


How does economic growth impacted by economic freedom? A case study of the Middle East Region



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ABSTRACT

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The study aimed to analyze the impact of economic freedom on economic growth and foreign direct investments concerning a country's political stability. The research employed a correlation design. It focused on 11 Middle Eastern countries over a period of 22 years. The study used the Autoregressive Distributed Lag (ARDL) method to estimate short- and long-term relationships. Results demonstrated that economic freedom significantly and positively affects economic growth in the long run, while civil liberties positively influence both economic growth and foreign direct investment in both the short and long term. Conversely, the study found that political rights have a negative impact on long-term growth, suggesting that in the Middle East, democratic expansion is associated with policy uncertainties that hinder growth. Additionally, the findings indicated that foreign direct investment in the Middle East is driven by civil liberties rather than political stability or economic freedom, highlighting the importance of institutional transparency. Overall, the findings emphasize the significance of institutional quality as a key driver of sustained economic performance in the region. Therefore, Middle Eastern governments should implement structural reforms to safeguard trade and economic freedoms.

Contribution/ Originality: This study uniquely integrates economic freedom, political stability, and civil liberties into an ARDL framework to examine their joint short- and long-term effects on growth and FDI in the Middle East, addressing regional gaps and nonlinear dynamics often overlooked in prior literature.

1. INTRODUCTION

Economic freedom (EF) is essential for all countries as it promotes a stable monetary system, certain rights to private property, an impartial legal system, and minimal barriers to international exchange (Ghazalian & Amponsem, 2019). EF and economic growth are related because if countries experience multiple barriers to trade, they will struggle to grow their economies appropriately (Seyoum & Ramirez, 2019). Indeed, the freedom to choose and supply resources, in conjunction with strong competition within business trades, is central to economic progress (Perevozova et al., 2020). However, the precise mechanisms by which economic freedom influences economic growth and foreign direct investments (FDIs) remain contested in the literature, particularly when accounting for a country's level of political stability. In particular, FDIs, which refer to the ownership stakes in foreign companies by individuals from other countries (Contractor, Dangol, Nuruzzaman, & Raghunath, 2020), represent a critical channel through which economic freedom might affect growth outcomes. Despite their

significance, Senalp (2018) reported that EF, economic growth, and FDI are often relegated to secondary considerations in economic research, with greater attention focused on technological development, market size, and transport and factor costs. This neglect represents a significant gap in our understanding of economic development processes, especially in regions with fragile political environments like the Middle East.

Accordingly, prior research on the relationship between economic freedom, growth, and FDI has produced inconsistent and contradictory findings, limiting the development of coherent policy frameworks. While many countries have observed positive relationships between FDI and economic growth since the post-World War II expansion of global investment, a critical strand of research challenges this orthodoxy. As a result, studies like Senalp (2018) have identified methodological shortcomings in earlier works that failed to account for contextual factors specific to developing economies, potentially overstating the benefits of FDI. More specifically, Loungani and Razin (2001) argued that developing countries might perceive FDIs as more resilient during financial crises than other private capital flows, leading to policy preferences that may be based on incomplete evidence. Their analysis revealed that developing countries relying heavily on FDIs could be operating under false premises, as their economies often feature missing or inefficient markets that distort the relationship between investment and growth outcomes.

A more fundamental weakness in the literature concerns the inadequate theoretical integration of political stability as a moderating variable. Particularly, Bashir and Xu (2014) identified a positive and significant relationship between EF and political stability regarding economic growth. However, other studies have revealed negative relationships between these constructs, creating substantial uncertainty about their interactions (Hussain & Haque, 2016). These contradictory findings suggest that previous research has failed to develop sufficiently distinct models that account for regional variations, institutional frameworks, and historical contexts particularly in regions with distinctive political economies like the Middle East. Additionally, existing studies have often employed simplistic linear models that inadequately capture the complex, potentially non-linear relationships between economic freedom and growth outcomes. Most notably, the literature has insufficiently addressed threshold effects, whereby economic freedom may need to reach certain levels before generating significant growth benefits (Carlsson & Lundström, 2002). This theoretical limitation has resulted in policy recommendations that may be inappropriate for countries at different stages of development or with different institutional frameworks.

Economic policies attract significant scientific and public interest. Politicians, journalists, citizens, and intellectuals frequently debate the appropriate scope and size of government intervention. Policy polarization often characterizes these discussions: many economists advocate for an activist state that reduces economic inequality through control and redistribution policies, while others support a free-market economy with restrictions on state intervention to avoid market distortions (Jäger, 2017). This theoretical divergence has contributed to inconsistent empirical findings regarding the relationship between economic freedom and growth.

