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# The Role of Political Stability and Corruption in Human Development and Foreign Direct Investment in Pakistan

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## Abstract

This study investigates the relationship of Foreign Direct Investment (FDI) with human development in Pakistan and considers corruption and political stability in this relationship. We extracted the data from World Development Indicators' and Transparency International database. The period of study spanned from 1996 to 2022. We applied the Augmented Dickey-Fuller test to check the stationary condition of the data. The results suggest that some variables are stationary at level I(0), whereas others become stationary at first difference. So, the Autoregressive Distributed Lag (ARDL) approach is used to examine short-run and long-run relationships. The bounds test suggests a long-run relationship among the variables. FDI has a positive and significant relationship with the Human Development Index (HDI) in both periods, with a stronger long-run

effect. The Corruption Perception Index (CPI) also has a positive and significant relationship with HDI. The interaction of FDI and CPI shows that the contribution of FDI to human development becomes stronger when corruption is lower. Political stability is also positively related to HDI. However, its interaction with FDI is significant over the long run but not over the short run. So, the results show that better governance, lower corruption and greater political stability can strengthen the contribution of FDI to human development in Pakistan.

**Keywords:** Foreign direct investment, Human development, Corruption, Political stability, ARDL

# 1. Introduction

FDI is not only an additional source of capital for a host country; it may also bring technology, management skills and improved methods of production. FDI is an investment across borders in which the investor keeps a lasting interest and some control in an enterprise (Arcelus et al., 2005). The knowledge and production methods brought by foreign firms can improve the efficiency of local businesses (Pegkas, 2015; Findlay, 1978). Neo-classical and internationalization theories explain that investment from developed economies can support business activity in developing countries. These inflows can provide finance, create employment and generate tax revenue for the host economy (Buckley & Casson, 1976; Buckley, 2018; Caves, 1996; Hymer, 1976; Todaro, 1989). So, the effect of FDI is not limited only to output growth. It can also affect the economic and social conditions that determine human development.

Human development is often linked with economic growth, but it covers a wider range of outcomes. Income is important for development, but education and health are also basic components of the quality of life. A large body of literature has examined the impact of FDI on economic growth (Srivastava & Talwar, 2020; Korle et al., 2020; Ahmad et al., 2019; Al-Shammari et al., 2016; Haddad, 2018). However, economic growth does not always mean that human development will improve at the same rate (Fine, 1999; UNDP, 1999). GDP measures the value of economic activity, but it does not capture many dimensions of well-being. These dimensions include access to health, education and a stable social and political environment (Stiglitz, 2006). Rawls (1971) and Sen (1999) also explain development in terms of opportunities and human capabilities. From this perspective, development requires that economic gains are translated into education, healthcare

and other social resources. FDI can help improve human development only when its economic benefits reach these wider areas of life.

The HDI gives a broader measure of development than income alone. It was developed by the United Nations Development Program and includes education, health and living-standard indicators (UNDP, 1999; Sharma & Gani, 2004). The results in literature do not show the same relationship between FDI and HDI. This may be because foreign investment works under different conditions. Institutional quality, political stability and corruption can affect the use of investment resources and the distribution of their benefits (Blomstrom & Kokko, 1996). However, limited studies examine these institutional factors together in developing countries, particularly for Pakistan.

Pakistan is an important case for the investigation of the association between FDI and human development. Foreign investment increases capital and can support activity in the domestic market. It may also create employment and increase household income, which can improve living standards (Fonseka, 2020; Wang et al., 2018). Pakistan received about $2.74 billion FDI in 2024 compared with $2.73 billion in 2018. But FDI inflows have remained unstable during the last decade with periods of decline and recovery. Recent years show some improvement, although the trend is not continuously increasing (World Bank, 2024). At the same time, Pakistan still has a weak position in human development. Pakistan was ranked 146 out of 186 countries on HDI in 2018 (Wang et al., 2018). This shows continuing problems in education, health and distribution of income. Economic growth is important to improve these conditions, but growth itself may not be enough. The gains from economic activity also need to reach education, healthcare and other areas of social well-being in Pakistan overall (Srivastava & Talwar, 2020).

Considering this situation, the present study investigates the impact of FDI on human development in Pakistan. The study particularly considers corruption and political stability because both variables may affect how foreign investment contributes to the economy. These institutional variables investigate if the impact of FDI on HDI changes under different governance conditions. The study also directly addresses a gap in the Pakistan based literature. Most of the earlier literature has focused on the relationship between economic growth and FDI, whereas broader dimensions of human development received less attention (Fine, 1999; UNDP, 1999). So, this study focuses

on HDI and examines whether corruption and political stability change the relationship of FDI with human development in Pakistan over time.

The study uses annual data from 1996 to 2022 for FDI, HDI, corruption and political stability. The data are taken from World Bank's WDI database and transparency international. We used ARDL method to estimate short-run and long-run associations. The results show that FDI has a favorable and statistically significant relationship with HDI in both periods. A higher CPI score means lower corruption and it is also related with higher HDI. The interaction of FDI and CPI is positive and significant, which shows that FDI contributes more to human development when corruption is controlled. Political stability also has a positive relationship with HDI, whereas its interaction with FDI is significant only in the long-term. So, attracting FDI alone may not be enough because governance conditions also matter in Pakistan. Section two reviews literature on FDI, HDI and governance. Section three elaborates on the data and methodology used in this research. In section four we discuss the results. Finally in section five, the conclusion and main policy implications of the study are presented.

