-square estimates

Dep. FDI inflows						
Variables	**Coef.**	**St. Err**	**t-value**	**p-value**	**[95% Conf**	**Interval]**
DC	-0.018	0.011	-1.63	0.122	-0.042	0.005
GDP	0.228	0.496	0.46	0.652	-0.824	1.281
RQ	-0.038**	0.016	-2.37	0.031	-0.073	-0.004
RL	0.037*	0.018	2.10	0.052	0	0.075
HX	0.017*	0.009	1.78	0.093	-0.003	0.036
VA	-0.045***	0.014	-3.13	0.006	-0.075	-0.014
PG	-0.455**	0.203	-2.25	0.039	-0.885	-0.026
Constant	6.781	4.686	1.45	0.167	-3.152	16.714
Mean dependent var			7.635			
R-squared			0.938			
F-test (7, 16)			34.751			
Prob > F			0.000			
Dep. ODA						
Variables	**Coef.**	**St. Err**	**t-value**	**p-value**	**[95% Conf**	**Interval]**
GDP	0.23*	0.124	1.85	0.08	-0.03	0.489
MD	0.3***	0.102	2.95	0.008	0.087	0.513
GE	-0.006*	0.003	-1.84	0.081	-0.013	0.001
RQ	-0.007**	0.003	-2.20	0.04	-0.015	0
Constant	4.183***	0.622	6.73	0.0001	2.881	5.484
Mean dependent var			8.077			
R-squared			0.897			
F-test (4, 19)			41.545			
Prob > F			0.000			

**** p<.01, ** p<.05, * p<.1. Source: Author's own work*

Table 5. Quantiles results for FDI

Variables	Dependent variable: FDI								
	Lower quantile			Intermediate quantile			Upper quantile		
	q15	q25	q35	q45	q55	q60	q70	q85	Q95
DC	-0.0403	-0.0185	-0.0210	-0.0027	-0.0113	-0.0406	-0.0453	-0.0514	-0.0514
	(0.025)	(0.028)	(0.028)	(0.026)	(0.025)	(0.024)	(0.026)	(0.033)	(0.034)
GDP	1.139	1.024	1.056	0.361	-0.453	-0.514	-0.268	-0.104	-0.104
	(0.673)	(0.702)	(0.693)	(0.679)	(0.690)	(0.737)	(0.828)	(0.803)	(0.858)
RQ	-0.00209	-0.00603	-0.0131	-0.026	-0.041*	-0.057**	-0.0464	-0.0437	-0.0437
	(0.0315)	(0.0303)	(0.0277)	(0.0250)	(0.0205)	(0.0208)	(0.028)	(0.028)	(0.030)
RL	0.0465	0.0362	0.0472	0.0220	0.0210	0.0337	0.0340	0.0402	0.0402
	(0.0366)	(0.0334)	(0.0296)	(0.0270)	(0.0259)	(0.0245)	(0.026)	(0.0283)	(0.0276)
HX	0.0030	0.0057	0.0098	0.0201	0.0172*	0.024**	0.015	0.011	0.011
	(0.0133)	(0.0145)	(0.0138)	(0.0134)	(0.0097)	(0.010)	(0.017)	(0.0176)	(0.018)
VA	-0.0493*	-0.0398	-0.0284	-0.0246	-0.053**	-0.062**	-0.06**	-0.06**	-0.062
	(0.0271)	(0.0285)	(0.0284)	(0.0254)	(0.0216)	(0.0253)	(0.026)	(0.0252)	(0.035)
PG	-0.200	-0.353	-0.356	-0.567	-0.827*	-0.217	-0.158	0.0578	0.0578
	(0.246)	(0.248)	(0.362)	(0.437)	(0.449)	(0.426)	(0.501)	(0.584)	(0.584)
Const	-1.834	-0.997	-1.641	4.869	13.98*	14.16*	12.20	10.54	10.54
	(6.808)	(7.033)	(7.187)	(7.112)	(6.947)	(7.383)	(7.714)	(7.286)	(8.491)

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

Table 6. Quantiles results for ODA

Variables	Dependent variable: ODA								
	Lower quantile			Intermediate quantile			Upper quantile		
	q10	q20	q35	q45	q55	q65	q75	q85	q90
GDP	-0.086	0.207	0.230	0.225	0.217	0.325*	0.244	0.268	-0.058
	(0.239)	(0.202)	(0.137)	(0.194)	(0.175)	(0.176)	(0.194)	(0.295)	(0.305)
MD	0.427	0.224	0.185	0.291*	0.290**	0.268**	0.311*	0.303	0.527**
	(0.251)	(0.166)	(0.129)	(0.151)	(0.137)	(0.122)	(0.150)	(0.219)	(0.234)
GE	-0.008	-0.011	-0.012*	-0.003	-0.0042	-0.0041	-0.0065	-0.0068	0.0006
	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.005)	(0.006)	(0.007)	(0.008)
RQ	0.0032	-0.002	-0.002	-0.004	-0.0053*	-0.009***	-0.008***	-0.00***	-0.008*
	(0.009)	(0.005)	(0.0036)	(0.003)	(0.002)	(0.003)	(0.002)	(0.0028)	(0.004)
Const	5.83***	4.87***	4.96***	4.17***	4.27***	3.569***	4.05***	3.921***	5.157***
	(1.35)	(1.262)	(0.863)	(0.997)	(0.888)	(0.940)	(0.761)	(1.088)	(1.105)

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

4.4 QREG Estimates for FDI inflows

Table 5 above, presents the heterogeneity between the quantiles for the variables that affect FDI inflows in Djibouti. The table compromise a lower quantile between (q15, q25, q35) an intermediate quantile (q45, q55, q60) and upper quantile (q70, q85, q95). Within this scope, the results showcase that RQ and HX coefficients are statistically significant at 5% and 1% levels for the 55th and 60th quantiles. Whereas, VA reveals a significance level of (5%) at intermediate and upper quantiles. Additionally, PG displays a significance coefficient of 10% in the 55th quantile. Finally, factors such as DC, GDP, and RL present insignificant values across all the quantiles. Based on these outcomes, when the quantile regression model is performed factors such as regulatory quality, health expenditure, voice accountability, and population growth play a crucial role in terms of FDI inflows in Djibouti.