Given these significant gaps and limitations in the existing literature, this study aims to make three distinct contributions. First, the paper analyzes the impact of economic freedom on economic growth and foreign direct investments, specifically within the Middle Eastern context a region characterized by unique political and economic structures that previous research has inadequately addressed. Second, the paper develops a more sophisticated theoretical framework that explicitly accounts for the moderating role of political stability in the relationship between economic freedom and growth outcomes. Finally, the paper employs methodological approaches that detect short-run and long-run influences in these relationships, thereby providing more nuanced policy implications than previous studies have offered. By addressing these limitations in the existing literature, this study provides a more comprehensive understanding of how economic freedom influences growth in the Middle East, a region where conventional economic theories have often proven insufficient, and where more tailored policy approaches may be necessary to foster sustainable development.

1.1. Background of the Problem

Although research has concluded that there are strong relationships between EF, economic growth, and FDIs, a weakness in the literature concerns the inadequate theoretical integration of political stability as a moderating variable. Particularly, [Bashir and Xu \(2014\)](#) identified a positive and significant relationship between EF and political stability regarding economic growth. However, other studies have revealed negative relationships between these constructs, creating substantial uncertainty about their interactions ([Hussain & Haque, 2016](#)). These contradictory findings suggest that previous research has failed to develop sufficiently distinct models that account for regional variations, institutional frameworks, and historical contexts. This section provides a background to the problem, discussing EF, how EF is measured, EF and FDIs, political stability, EF, economic growth, and how political stability can contribute to economic growth.

1.2. Economic Freedom and Its Measurement

According to [Ghazalian and Amponsem \(2019\)](#), economic freedom is a multifaceted concept with varying interactions with income inequality depending on a country's development stage. Specifically, economic freedom encompasses aspects such as market-oriented policies and institutions, necessity-driven entrepreneurship, and the degree of government intervention in economic activities ([Angulo-Guerrero, Pérez-Moreno, & Abad-Guerrero, 2017](#)). According to [Xu \(2019\)](#), as a result, economic freedom therefore implies minimal state interference, which in turn plays a critical role in fostering a competitive business environment and encouraging foreign direct investment inflow. Since the 1990s, researchers have increasingly emphasized the significance of institutional quality and economic growth in promoting economic development. Accordingly, economic freedom is characterized by the presence of voluntary exchange, competitive markets, and strong legal protection for property and individual rights ([Carlsson & Lundström, 2002](#); [O'Driscoll, Holms, & O'Grady, 2002](#)).

Developed by [Gwartney, Holcombe, and Lawson \(2004\)](#), the world economic freedom index (EFW) was initially applied to data from 1775 to 1995 before transitioning to annual updates starting in 1996. Accordingly, EFW has emerged as a pivotal tool for academics and policymakers examining the relationship between institutional frameworks and economic performance. Specifically, the index provides a quantitative assessment of market liberalism across countries, scoring nations on a 0 to 100 scale, whereby higher values denote greater economic freedom ([Lawson, Murphy, & Powell, 2020](#)). The EFW metric has gained widespread recognition in economic research ([Lawson et al., 2020](#)). While the majority of literature underscores the beneficial effects on economic freedom, some researchers caution against overgeneralization. In particular, [Heckelman \(2000\)](#) and [Kotulic, Huttmanova, Vozarova, and Nagy \(2015\)](#) emphasize contextual limitations, arguing that economic freedom's impact varies across institutional settings. Methodologically, studies leveraging the EFW index often employ convergent validity tests to ensure consistency across indicators, with Cronbach's alpha serving as a reliability benchmark (where $\alpha \geq 0.7$ is acceptable and $\alpha \geq 0.8$ is ideal).

1.3. Economic Freedom and Foreign Direct Investment

Starting in early 1980, there has been a global trend towards liberalizing foreign direct investment policies. Specifically, these trends have been observed more in developing and emerging economies ([Asongu, Akpan, & Isihak, 2018](#)). According to [United Nations Conference on Trade and Development \(UNCTAD\) \(2013\)](#), this shift was evidenced by 59 countries implementing 87 distinct policy measures impacting foreign direct investment. However, despite this movement towards liberalization, approximately 27% of national investment policies remained restrictive. As a result, this indicates a complex balance between investment promotion and regulatory control. In particular, scholarly consensus identifies several critical linkages between economic freedom and FDI attraction. First, deregulation has been shown to stimulate economic growth by creating favorable conditions for entrepreneurship and enabling firms to pursue higher-risk, higher-return ventures ([Bosma, Content, Sanders, &](#)

Stam, 2018). Conversely, excessive market regulation can lead to inefficient resource allocation (Zghidi, Mohamed Sghaier, & Abida, 2016). Second, flexible labor market policies facilitate positive FDI spillovers through labor mobility, allowing workers with multinational experience to transfer valuable skills and knowledge to domestic firms (Li, Liang, & Zhou, 2021). Third, robust property rights protection serves as a key determinant for attracting technology-intensive FDI (Li et al., 2021), while fourth, trade openness enables domestic firms to expand into international markets (Javorcik, 2004).