### 1.1. Review of Literature

Human development is a broad concept which includes health, education and standard of living, so it cannot be explained only by economic growth (Sharma & Ghani, 2004). Economic growth can provide resources for development, but the way these resources are converted into human well-being also depends on governance conditions. Political stability and quality of governance are important in this process (Cao et al., 2017). The effects of FDI on economic growth and human development have been examined in different countries. However, limited research is available for Pakistan when corruption and political stability are considered together (Siraroj & Ulubasoglu, 2015). Most studies for Pakistan have examined the effect of FDI on economic growth (Siddique et al., 2017; Mahmood & Chaudary, 2019; Minhaj et al., 2007; Raza et al., 2020; Sohail & Mirza, 2020). These studies do not examine FDI, corruption and political stability jointly in relation to HDI. Most available evidence on these relationships comes from other developing regions such as South Africa, MENA, Cameroon and India (Tamer, 2013; Nawaz et al., 2020; Mbang, 2022; Fonseka, 2020). So, governance conditions remain important.

This section reviews the theoretical and existing research related to FDI and human development. It also reviews the role of political stability and corruption in this relationship. On the basis of the existing evidence, the relevant hypotheses of the study are developed.

### 1.2. FDI and Human Development Nexus

FDI represents long-term investment and can also transfer technology and production knowledge. These inflows can increase investment and business activity (Arcelus et al., 2005). FDI provides finance, but its role is not limited to it. Foreign firms can also transfer managerial practices and technical knowledge to local firms. This transfer of knowledge may create efficiency spillovers (Pegkas, 2015; Findlay, 1978), also called contagion effect. Through these channels, productivity can in turn contribute to better human development outcomes (Hussain et al., 2010; Mehrara et al., 2015).

Several theoretical approaches explain why firms invest across foreign economies. Internationalization theory (Buckley & Casson, 1976; Buckley, 2018) and the product cycle or industry technology cycle (Magee, 1977) explain the movement of firms and FDI over time. Developing countries often depend on FDI because domestic savings and technology are limited. FDI can help to fill the savings gap and can also support improvements in technology and institutional capacity (Gökmenoğlu, 2018; Caves, 1996; Hymer, 1976; Todaro, 1989). The inflow of foreign investment may then affect human development through capital investment, employment creation and higher income (Reiter & Steensma, 2010). These channels provide the theoretical basis for expecting a relationship between FDI and HDI.

previous studies generally show a relationship between FDI and human development, but the results are different across countries and industries. Santosa (2014) found that FDI improved HDI in Myanmar and Vietnam, whereas the effect was negative in the Philippines. Makki and Somwaru (2004) also found a positive relationship of FDI with HDI. Whereas Naveed and Shabir (2006) found only a limited effect on GDP per capita. Blomstrom and Kokko (1998) showed that results may differ across industries. Nelson and Singh (1998) argued that FDI alone cannot explain differences in human development and political, institutional and social factors are also important. Other macroeconomic variables may also affect this relationship. Inflation is associated with lower HDI, whereas GDP per capita has shown a positive relationship with FDI (Gohou & Soumare,

2011; Alshamsi & Azam, 2015; Tamer, 2013). So, the relationship of FDI with human development may depend on the economic and governance environment. It means governance conditions are also important for human development outcomes in Pakistan.

In Pakistan, foreign direct investment has generally increased during the last two decades. FDI rose from $0.534 billion in 2003 to $2.73 billion in 2024 (World Bank, 2024). This increase indicates that FDI may have an important role in economic and human development. However, the human development position of Pakistan is still relatively low. According to the United Nations Development Programme (UNDP, 2023), the HDI of Pakistan increased from 0.40 in 1990 to 0.54 in 2022. This reflects an improvement of approximately 37.1 percent during the period. Even with this improvement, an important question remains. It is necessary to examine the extent to which higher FDI contributes to human development in Pakistan. It is also important to know whether the effect stays the same in the short-run and the long-run. Considering this issue, the first hypothesis is stated as follows:

*H1: FDI has a significant impact on the human development index (HDI) in Pakistan.*

### 1.3. Corruption and Human Development

Corruption can reduce the effective use of resources in health, education and other sectors that are important for human development. Mauro (1995) showed that higher corruption reduces government expenditure on social services. Gupta et al. (1998) found that a 1% increase in corruption could lead to a decrease of an annual 7.8% income of the poor. Corruption can also change the composition of public investment. Resources may be directed towards projects that provide higher private gains instead of projects with greater social benefits (Croix & Delavallade, 2008). Akçay (2006) also found a negative association between corruption and HDI. Countries with a high level of corruption were found to have more serious human development problems. These results show that corruption can directly affect public resource allocation and the welfare outcomes linked with these resources.

The effect of FDI on human development may depend on corruption. Reiter and Steensma (2010) and Ullah et al. (2014) found that FDI contributes more to HDI where corruption is low. With high corruption, some FDI benefits may not reach households and public services. Therefore, better

control of corruption can increase the development benefits obtained from foreign investment. For this reason, the study examines the interaction between FDI and corruption instead of considering only their separate effects.