4.5 QREG Estimates for ODA

Table 6 expresses the findings concerning the official development assistance (ODA). The present model illustrates an identical outcome to the OLS results. For instance, we perceive that all the variables have an impact on ODA with a significance level of 1%, 5%, and 10%. In addition, MD and RA present a significant impact at the intermediate and upper quantiles. While GDP and GE reveal notable impact at lower (q35) and intermediate quantiles (q65) respectively.

4.6 Diagnostic Results

Table 7 expresses the diagnostic test of the study. Hereby, Breusch-Pagan-Godfrey and White's tests for Heteroskedasticity demonstrate a Prob value higher than the 1%, 5%, and 10% significance level thus we conclude that the empirical findings are free from heteroskedasticity issue.

Table 7. The diagnostic test

Heteroskedasticity test: Breusch-pagan-godfrey		
Model	**Prob**	**Notes**
FDI	0.4006	No evidence of Heteroskedasticity
ODA	0.6766	No evidence of Heteroskedasticity
White's test for Heteroskedasticity		
Model	**Prob**	**Notes**
FDI	0.4038	The model is free from Heteroskedasticity
ODA	0.4136	The model is free from Heteroskedasticity

5. CONCLUSION

The provision of company finance and the promotion of general economic development in other nations are major benefits of FDI via ODA. In reality, several scholars' empirical investigations strongly confirm the link between levels of foreign assistance and the economy. Western agenda has changed significantly in recent years. Government international aid (ODA) from wealthy donor nations has long served as the primary source of funds for numerous poor countries. For a number of them, additional capital flows, including remittances and investment from abroad (FDI), have grown to be similar or more significant in recent centuries.

ODA is a crucial component of the international development sector. It is referred to as state assistance that is given bilaterally between funder and beneficiary nations or is routed via an international body like the UN or the World Bank to advance the economic growth and prosperity of emerging economies. The UN recommends that industrialized nations give 0.70% of their Economic output (gross national income) to help underdeveloped countries.

Furthermore, long-term economic growth is a universal phenomenon that all countries strive to achieve. Emerging economies in general must draw the most Overseas investment as they can in order to achieve this aim. Therefore, FDI has made a significant contribution to capital formation and economic progress in many different nations. This is thought to help with socioeconomic enhancement. A study conducted by [40] in the context of Vietnam with FDI inflows, states the country has secure political and economic conditions, while also upholding positive connections with nations throughout the world, including those in the Asia Pacific, Europe, and America. In order to update our workforce and employees in a variety of fields and sectors, including education, manufacturing, banking and finance, healthcare, etc., Vietnam also offers appropriate and acceptable training. What is more, in another study [41] examined the challenges and opportunities that affect FDI. The author asserts Over the years, Vietnam's government and key ministries have adopted or changed a number of related legislations to eliminate obstacles, let companies run more effectively, enhance the investment climate, and raise Vietnam's competitiveness index, which attracts international investors.

Within this context, the current paper examined the factors that enable an adequate environment for official development assistance and FDI inflows from the period 1997 until 2020. Djibouti was considered a focus country due to its complex and underdevelopment economy which requires urgent need for foreign aid. The study employed simple ordinary least squares and quantile regression to investigate the effect of various socioeconomic and governance indicators on ODA and FDI inflows. Accordingly, the findings disclosed that in the case of official development assistance factors such as GDP, and multilateral debt increase the foreign aid to Djibouti. Whereas, government effectiveness and the regulatory quality of the country are not encouraging foreign aid. However, the results of FDI showed that Djibouti is more attractive to FDI inflows when there is a greater level of transparency in the rule of law and spending in the health sector. Additionally, the country's regulatory quality, voice accountability, and low population growth rate all contribute to a decline in FDI inflows. Last but not least, the GDP and domestic credit to the private sector indicate a negligible influence in creating a desirable climate for FDI inflows, which is somewhat accurate given the weak economic position of the nation.

Based on the findings, it is important that Djibouti change it is governance structure and provide adequate institutional reforms that protect and attract multinational cooperation instead of only focusing on the domestic firms. Additionally, one of the main reasons that frame the Djiboutian market as undesirable for foreign firms' investment is the rigid monopolization by a governmental organization. For instance, all the important sectors such as telecommunication, energy, health, and media are dominated by one or few companies and institutions. Hereby, the government needs to liberalize the market and allow foreign firms to easily operate in the market while simultaneously providing them the necessary assistance such as reasonable taxation and stability. Finally. the current research will add to the body of literature by offering views from the viewpoint of eastern Africa, an area that has historically received little attention. The empirical results will also demonstrate to Djiboutian authorities and any other nation how to take advantage of the elements that draw ODA and FDI inflow and provide a favorable environment for international capital flows.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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