The mobility of capital and labor toward regions with greater economic freedom operates at both national and sub-national levels, as demonstrated by the Fraser Institute's Economic Freedom of North America index, which has tracked these movements since 2002 across U.S. states, Canadian provinces, and Mexican states (Stansel & McMahon, 2014). Investment decisions are influenced by a complex matrix of factors, including governance quality, trade policies, and financial transparency. Empirical evidence from South Asia (1995–2014) indicates that economic freedom, particularly fiscal and trade freedoms, significantly enhances FDI inflows (Korle, Amoah, Hughes, Pomeyie, & Ahiabor, 2020), suggesting that policy reforms in these areas could yield substantial benefits for developing economies (Imtiaz & Bashir, 2017).

1.4. Political Stability

Accordingly, political stability has emerged as a significant consideration for foreign investors, often outweighing other factors in investment decisions (Canh, Binh, Thanh, & Schinckus, 2020). According to Akin (2019), firms tend to evaluate host country stability along with economic freedom indicators, property rights protections, and labor market conditions. Ren, Zhang, Yan, and Gozgor (2022) contend that a stable political environment is associated with reduced investment risk, enhanced investor confidence, and improved capital productivity. Similarly, in their study, Blum and Gründler (2020) demonstrated that political crises reduce GDP growth by an average of three percentage points. As a result, the relationship between political stability and economic freedom appears particularly crucial, as stable institutional frameworks allow for the full realization of economic liberalization's benefits while mitigating the risks associated with rapid policy changes.

1.5. Economic Freedom and Economic Growth

There have been empirical studies that focus on the relationship between economic growth and economic freedom, especially over the past two decades. Here, we introduce recent significant studies. Table 1 demonstrates that economic freedom has been generally said to impact economic growth positively.

Table 1. Literature review on the nexus between economic freedom and economic growth.

| Study | Country/Country group (Period) | Impact of EF on EG | Weakness |
|----------------------------------|--|----------------------------------|---|
| Akinci, Yuce, and Yilmaz (2014) | 144 developed / underdeveloped countries (1995–2012) | Positive | Employed cointegration analysis and thus did not capture both short-run and long-run impacts, where the current study employs ARDL, which captures short-run shocks and long-run trends (critical for regions with frequent instability). |
| Kilic and Arica (2014) | 23 upper-middle-income countries (1995 – 2010) | Positive | Limited focus on upper-middle-income countries, which restricts the generalizability of the findings to other income groups. |
| Piątek, Szarzec, and Pilc (2013) | 25 transition economies (1990–2008) | Positive | Limited observations for variables, which may affect robustness, and the reliance on lagged values that might not fully capture long-term dynamics. |
| Alexandrakis and Livanis (2013) | 23 Latin American/Caribbean, 23 OECD countries (1984–2007) | Mixed, depending on the country. | Potential endogeneity issues persist despite the use of lagged variables and the exclusion of institutional nuances that may influence policy effectiveness, such as governance quality or cultural factors. |

| Study | Country/Country group (Period) | Impact of EF on EG | Weakness |
|---------------------------------|--|------------------------|--|
| Peev and Mueller (2012) | Transition economies (1994-2007) | Positive | Endogeneity concerns due to the potential reverse causality between growth and institutional quality, limitations in measuring democracy and bureaucratic legacy accurately, and the challenge of generalizing findings beyond the unique context of post-communist transitions. |
| Fabro and Aixalá (2012) | 79 countries (1976-2005) | Positive | Reliance on subjective indices such as those from Freedom House and the Fraser Institute, which may introduce measurement biases. |
| Wu (2011) | China (1995-2008) | Positive | Vulnerability to endogeneity and reverse causality, which the author acknowledges, noting that omitted variables such as policy quality and the limitations of cross-country regressions may affect the robustness of the conclusions. |
| Saribas (2009) | 49 countries (1995-2004) | Negative | Relied on a relatively short time frame (2009-2016), which may not capture long-term trends. |
| Cebula (2011) | OECD countries (2003-2007) | Positive | Limited temporal scope (2003-2007), which may restrict the generalizability of the findings to other periods or economic contexts. |
| Justesen (2008) | Varying number of countries (1970-1999) | Positive | Sensitivity to outliers and limited time periods, which constrain the lag structure and potentially affect the robustness of the results. |
| Us-Swaleheen and Stansel (2007) | 60 countries (1995-2004) | Positive | Reliance on perception-based corruption indices, which may not fully capture actual corruption levels, could limit the generalizability of the results. |
| Dawson (2003) | No information about the number of countries (1970-2000) | EF was a cause for EG. | Reliance on arbitrary lag lengths in Granger tests and the limited scope of freedom measures, which may not fully capture institutional nuances. |
| De Haan and Sturm (2000) | 80 countries (1975-1990) | Positive | Used variant of extreme bound analysis (EBA) as in Levine and Renelt (1992) and Leamer (1983), which focuses heavily on model robustness across variable combinations without capturing dynamic temporal relationships or long-run equilibrium. |
| Nelson and Singh (1998) | 67 less-developed countries (1970-1989) | Positive | Used a panel data set with a period fixed effect. The model fails to capture the dynamic short- and long-run relationships among variables over time. |

1.6. Political Stability and Economic Growth

Accordingly, Table 2 presents a review of the literature related to the nexus between political stability and economic growth, including studies, countries, periods, relationships, and weaknesses.