On the basis of this evidence, we hypothesize that:

*H2: There is a significant interacting effect of FDI and corruption on HDI.*

### 1.4. Political Stability and Human Development

Political stability can provide an environment where the governments can implement policies and allocate resources in a more consistent way. It can also improve access to education, health and income opportunities (Przeworski et al., 2000; Kurzman et al., 2002). Political instability can create the opposite effect by disturbing development programmes and public services. It can also increase social and economic inequality. The evidence on political stability and the FDI-HDI relationship is not uniform. Olson (1993) explains that long-lasting governments can come under the pressure of interest groups and this may reduce the effectiveness of development policies. Huntington (1968) also argues that rapid economic growth can take place without immediate social stability. In Pakistan, political instability has remained an important issue while the level of human development is also low. Therefore, it is useful to examine whether political stability changes the contribution of FDI to HDI. On the basis of this argument, the third hypothesis is stated as follows:

*H3: FDI and political stability have a significant combined effectx on HDI.*

## 2. Methodology

### 2.1. Data and Variables of Interest

We used annual time series data from 1996 to 2022. HDI is the outcome variable taken from the WDI databases. The key predictor, FDI was measured as a percentage of GDP. Political stability uses the political stability and absence of violence or terrorism score. Corruption was measured by Corruption Perception Index (CPI) from Transparency International; a higher score represents lower corruption. GDP growth and consumer price inflation are included as control variables and

are taken from the WDI. Table 1 therefore presents the definition, expected sign and data source of each variable used in the analysis.

**Table 1:** Variable description

| **Variable** | **Description** | **Expected Sign** | **Data Source** |
|---|---|---|---|
| Human Development Index (HDI) | HDI measures human development | NA | WDI |
| Foreign Direct Investment (FDI) | FDI inflows as % of GDP | + | WDI |
| Corruption (CPI) | Corruption Perception Index (High score depicting low corruption) | + | TI |
| Political Stability (POL) | Political stability and absence of violence/terrorism; Estimates from -2.5 (weak) to 2.5 (strong) | + | WDI |
| Gross Domestic Product (GDP) | Annual % GDP growth | + | WDI |
| Inflation (INFL) | Consumer price inflation (annual %) | – | WDI |

### 2.2. Empirical Model and Estimation Technique

We used ARDL cointegration method to estimate the short-run and long-run relationships (Pesaran & Shin, 1999; Pesaran et al., 2001). ARDL is suitable for this study because the variables are a mixture of I(0) and I(1) and the annual time series sample is relatively small. Therefore, it is more appropriate than the Engle-Granger (1987) and Johansen-Juselius (1990) approaches. It also allows the long-run relationship to be tested while the short-run changes are estimated within the same framework.

The baseline long-run model used in this study is specified as follows:

$$HDI_t = \alpha_0 + \alpha_1 FDI_t + \alpha_2 GDP_t + \alpha_3 INFL_t + \alpha_4 POL_t + \alpha_5 CPI_t + \varepsilon_t \quad \text{Eq. (1)}$$

Where $\varepsilon_t$ is the standard error term and $\alpha_0$ is the intercept.

The ARDL form of the baseline model is then written as follows:

$$\Delta HDI_t = \beta_0 + \sum_{i=1}^{\rho} \beta_{1i} \Delta HDI_{t-i} + \sum_{i=1}^{\rho} \beta_{2i} \Delta FDI_{t-i} + \sum_{i=1}^{\rho} \beta_{3i} \Delta GDP_{t-i} + \sum_{i=1}^{\rho} \beta_{4i} \Delta INFL_{t-i}$$

$$+ \sum_{i=1}^{\rho} \beta_{5i} \Delta POL_{t-i} + \sum_{i=1}^{\rho} \beta_{6i} \mathrm{CPI}_{t-i} + \alpha_1 ECT_{t-1} + \varepsilon_t$$

Eq. (2)

Here $\Delta$ is the difference operator. is the intercept and presents the baseline change in HDI. The F-test considers the level variables jointly to examine if they have a long-run relationship.$\beta_0$

The model is further extended by incorporating the interaction terms of FDI with corruption and political stability:

$$\Delta HDI_t = \beta_0 + \sum_{i=1}^{\rho} \beta_{1i} \Delta HDI_{t-i} + \sum_{i=1}^{\rho} \beta_{2i} \Delta FDI_{t-i} + \sum_{i=1}^{\rho} \beta_{3i} \Delta POL_{t-i} + \sum_{i=1}^{\rho} \beta_{4i} \Delta CPI_{t-i}$$

$$+ \sum_{i=1}^{\rho} \beta_{5i} \Delta (FDI \times POL)_{t-i} + \sum_{i=1}^{\rho} \beta_{6i} \Delta (FDI \times CPI)_{t-i} + \sum_{i=1}^{\rho} \beta_{7i} \Delta GDP_{t-i} +$$

$$\sum_{i=1}^{\rho} \beta_{8i} \Delta INFL_{t-i} + \alpha_1 ECT_{t-1} + \varepsilon_t$$

Eq. (3)

$ECT_{t-1}$ Here is the error correction term. It shows the speed at which short-run deviations correct toward the long-run equilibrium.

## 3. Results and Discussion

In this section, first we present the descriptive statistics and correlations of the variables. Table 2 presents the descriptive statistics. The mean value of the Human Development Index is 0.496 with a standard deviation of 0.042. The low standard deviation shows that changes in human development remained limited during the period of analysis. There is some improvement over time, but the overall change remains small. FDI as a percentage of GDP also shows a low mean value. The average FDI to GDP ratio is 0.977 percent, while its maximum value is 3.036 percent and its minimum value is 0.31 percent. The standard deviation is 0.726. It shows that Pakistan has not attracted foreign investment consistently during the period of study. Average GDP growth is 3.988 percent. The minimum growth rate is -1.274 percent, whereas the maximum growth rate is 7.547 percent during this period. This wide range shows instability in the economic performance of the country. Inflation also remained relatively high during the study period. Its mean value is 8.385 percent with a standard deviation of 4.677 percent. The maximum inflation rate is 20.286 percent, whereas the minimum is 2.529 percent. The governance variables also show a weak position. Political stability and absence of violence has a mean value of -1.989. This value is close to the lower side of the scale of -2.5 and therefore shows a weak political environment. The mean value of the Corruption Perception Index is 25.815, which also reflects a poor position in the control of corruption. Taken together, these results provide a picture of the economic, political and governance conditions faced by Pakistan.

**Table 2:** Descriptive results

| Variables | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| HDI index | 27 | .496 | .042 | .423 | .546 |
| FDI to GDP ratio | 27 | .977 | .726 | .31 | 3.036 |
| GDP growth rate | 27 | 3.988 | 1.961 | -1.274 | 7.547 |
| Inflation | 27 | 8.385 | 4.677 | 2.529 | 20.286 |
| Political Stability | 27 | -1.989 | .573 | -2.5 | -1.105 |
| Corruption perception | 27 | 25.815 | 4.876 | 10 | 33 |

Table 3 reflects on the correlation among the variables used in this research. HDI has a negative correlation with political stability and FDI/GDP. This may occur because political changes do not

immediately appear in health, education and other social outcomes. The weak negative HDI-FDI relationship also shows that foreign investment alone may not be enough to improve human development without supportive institutions. CPI, GDP growth and inflation, however, show positive correlations with HDI. The CPI relationship is important because a higher CPI score means lower corruption. Its positive relationship with HDI therefore suggests that better control of corruption is related with better human development in Pakistan.

The correlation between HDI and political stability is strongly negative at -0.730. This may be because social outcomes may respond slowly when political conditions change, and HDI may continue improving because of earlier reforms during political instability. In contrast, HDI and CPI have a strong positive correlation of 0.717. A higher CPI score represents lower corruption. It means that better control of corruption may support human development through better allocation of public resources to education, healthcare and other social services.

**Table 3:** Correlational Matrix

| Variables | HDI index | FDI to GDP ratio | GDP growth rate | Inflation | Political stability | Corruption perception |
|---|---|---|---|---|---|---|
| HDI index | 1.000 | | | | | |
| FDI to GDP ratio | -0.132 | 1.000 | | | | |
| GDP growth rate | 0.090 | 0.009 | 1.000 | | | |
| Inflation | 0.200 | 0.310 | -0.324 | 1.000 | | |
| Political stability | -0.730 | -0.133 | 0.048 | -0.262 | 1.000 | |
| Corruption perception | 0.717 | -0.358 | -0.172 | -0.149 | -0.432 | 1.000 |

### 3.1. Unit Root and Lag Length Analysis

Time series variables can become non-stationary over time and ignoring this property may produce spurious regression results (Nelson & Charles, 1982). So, the Augmented Dickey-Fuller (ADF) test of Dickey and Fuller (1979) is used to check the order of integration of the series. The results are reported in Table 4. HDI and GDP are stationary at level I(0), whereas FDI, CPI, POL and INFL become stationary after first differencing and are I(1). The interaction terms are also stationary after first difference. None of the variables is reported as I(2). The presence of both I(0) and I(1) variables supports the use of the ARDL approach for this study (Pesaran et al., 2001).

**Table 4:** Results of Unit Root Test

| Variable | T-Statistic | 1% Critical Value | 5% Critical Value | 10% Critical Value | P-value | Decision |
|---|---|---|---|---|---|---|
| HDI | -4.6827 | -3.743 | -2.997 | -2.629 | 0.001 | I(0) |
| FDI | -3.333 | -3.750 | -3.000 | -2.630 | 0.01 | I(1) |
| CPI | -4.676 | -3.750 | -3.000 | -2.630 | 0.001 | I(1) |
| POL | -3.461 | -3.750 | -3.000 | -2.630 | 0.009 | I(1) |
| GDP | -3.776 | -3.743 | -2.997 | -2.629 | 0.003 | I(0) |
| INFL | -5.161 | -3.750 | -3.000 | -2.630 | 0.000 | I(1) |
| FDI*CPI | -4.517 | -3.750 | -3.000 | -2.630 | 0.002 | I(1) |
| FDI*POL | -3.135 | -3.750 | -3.000 | -2.630 | 0.0241 | I(1) |

**Table 5:** Lag Order Selection

| \| lag \| | LL | LR | FPE | AIC | HQ | SC |
|---|---|---|---|---|---|---|
| \| 0 \| | 29.5934 | na | -2.48638 | -2.47396 | -2.43701 | na |
| \| 1 \| | 85.9384 | 112.69 | .00004 | -7.29899 | -7.27416 | -7.20025 |
| \| 2 \| | 89.5375 | 7.1981* | .000032* | -7.525* | -7.48775* | -7.37689* |
| \| 3 \| | 89.551 | .02702 | .000035 | -7.43922 | -7.38955 | -7.24174 |
| \| 4 \| | 89.7525 | .40308 | .000037 | -7.36978 | -7.3077 | -7.12294 |

Before estimating the ARDL model, lag length is selected. Table 5 reports lag orders using the Akaike Information Criterion (AIC), which is suitable for a relatively small sample. The minimum AIC value is obtained at lag two. Therefore, two lags are then selected for the remaining analysis. After selecting the lag structure, the ARDL bounds test is applied. Table 6 reports F-statistics of 8.025 for Model I, 37.884 for Model II and 7.013 for Model III. In all three models, the results show that F-statistic has a value greater than the 1 percent upper-bound critical value. Hence, we reject the null hypothesis and conclude that cointegration between HDI and the FDI, governance and macroeconomic variables over the period of study exist.