Table 2. Literature review on the nexus between political stability and economic growth.

| Study | Country/Country group (Period) | Impact of PS on EG. | Weakness |
|------------------------|--|---------------------|---|
| Gurgul and Lach (2013) | In 10 Central and Eastern Europe, during the period 1990-2009, it was found that | Negative | Reliance on short-term analyses due to limited data and potential heterogeneity bias from regional variations not fully accounted for in the models. |
| Bashir and Xu (2014) | In 117 countries during the period 1980 - 2012 | Positive | Ignored the direct effect of political stability on economic growth and overreliance on aggregated indices, which may oversimplify complex institutional dynamics. |
| Jong-A-Pin (2009) | In 90 countries during 1974 - 2003 | Negative | The study chose a 5-year average of economic growth, which may be insignificant, especially when the fluctuations in economic growth are attributed to political instability. |
| Aisen and Veiga (2013) | In 169 countries during 1960 - 2004 in 5-year | Negative | Using the system-GMM estimator on a large, heterogeneous panel covering up to 169 countries over long 5-year periods is sensitive to |

| Study | Country/Country group (Period) | Impact of PS on EG. | Weakness |
|--|--|---|--|
| | | | instrument proliferation and weak instrument bias, which undermine the reliability of results. |
| Asteriou and Siriopoulos (2000) | In Greece, during 1960 - 1995 by using regression | Negative | Potential subjectivity in constructing the ISPI index, limited generalizability due to its focus on Greece, and the absence of robustness checks for alternative instability measures. |
| Ali (2001) | In 119 countries during 1965 - 1997 | Negative | Employed OLS regression thus failed to account for dynamic relationships and mixed orders of integration among variables, potentially leading to biased or inconsistent estimates in time series analysis. |
| Fosu (2002) | In 31 countries of Sub-Saharan Africa during the period 1960–1986. | Negative | Limited exploration of reverse causality, as the study assumes PI directly affects growth without thoroughly examining how economic conditions might precipitate instability. |
| Barro (1991) | In 98 countries during 1960 - 1985 | Negative | Potential endogeneity issues, such as reverse causality between growth and human capital, and reliance on imperfect proxies like revolutions and assassinations, which may not fully capture political instability. |
| Alesina, Ozler, Roubini, and Swagel (1992) | In 113 countries during 1950 - 1982 | Negative | Using GLS regression on stacked coefficients while ignoring the dynamic structure and potential cointegration relationships among variables over time can lead to biased or inefficient estimates. |
| De Haan and Siermann (1996) | In 97 countries during the period 1963 - 1988 | Mixed findings depending on the continent | Sensitivity of results to variable definitions, the simplistic growth model employed, and the inability to fully account for Asia's divergent development patterns. |
| Devereux and Wen (1998) | In 52 countries, based on the averages from 1960 to 1985. | Negative | The study model's poor fit for Asian economies and the reliance on simplistic dichotomous variables for political measures may oversimplify complex institutional dynamics. Similarly, the analysis relied on cross-country averages over 25 years, ignoring temporal variations and dynamic effects that panel data could better capture. |

1.7. Problem Statement

The problem being studied is that the impact of economic freedom on economic growth and foreign direct investments is currently unknown, especially when considering a country's political stability. Although research has concluded that there are strong relationships between EF, economic growth, and FDIs, some literature reports that FDIs can hinder the economic growth of certain countries, such as those classified as developing countries (Loungani & Razin, 2001).

1.8. Purpose of the Study

This proposed study aims to analyze the impact of economic freedom on economic growth and foreign direct investments concerning a country's political stability. Previous studies have suggested a strong link between EF, economic growth, and FDIs. Additional studies have also found a variety of results that demonstrate both positive and negative impacts that political stability has on economic growth. In this proposed study, the researcher aims to bridge this gap. This study uses different variables, including economic growth, EF, FDIs, and political stability. Table 3 labels the variables.

Table 3. Identified variables.

| Variable | Type of variable |
|-----------------------------------|----------------------|
| Economic growth | Dependent variable |
| Economic freedom (EF) | Explanatory variable |
| Foreign direct investments (FDIs) | Dependent variable |
| Political stability | Explanatory variable |

2. METHODOLOGY

2.1. Data, Econometric Application, and Findings

We examined the impact of economic freedom and political stability on economic growth in 11 countries of the Middle East during the period 1995-2017. The studies included data from the [World Bank \(2015\)](#) as a World Development Indicator. This was achieved using various statistical analysis methods, including mean, standard deviation, Pearson correlation coefficient, multiple linear regression, and the Durbin-Watson test. We used FDI and economic growth as dependent variables, with economic freedom and political stability as explanatory variables. Our data sample contains seven covariates for 11 countries over a period of 22 years. Therefore, we used 253 observations in our study.