**Table 6:** ARDL Cointegration Test Results

| **Models** | **Model-I** | | | **Model-II** | | | **Model-III** | | |
|---|---|---|---|---|---|---|---|---|---|
| Optimal lag structure | (2 0 0 1) | | | (1 2 2 2 1 2) | | | (2 1 0 0 0 2) | | |
| *F*-Statistics | 8.025 | | | 37.884 | | | 7.013 | | |
| Critical values (%) | 1% | 5% | 10% | 1% | 5% | 10% | 1% | 5% | 10% |
| Lower bounds *I*(0) | 4.29 | 3.23 | 2.72 | 3.41 | 2.62 | 2.26 | 3.41 | 2.62 | 2.26 |
| Upper bounds *I*(1) | 5.61 | 4.35 | 3.77 | 4.68 | 3.79 | 3.35 | 4.68 | 3.79 | 3.35 |

### 3.2. Long-Run and Short-Run Results

This study uses Pakistan annual data from 1996 to 2022 rather than a panel. The ARDL approach also estimates both the short-run changes and long-run relationships. The R-squared values are close to 0.99, showing high explanatory power of the models. The error correction term is negative and significant, which shows adjustment toward long-run equilibrium after deviations. The bounds test also confirms cointegration. So, the short-run and long-run results are discussed together.

According to Section A of Table 7, FDI has a positive and significant coefficient of 0.487. It shows that a 1 percent increase in FDI is related with about 0.48 percent increase in HDI. CPI also has a positive and significant coefficient of 0.205. A higher CPI score means lower corruption, so better control of corruption is related with improved human development. The interaction of FDI and CPI is positive and significant at 3.475. It clearly means the FDI-HDI relationship becomes stronger when corruption is lower. According to the reported interpretation, a 1 percent increase

in FDI is related with 3.47 percent increase in HDI when corruption declines by 1 percent. So, this is an important long-run result.

**Table 7:** Long-run and Short-run ARDL Results

| **Section A: Long-run Results** | | | | |
|---|---|---|---|---|
| **Predictors** | **Coeff. (β)** | **Std. Error** | **T-ratio** | ***p*-value** |
| FDI | 0.487194 | 0.227765 | 2.13 | 0.0431 |
| CPI | 0.205397 | 0.040989 | 5.01 | 0.0000 |
| FDI x CPI | 3.475 | 0.686616 | 5.06 | 0.0000 |
| POL | 0.314917 | 0.08950 | 3.52 | 0.0016 |
| FDI x POL | 0.005309 | 0.0024898 | 2.13 | 0.0431 |
| GDP | 0.598482 | 0.26144 | 2.29 | 0.030 |
| INFL | -0.031261 | 0.0080 | -3.90 | 0.0006 |
| **Section B: Short-run Results** | | | | |
| **Predictors** | **Coeff. (β)** | **Std. Error** | **T-ratio** | ***p*-value** |
| FDI | 0.003873 | 0.001842 | 2.10 | 0.0435 |
| CPI | 0.217643 | 0.054795 | 3.97 | 0.0005 |
| FDI x CPI | 0.002410 | 0.000427 | 5.64 | 0.0000 |
| POL | 0.147526 | 0.032957 | 4.47 | 0.0001 |
| FDI x POL | 0.0309321 | 0.0252617 | 1.22 | 0.2338 |
| GDP | 0.210100 | 0.047050 | 4.46 | 0.0001 |
| INFL | -0.052887 | 0.016966 | -3.11 | 0.0046 |
| ECM | -0.061546 | 0.016219 | -3.79 | 0.002 |
| Note: the HDI is the dependent variable | | | | |

Political stability has a positive and significant long-run relationship with HDI, with a coefficient of 0.315. It shows about a 0.31 percent increase in HDI with a 1 percent improvement in political stability. The interaction of FDI and political stability is positive and significant with a coefficient of 0.005. So, stable political conditions may help foreign investment to contribute strongly to human development. GDP also has a positive and significant coefficient of 0.598, showing an

effect of about 0.59 percent in the long run. Whereas inflation has a negative and significant coefficient of -0.031, hence, higher inflation is associated with lower human development in the long-run. So, the long-run results show the importance of both governance and economic conditions for HDI.

Section B of Table 7 presents the short-run results. FDI has a favorable and statistically significant coefficient of 0.0039, showing a smaller positive relationship with HDI. CPI is also positive and significant at 0.218, showing that lower corruption is linked with better human development. The FDI-CPI interaction remains favorable and significant with a beta of 0.0024. This shows that corruption control also strengthens the FDI-HDI relationship in the short run. However, the short-run effect is smaller than the long-run effect because benefits of investment through education, healthcare and household welfare may take longer to become clear.

Political stability is positively associated and has a significant short-run coefficient of 0.148. However, the FDI-political stability interaction is insignificant in the short run. This result is different from the significant long-run interaction and indicates that the combined effect of investment and political stability may take longer to become clear. GDP is positive and significant with a coefficient of 0.210, whereas inflation is negative and significant at -0.053. Therefore, most short-run results have the same direction as long-run results. The main difference is the insignificant short-run interaction between FDI and political stability.

Table 8 presents the diagnostic tests of the estimated models. The Durbin-Watson statistics for Models I and II are close to 2, while Model III has a higher value treated as acceptable. Breusch-Godfrey probabilities are above 0.05 in all models, so serial correlation is not rejected. White test probabilities are also above 0.05, showing no evidence of heteroscedasticity. The Jarque-Bera probabilities are also above 0.05 and do not reject normality of the residuals. So, the diagnostic results support the adequacy and reliability of the estimated ARDL models.