We took the index of economic freedom from the Heritage Foundation database. The index of economic freedom is graded on a scale of 0-100. It is based on ten quantitative and qualitative factors grouped into the rule of law (e.g., property rights, freedom from corruption), limited government (e.g., fiscal freedom, government spending), regulatory efficiency (e.g., business freedom, labor freedom, monetary freedom), and open markets (e.g., trade freedom, investment freedom, financial freedom) ([Heritage Foundation, 2015](#)). Additionally, political stability served as another key independent variable, utilizing the World Bank's Worldwide Governance Indicators. This measure assesses the likelihood of political instability and politically motivated violence, providing insight into the institutional risks that can significantly impact economic growth. We used the index of political stability, graded on a scale from -2.5 (weak) to 2.5 (strong), and the absence of violence or terrorism from the Worldwide Governance Indicators of the World Bank, which measured perceptions of the likelihood of political instability or politically motivated violence, including terrorism ([Kaufmann, Kraay, & Mastruzzi, 2015](#)). The index is an average of several other indexes from the Economist Intelligence Unit, the World Economic Forum, and the Political Risk Services, among others.

Foreign direct investment refers to the net inflows of investment aimed at acquiring a lasting management interest in an enterprise operating in an economy other than that of the investor. It includes the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital, as shown in the balance of payments. This series indicates net inflows in the reporting economy from foreign investors and is divided by GDP.

Both Political Rights and Civil Liberties indexes range from 1 (strong) to 7 (weak). The Political Rights ratings from Freedom House evaluate three categories: electoral process, political pluralism and participation, and the functioning of government. The Civil Liberties index from Freedom House evaluates the following: freedom of expression and belief, associational and organizational rights, rule of law, and personal autonomy and individual rights. Additionally, we have included several control variables such as unemployment rate, labor force participation, primary school completion rate, exports, inflation, and population growth.

This study employed the Autoregressive Distributed Lag (ARDL) method to estimate the relationships between various independent variables and gross domestic product (GDP) per capita growth in a sample of countries. According to [Narayan \(2014\)](#), ARDL is a widely used econometric method for estimating long-run and short-run relationships between variables. It is a flexible technique that allows the inclusion of a mix of stationary and non-stationary variables in the model. The method is especially useful when variables are integrated at different orders, which can cause spurious regressions if not properly addressed. The ARDL model was used to estimate the relationship between GDP per capita growth and several independent variables, including economic freedom, civil

liberties, political rights, foreign direct investment, and political stability (Dreher, Gaston, & Martens, 2016). The model aims to identify the factors most strongly associated with economic growth and to examine the nature of these relationships in both the short and long term. The use of ARDL is appropriate in this case because the variables included in the model are likely to have both short-term and long-term effects on economic growth. Additionally, some of the variables are likely to be integrated at different orders, which can cause problems in traditional regression models. By using the ARDL method, the study can account for these issues and produce more reliable estimates of the relationships between the variables. The ARDL model is preferred over standard OLS models in cases where the time series data is non-stationary, i.e., the variables exhibit trends, cycles, and seasonal patterns (Narayan, 2014). In such cases, the OLS models may produce biased and inconsistent parameter estimates, leading to incorrect inferences and predictions.

The ARDL model allows for the inclusion of both stationary and non-stationary variables in the same regression model, which addresses issues of spurious regression and the omission of relevant variables in standard OLS models. Additionally, the ARDL model includes lagged values of the dependent and independent variables as regressors, helping to capture short- and long-run relationships between variables. Furthermore, the ARDL model enables testing hypotheses regarding the existence and nature of cointegrating relationships between variables, which is not possible with standard OLS models. Cointegrating relationships are important because they indicate long-run equilibrium relationships between variables, with implications for policy and decision-making. Therefore, the ARDL model provides a more robust and flexible approach to modeling time series data compared to standard OLS models, especially when data is non-stationary and variables have long-run relationships. The empirical models were formally specified as.

ARDL Model 1:

$$EG_t = \beta_0 + \sum_{i=1}^q \gamma_i EFI_{t-1} + \sum_{i=1}^r \kappa_i CLI_{t-1} + \sum_{i=1}^s t_i PRI_{t-1} + \sum_{i=1}^t l_i FDI_{t-1} + \sum_{i=1}^u m_i PSI_{t-1} + \beta ECT_{t-1} + \mu_t$$

Model 2

$$FDI_t = \beta_0 + \sum_{i=1}^q \gamma_i PSI_{t-1} + \sum_{i=1}^r \kappa_i CLI_{t-1} + \sum_{i=1}^s m_i EFI_{t-1} + \beta ECT_{t-1} + \mu_t$$

Where, EG -Economic growth, EFI-Economic freedom index, CLI-Civil liberties index, PRI, Political rights index, FDI-Foreign direct investment, PSI-Political stability index. β_0 -intercept, $\alpha_i, \gamma_i, \kappa_i, m_i$ -coefficients for lagged variables $-p, q, r, s, t, u$ -lagged orders, ECT - Error correction term, μ_t -error term, and t -1995 - 2017-time period.

3. RESULTS AND DISCUSSION

This section presents the results and discussion of findings, including descriptive analysis, correlation analysis, pre-diagnostic tests such as stationarity tests, and model estimation.

Table 4. Descriptive analysis of the entire sample (1995-2017) for 11 countries.

| Variable | Mean | Std. dev. | Min | Max |
|---------------------------------------|-------|-----------|--------|-------|
| GDP per capita growth (Annual %) (EG) | 0.96 | 6.89 | -38.56 | 49.03 |
| Economic freedom index (EF) | 57.58 | 18.95 | -38.56 | 78 |
| Political rights index (PR) | 5.81 | 0.83 | 4 | 7 |
| Political stability index (PS) | -0.42 | 1.13 | -3.18 | 1.22 |
| Civil liberties index (CL) | 5.46 | 0.84 | 3 | 7 |
| Foreign direct investment (FDI) | 2.56 | 5.21 | -9.64 | 33.56 |
| Population growth (Annual %) (PG) | 3.65 | 3.08 | -2.42 | 19.36 |

Table 4 provides descriptive statistics on four different variables: GDP per capita growth (annual %), political stability index, political rights index, civil liberties index, economic freedom index, and foreign direct investment for eleven countries between 1995 and 2017.

The mean values for the GDP per capita growth, political stability index, political rights index, civil liberties index, economic freedom index, and foreign direct investment are 0.96, -0.42, 5.81, 5.46, 57.58, and 2.56, respectively. Similarly, the standard deviation values indicate that the data points for the political stability index, political rights index, and civil liberties index are less dispersed than those for the economic freedom index, GDP per capita growth, and foreign direct investment.

Moreover, the minimum and maximum values for the political stability index are -3.18 and 1.22, respectively, indicating that some countries in the dataset experienced significantly lower political stability than others during the examined period. Similarly, the political rights index has a minimum value of 4 and a maximum value of 7, indicating that all countries in the dataset had at least a moderate level of political rights during this period. Furthermore, the civil liberties index has a minimum value of 3 and a maximum of 7, indicating that some countries experienced greater restrictions on civil liberties than others. Additionally, the economic freedom index ranges from -38.56172 to 78, showing that some countries experienced significantly lower levels of economic freedom. Likewise, the minimum and maximum values for foreign direct investment are -9.64 and 33.56, respectively, indicating that some countries experienced substantially lower foreign direct investment. Consequently, the descriptive statistics suggest substantial variation across the eleven countries in terms of political stability, political rights, civil liberties, foreign direct investment, GDP per capita growth, and economic freedom.

Table 5. Results of the slope regression homogeneity test.

| Variable | Statistical value | Probability value |
|-------------------------------------|-------------------|-------------------|
| DELTA | 0.483 | 0.629 |
| DELTA ADJ | 0.598 | 0.55 |
| Variables partialled out: constant. | | |

Source: Pesaran and Yamagata (2008).

Table 5 presents the results of the Slope Regression Homogeneity Test (Pesaran & Yamagata, 2008) for eleven countries from 1995 to 2017. The test examines whether the slope coefficients of the independent variables are homogeneous across countries. The null hypothesis (H_0) posits homogeneity in the effects of the independent variables on the dependent variable, while the alternative hypothesis suggests heterogeneity. The test reports Delta statistics (measuring heterogeneity magnitude, where higher values indicate greater divergence) and corresponding p-values (assessing statistical significance), revealing values of 0.483 ($p = 0.629$) for the unadjusted model and 0.598 ($p = 0.550$) for the adjusted model, both failing to reject H_0 at the 5% significance level and thus supporting slope homogeneity across countries.

Table 6. Correlation matrix between variables PS, EG, EF, and FDI.

| Variable | EG | EF | CL | PR | PS | FDI | PG |
|----------|---------|---------|---------|---------|--------|--------|----|
| EG | 1 | | | | | | |
| EF | -0.0469 | 1 | | | | | |
| CL | 0.0973 | -0.2952 | 1 | | | | |
| PR | 0.0182 | -0.0548 | 0.6668 | 1 | | | |
| PS | -0.0339 | 0.5988 | -0.1142 | -0.0207 | 1 | | |
| FDI | 0.0363 | 0.2571 | -0.3810 | -0.0578 | 0.0394 | 1 | |
| PG | -0.2645 | 0.1851 | -0.2149 | -0.0361 | 0.3597 | 0.0799 | 1 |

Table 6 presents the correlation matrix for the study variables. The correlation matrix above shows the association between seven variables: GDP per capita growth (annual %), Economic Freedom Index, Civil Liberties Index, Political Rights Index, Political Stability Index, Foreign Direct Investment, net inflows (% of GDP), and

Population Growth across eleven countries from 1995 to 2017. The diagonal line of the matrix indicates the perfect correlation of each variable with itself, which is always 1.0. The correlations between the independent variables are low, except for political stability and economic freedom, and civil liberties and political rights, which may present multicollinearity problems.