**Table 8:** Diagnostic Tests

| | **Model One** | **Model Two** | **Model Three** |
|---|---|---|---|
| R Square | 0.9985 | 0.9985 | 0.9986 |
| Adjusted R Square | 0.9980 | 0.9979 | 0.9980 |
| Durbin-Watson stat | 1.963929 | 1.992259 | 2.468134 |
| Breush-Godfrey | 0.1384 | 0.1409 | 0.2502 |
| White test | 0.4058 | 0.4058 | 0.4058 |
| Jarque-Bera | 0.4865 | 0.3448 | 0.3832 |

Model stability is examined through the CUSUM and CUSUM of Squares tests (Pesaran & Shin, 1999). Figures 1 to 3 present the CUSUM of Squares results. The plotted series stay within the 5 percent significance limits during the periods shown. So, the stability tests do not indicate structural instability in the estimated coefficients and further support the estimated models.

- Figure 1 CUSUM of Squares for Model I
- Figure 2 CUSUM of Squares for Model II
- Figure 3 CUSUM of squares for Model III

# 4. Discussion

The findings can be compared with earlier research. Ullah et al. (2014), using 33 Asian countries, found a positive association between corruption control and human development but no significant role of political stability. Reiter and Steensma (2010) showed that high corruption weakens the positive FDI effect on human development. The results are consistent with these studies and show that governance conditions affect how foreign investment contributes to human development.

The positive and significant association between FDI and HDI favors the first hypothesis. Similar results are reported by Sharma and Gani (2004), Hussain et al. (2010), Gui-Diby (2014) and Hamdi and Hakimi (2022). The effect of FDI is greater over the long run than in the short run. This difference may occur because foreign investment needs time to affect employment, skills, technology, capital accumulation and household income. As income and productive activity

increase, people can obtain better access to education and healthcare (Reiter & Steensma, 2010). The effect may also differ across sectors. A large infrastructure project may affect development differently than investment which directly creates employment or supports social services. The results also support corruption control. A higher CPI score represents lower corruption and has a positive relationship with HDI. Better use of public funds can increase public resources for health, education and services (Mauro, 1995), whereas corruption can divert these resources. The stronger relationship in the long run shows that continued control of corruption is important for human development. This is particularly important for Pakistan.

The FDI-CPI interaction is positive and significant in both periods and supports the second hypothesis. It shows that the relationship between FDI and HDI becomes stronger when corruption is lower. FDI can bring finance and technology, but governance affects how these benefits reach households and public services. If fewer resources are diverted, investment benefits can reach more people. The long-run interaction is stronger than the short-run interaction. So, the results suggest that policies for attracting FDI should also be combined with better governance and control of corruption (Reiter & Steensma, 2010; Ullah et al., 2014) in Pakistan.

The third hypothesis is related to political stability. A stable political environment can support government programmes, reduce investor uncertainty and improve public services. Political stability has a positive relationship with HDI in both periods and the effect is greater in the long run. However, the interaction of political stability with FDI is significant only in the long run. It means political conditions may need time before they strengthen the relationship of foreign investment with human development. Political uncertainty may reduce the benefits of FDI when investment continues. But over time, lower risk and more consistent policies can provide better environment for development (Przeworski et al., 2000; Kurzman et al., 2002).

GDP and inflation also show important results. GDP has a positive relationship with HDI in both periods. This means that overall economic activity can support education, health and other human development outcomes (Minhaj et al., 2007; Chaudhury et al., 2020). Whereas inflation has a negative relationship. Higher prices reduce household purchasing power and leave less money for education, healthcare and basic needs. Continued inflation can also put pressure on government

spending for social services. So, macroeconomic stability is important along with economic growth and foreign investment policies.

The results show that FDI contributes to human development in Pakistan, but governance and economic conditions are also important. The relationship between FDI and HDI becomes stronger when corruption is lower and political conditions are stable. GDP growth has a positive relationship with HDI, whereas inflation shows a negative relationship. Most of these effects are stronger in the long run. So, policies should not focus only on increasing foreign investment. FDI promotion should be supported with better governance, political stability and sound macroeconomic management so that the benefits of foreign investment can contribute more to human development in Pakistan over a longer period.

# 5. Conclusion

This study examines the relationship of FDI with human development in Pakistan using annual data from 1996 to 2022 and also considers corruption and political stability. The unit root results show that HDI and GDP are stationary at level, whereas other variables become stationary after first difference. This mixed order of integration supports the ARDL approach. The bounds test shows a long-run relationship and the error correction results show adjustment from short-run disequilibrium towards the long-run equilibrium after deviations.

The results show a positive and significant relationship between FDI and HDI in Pakistan in both periods, with a stronger effect in the long run. Better control of corruption is related with higher HDI and also strengthens the positive effect of FDI. Political stability also has a positive relationship with human development and strengthens the FDI relationship in the long run, whereas its short-run interaction is insignificant. GDP has a positive relationship with HDI, while inflation has a negative relationship. So, Pakistan needs more than only an increase in foreign investment. FDI should be encouraged in sectors that create employment and improve education, health and other areas of human development. Better control of corruption and a more stable political environment can also help investment benefits reach more people. The study is limited by annual data availability and focus on one country. Future studies may extend the time period,

include other macroeconomic and institutional variables and examine the sectoral composition of FDI in more detail in future research.

## References


[1] Ahmad, F., Draz, M. U., Su, L., Ozturk, I., Rauf, A., & Ali, S. (2019). Impact of FDI inflows on poverty reduction in the ASEAN and SAARC economies. Sustainability, 11(9), 2565.

[2] Akçay, S. (2006). Corruption and human development. Cato Journal, 26(1), 29–48.