The values on the diagonal (top left to bottom right) are all 1, which is expected since the correlation between a variable and itself is always perfect.

3.1. Checking Stationarity

We used the Augmented Dickey-Fuller test to check for stationarity.

Table 7. Checking stationarity using augmented Dickey-Fuller test statistic.

| Variables | Augmented Dickey-Fuller test statistic | | | |
|---|--|--------|------------------|--------|
| | Level 0 | | First difference | |
| | t-test | prob | t-test | prob |
| Foreign direct investment, net inflows (% of GDP) | -3.8201 | 0.0001 | -9.2511 | 0.0000 |
| GDP per capita growth (Annual%) | -4.1143 | 0.0000 | 6.373 | 0.0000 |
| Economic freedom index | -2.2381 | 0.0126 | -5.9488 | 0.0000 |
| Civil liberties index | -1.5137 | 0.0650 | -6.0389 | 0.0000 |
| Political rights index | -0.357 | 0.9798 | -4.504 | 0.0002 |
| Political stability index | -1.9561 | 0.0252 | -5.6320 | 0.0000 |

Table 7 presents the test results for unit root analysis, indicating that all variables except for the Political Rights Index are stationary. Specifically, Foreign Direct Investment (FDI) net inflows (% of GDP), GDP per capita growth, the Economic Freedom Index, the Civil Liberties Index, and the Political Stability Index are stationary both at the level and first difference. Similarly, the Political Rights Index demonstrated stationarity at the first difference.

Table 8. The A.R.D.L. model.

| D. EG | Variables | Coefficient | Std. err. | z | P>z | [95% conf. interval] | |
|--------------------|-----------|-------------|-----------|-------|-------|----------------------|--------|
| Long run | EFI | 0.5018 | 0.2263928 | 2.22 | 0.027 | 0.946 | 0.058 |
| | PRI | -10.433 | 1.158 | -9.01 | 0.000 | - | -8.164 |
| | CLI | 5.445 | 1.855 | 2.94 | 0.003 | 1.810 | 9.081 |
| | PSI | -2.03 | 1.466 | -1.39 | 0.165 | -4.908 | .840 |
| Short run | _ec | 1.005 | 0.137 | 7.34 | 0.000 | 1.273 | 0.737 |
| | EFI | .0838 | 0.427 | 0.20 | 0.844 | .921 | 0.753 |
| | PRI | 3.151 | 1.339 | 2.35 | 0.019 | .528 | 5.775 |
| | CLI | 1.335 | 2.811 | 0.48 | 0.635 | -4.173 | 6.845 |
| | PSI | 8.756 | 10.102 | 0.87 | 0.386 | - | 28.556 |
| | _cons | 70.586 | 9.583 | 7.37 | 0.000 | 51.804 | 89.368 |
| F-statistic | | 9.16 | | | | | |
| Log likelihood | | 555.3722 | | | | | |
| Prob (F-statistic) | | 0.0000 | | | | | |

3.2. Main Results

3.2.1. Estimating the ARDL Model

Table 8 presents long-run and short-run results. In particular, in the long run, EFI exhibits a statistically significant and positive effect on EG (coefficient = 0.502, $p = 0.027$), suggesting that higher levels of economic freedom foster sustained economic expansion. Civil liberties (CLI) also positively and significantly influence growth

(coefficient = 5.446, $p = 0.003$), implying that protections of individual freedoms and institutional openness enhance economic performance. In contrast, political rights (PRI) have a markedly negative and statistically significant effect on long-run growth (coefficient = -10.433, $p < 0.001$), indicating that broader political participation or democratic structures may, in certain institutional contexts, exert a constraining influence on growth possibly due to redistributive pressures or policy instability. Political stability (PSI), though negative, is not statistically significant ($p = 0.165$), suggesting its role may be less critical or more nuanced in the long-run dynamics. In the short run, the adjustment coefficient (α) is positive and highly significant (coefficient = 1.005, $p < 0.001$), indicating a very rapid and somewhat atypical adjustment toward the long-run equilibrium. Among the differenced short-run regressors, only PRI demonstrates a significant effect (coefficient = 3.152, $p = 0.019$), suggesting that in the short term, improvements in political rights can stimulate economic growth possibly due to immediate boosts in investor confidence or governance transparency. EFI, CLI, and PSI do not show significant short-run effects, highlighting that the growth-enhancing impacts of economic freedom and civil liberties materialize more meaningfully over time.

Table 9. Model diagnostics.

| Test | Statistics | Prob |
|--|------------|--------|
| Heteroskedasticity test: Breusch-Pagan-Godfrey | 74.980 | 0.0379 |
| Breusch-Godfrey serial correlation LM test | 34.711 | 0.000 |
| Normality | 7.360 | 0.000 |

Table 9 provides the results of three model diagnostic tests. These tests were conducted to evaluate the assumptions and goodness-of-fit of a statistical model. The test statistic for the heteroskedasticity test was 74.980, and the corresponding p-value is 0.0379. Since the p-value is less than the significance level of 0.05, we reject the null hypothesis of no heteroscedasticity and conclude that there is evidence of heteroscedasticity in the model. Similarly, for the autocorrelation test, the test statistic is 34.711, and the p-value is 0.00000. Since the p-value is less than 0.05, it was concluded that the model suffers from serial correlation. Moreover, for the normality test, the test statistic is 7.360, and the p-value is 0.00000. Since the p-value is less than 0.05, we reject the null hypothesis of normal distribution and conclude that the model exhibits non-normality.