[3] Al-Shammari, N., Al-Halaq, S., Al-Shammari, D. (2016), Testing the FDI hypothesis of location advantage in the case of Kuwait. Journal of Applied Business Research, 32(2), 597. Available from: https://doi.org/10.19030/jabr.v32i2.9598.

[4] Alshamsi, K. H., & Azam, M. (2015). The impact of inflation and GDP per capita on foreign direct investment: the case of United Arab Emirates. Investment management and financial innovations, (12, Iss. 3 (contin.)), 132-141.

[5] Arcelus, F. J., Sharma, B., & Srinivasan, G. (2005). Foreign capital flows and the efficiency of the HDI dimensions. Global Economy Journal, 5(2), 1850036.

[6] Blomstrom, M., & Kokko, A. (1996). The impact of foreign investment on host countries: A review of the empirical evidence. Unpublished manuscript.

[7] Blomstrom, M., & Kokko, A. (1998). The economics of foreign direct investment incentives. NBER Working Paper 9489, National Bureau of Economic Research.

[8] Buckley, P., & Casson, M. (1976). The Future of Multinational Enterprise. Basingstoke and London: Macmillan

[9] Buckley, P. (2018). Internalization Theory. In: Augier, M., Teece, D.J. (eds) The Palgrave Encyclopedia of Strategic Management. Palgrave Macmillan, London.

[10] Cao, T. H. V., Trinh, Q. L., & Nguyen, T. A. L. (2017, June). The effect of foreign direct investment on inequality-adjusted human development index (IHDI) in Asian countries. Paper presented at the 10th Vietnam Economist Annual Meeting (VEAM), Vietnam.

[11] Caves, R. E. (1996). Multinational enterprise and economic analysis (2nd ed.). Cambridge: Cambridge University Press.

[12] Chaudhury, S., Nanda, N., & Tyagi, B. (2020). Impact of FDI on economic growth in South Asia: does nature of FDI matters?. Review of Market Integration, 12(1-2), 51-69.

[13] Croix, D. and C. Delavallade (2007), Corruption et allocation optimale de l'investissement public. Revue Economique, Volume 58(3), pp. 637-647.

[14] Dickey, D. A., & Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. Journal of the American Statistical Association, 74(366), 427–431. https://doi.org/10.1080/01621459.1979.10482531.

[15] Engle, R. F., & Granger, C. W. (1987). Co-integration and error correction: representation, estimation, and testing. Econometrica: Journal of the Econometric society, 251-276.

[16] Findlay, R., (1978), "Relative Backwardness, Direct, Investment, and the Transfer of Technology: A Simple Dynamic Model," Quarterly Journal of Economics, Vol. 92, pp. 1-16.

[17] Fine, Ben. 1999. The Developmental State is Dead-Long Live Social Capital? Development and Change. 30 (1):1-19

[18] Fonseka, T. N. M. (2020). Impact of FDI on Indian Economic growth. GSJ, 8(10).

[19] Gohou, G., & Soumaré, I. (2011). Does Foreign Direct Investment Reduce Poverty in Africa and are There Regional Differences? World Development, 40, 75-95. https://doi.org/10.1016/j.worlddev.2011.05.014

[20] Gökmenoğlu, K. K., Apinran, M. O., & Taşpınar, N. (2018). Impact of foreign direct investment on human development index in Nigeria. Business and Economics Research Journal, 9(1), 1-14.

[21] Gui-Diby, S.L. 2014. "Impact of Foreign Direct Investments on Economic Growth in Africa: Evidence from Three Decades of Panel Data Analyses." Research in Economics 68 (3): 248–256. doi:10.1016/j.rie.2014.04.003.

[22] Gupta, S., Davoodi, H., and Terme, R. (1998) Does Corruption Affect Income Inequality and Poverty? International Monetary Fund, Working paper WP/98/76.

[23] Haddad, A.M. (2018), The impacts of the inwards and outwards FDI on the development measured by GDP. Oxford Journal: An International Journal of Business and Economics, 13(1), 75-88.

[24] Hamdi, H., & Hakimi, A. (2022). Trade openness, foreign direct investment, and human development: a panel cointegration analysis for MENA countries. The International Trade Journal, 36(3), 219-238.

[25] Huntington, S. P. (1968). Political order in changing societies. Yale University Press.

[26] Hussain, A., Majeed, S., Muhammad, S. D., & Lal, I. (2010). Impact of globalization on HDI (Human Development Index): case study of Pakistan. European Journal of Social Sciences, 13(1), 46.

[27] Hymer, S. H. (1976). The international operations of national firms: A study of direct foreign investment. Cambridge: MIT Press

[28] Johansen, S., & Juselius, K. (1990). Maximum likelihood estimation and inference on cointegration- with the applications to demand for money. Oxford Bulletin of Economics and statistics. 52(2), 196-210.

[29] Korle, K., Amoah, A., Hughes, G., Pomeyie, P., & Ahiabor, G. (2020). Investigating the role of disaggregated economic freedom measures and FDI on human development in Africa. Journal of Economic and Administrative Sciences, 36(4), 303-321.

[30] Kurzman, C., R. Werum and R. E. Burkhart (2002), Democracy's effect on economic growth: A pooled time-series analysis, 1951-1980. Studies in Comparative International Development, Volume 37(1), pp. 3-33. http://dx.d0i.0rg/l 0.1007/BF02686336

[31] Magee, S. P. (1977).* Multinational corporations, the industry technology cycle and development. Journal of World Trade Law, 11(4), 297–321.*

[32] Mahmood, H., & Chaudhary, A. R. (2012). Impact of FDI on human capital in Pakistan. Asian Journal of Empirical Research, 2(3), 84-91.

[33] Makki, S. S. & Somwaru, A. 2004. Impact of foreign direct investment and trade on economic growth: Evidence from developing countries. American Journal of Agricultural Economics, 86, 795-801.

[34] Mauro, P. (1995) Corruption and growth. The Quarterly Journal of Economics 110(3): 681-712.

[35] Mbang, O. M. (2022). Foreign Direct Investment and Human Development in Cameroon. American Journal of Industrial and Business Management, 12(1), 58-72.

[36] Mehrara, M., & Musai, M. (2015). The effect of FDI on Economic Growth in MENA Region. International Journal of Applied, 3(1), 11-16.

[37] Minhaj, S. Q., Ahmed, R., & Hai, S. S. (2007). Globalization, foreign direct investment and the human development index: The case of Pakistan. Global economy journal, 4(1).

[38] Naveed and Shabir. (2006). Trade Openness, FDI and Economic Growth, Pakistan Economic and Social Review Volume XLIV, No. 1 (Summer), pp. 137- 154.

[39] Nawaz, z., Elarby, L., & Lamis. (2022). Does the Rule of law affect the relation between IHDI and FDI? An Empirical Evidence for the MENA region from 2010-2019.*

[40] Nelson, C. R., & Charles, C. R. (1982). Trends and random walks in macroeconomics time series; some evidence and implications. Journal of Monetary Economics, (10)2, 139-162

[41] Nelson, M. A. and Ram D. Singh, R.D. (1998). Democracy, Economic Freedom, Fiscal Policy and Growth in LDCs: A Fresh Look. Economic Development and Cultural Change. 46 (4):677-697.

[42] Olson, M. (1993). Dictatorship, democracy, and development. American Political Science Review, 87(3), 567–576.

[43] Pegkas, P. (2015). The impact of FDI on economic growth in Eurozone countries. The Journal of Economic Asymmetries, 12(2), 124-132.

[44] Pesaran, M. H., & Shin, Y. (1999). An autoregressive distributed lag modelling approach to cointegration analysis (DAE Working Paper Series). University of Cambridge.

[45] Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. Journal of Applied Econometrics, 16(3), 289–326. https://doi.org/10.1002/jae.616.

[46] Przeworski, A., M. E. Alvarez, J. A. Cheibub and F. Limongi (2000), Democracy and development: Political institutions and well-being in the world, 1950-1990. Cambridge: Cambridge University.

[47] Rawls, J. (1971). A theory of justice. Harvard University Press.

[48] Raza, A., Azam, M., & Tariq, M. (2020). The Impact of Greenfield-FDI on Socio-Economic Development of Pakistan. Экономический журнал Высшей школы экономики, 24(3), 415-433.

[49] Reiter, S. L., & Steensma, H. K. (2010). Human development and foreign direct investment in developing countries: the influence of FDI policy and corruption. World development, 38(12), 1678-1691.

[50] Santosa, W. 2014. Analysis of the impact of Foreign direct investment on Social development in Indonesia and other ASEAN countries. In: UNIVERSITY, T. (ed.).

[51] Sen, A. (1995). Gender inequality and theories of justice. In M. Nussbaum and J. Glover (Eds.), Women, Culture, and Development, Clarendon Press, Oxford, 259–273.

[52] Sharma, B., & Gani, A. (2004). The effects of foreign direct investment on human development. Global economy journal, 4(2), 1850025.

[53] Siddique, H. M. A., Ansar, R., Naeem, M. M., & Yaqoob, S. (2017). Impact of FDI on economic growth: Evidence from Pakistan. Bulletin of Business and Economics (BBE), 6(3), 111-116.

[54] Siraroj, S., & Ulubaşoğlu, M. A. (2015). Foreign direct investment and economic growth: A real relationship or wishful thinking? Economic Modelling, 51, 200–213.

[55] Sohail, S., & Mirza, S. S. (2020). Impact of foreign direct investment on economic growth of Pakistan. Asian Journal of Economics, Finance and Management, 1-13.

[56] Srivastava, S., & Talwar, S. (2020). Decrypting the dependency relationship between the triad of foreign direct investment, economic growth and human development. The Journal of Developing Areas, 54(2).

[57] Stiglitz, J. E. (2006). Making globalization work. New York: W.W. Norton and Company.

[58] Tamer, C. R. (2013). The Effects of Foreign Direct Investment and Official Development Assistance on the Human Development Index in Africa. University of Massachusetts Boston.

[59] Todaro, M. P. (1989). Economic development in the Third World. New York: Longman

[60] Ullah, S., Azim, P., Asghar, N. (2014). Political economy of human development: An empirical investigation for Asian countries. Pakistan Development Review. 52, 75-97.

[61] UNDP. (1999). Human Development Report 1999, Oxford University Press, Oxford.

[62] UNDP. (2023). Human development report 2023/24: Breaking the gridlock-Reimagining cooperation in a polarized world. UNDP. https://hdr.undp.org/content/human-development-report-2023-24

[63] Wang Z, Zhang B, Wang, B. (2018) Renewable energy consumption, economic growth, and human development index in Pakistan: evidence form a simultaneous equation model. J Clean Prod 184, 1081– 1090. https://doi.org/10.1016/j.jclepro.2018.02.260.

[64] World Bank. (2024). Foreign direct investment, net inflows (BoP, current US$) – Pakistan. Retrieved from https://data.worldbank.org/indicator /BX.KLT.DINV.CD. WD ? locations =PK