Table 10. The ARDL model.

| D.EG | Variables | Coefficient | Std. err. | z | P>z | [95% conf. interval] | |
|--------------------|-----------|-------------|-----------|-------|-------|----------------------|--------|
| Long run | PSI | 0.057 | 0.172 | 0.33 | 0.740 | -0.281 | 0.395 |
| | EFI | 0.026 | 0.020 | 1.33 | 0.183 | -0.012 | 0.065 |
| | CLI | 0.495 | 0.128 | 3.87 | 0.000 | 0.745 | 0.244 |
| Short run | __ec | -0.506 | 0.103 | -4.93 | 0.000 | -0.707 | -0.304 |
| | PSI | -1.846 | 0.993 | -1.86 | 0.063 | -3.791 | 0.100 |
| | EFI | -0.138 | 0.129 | -1.07 | 0.284 | -0.391 | 0.114 |
| | CLI | 1.463 | 0.527 | 2.77 | 0.006 | 2.496 | 0.429 |
| | __cons | 1.919 | 0.348 | 5.51 | 0.000 | 1.236 | 2.601 |
| F-statistic | | 12.91 | | | | | |
| Log likelihood | | -228.895 | | | | | |
| Prob (F-statistic) | | 0.0000 | | | | | |

3.2.2. Estimating the ARDL Model 2

Table 10 results reveal distinct long-run and short run relationships between foreign direct investment (FDI), political stability (PSI), and the control variables. In the long run, political stability (PSI) shows a positive but statistically insignificant coefficient (0.057, $p=0.740$), suggesting that while improved political stability may weakly encourage FDI, the effect is not robust. Economic freedom (EFI) also exhibits a positive but insignificant long-run

association with FDI (0.026, $p=0.183$), whereas civil liberties (CLI) demonstrate a strong positive and statistically significant impact (0.495, $p<0.001$), indicating that greater civil liberties enhance FDI inflows over time, possibly by fostering a more transparent and predictable institutional environment. In the short run, the error correction term (---ec) is significant and negative (-0.506, $p<0.001$), confirming a relatively rapid convergence to long-run equilibrium at an adjustment speed of about 50.6% per year. Short-run deviations in PSI negatively affect FDI (-1.846, $p=0.063$), though only marginally significant, while EFI's short-run effect remains insignificant (-0.138, $p=0.284$). Notably, CLI has a positive and significant short-run coefficient (1.463, $p=0.006$), reinforcing those improvements in civil liberties immediately attract FDI.

Table 11. Model diagnostics.

| Test | Statistics | Prob |
|--|------------|--------|
| Heteroskedasticity test: Breusch-Pagan-Godfrey | 95.866 | 0.0000 |
| Breusch-Godfrey serial correlation LM test | 177.257 | 0.0000 |
| Normality | 7.360 | 0.000 |

Table 11 presents the model's post-diagnostics test results, including heteroscedasticity, autocorrelation, and normality tests. The heteroskedasticity test, using the Breusch-Pagan-Godfrey statistic, has a test statistic of 95.866, with an extremely low probability of obtaining such a large statistic by chance ($p\text{-value} = 0.0000$). This suggests that the model may exhibit heteroskedasticity, which occurs when the variance of the errors is not constant across observations. Similarly, the normality test has a statistic of 7.360, with a $p\text{-value}$ of 0.00000, indicating that the residuals from the model may not be normally distributed. Additionally, the serial correlation test, using the Breusch-Godfrey LM statistic, has a value of 177.257, with a $p\text{-value}$ of 0.0000, suggesting that the model may exhibit serial correlation, which occurs when errors are correlated across time or observations.

4. DISCUSSION

The empirical results of this study, derived from the ARDL estimation, contribute meaningfully to the existing literature on the nexus between economic freedom and economic growth by addressing several methodological and contextual gaps identified in prior research. The short-run coefficient for economic freedom ($\beta = 0.084$, $p = 0.844$) is statistically insignificant, suggesting that immediate policy changes aimed at enhancing economic freedom may not yield significant growth effects in the short term. This finding aligns with the critiques of Akinci et al. (2014) and De Haan and Sturm (2000) who highlight that short-run dynamics are often obscured in traditional cointegration or extreme bound analyses, which fail to disentangle transient shocks from persistent trends. However, the long-run coefficient ($\beta = 0.502$, $p = 0.027$) is both statistically and economically significant, reinforcing the consensus in the literature exemplified by Dawson (2003), Justesen (2008), and Peev and Mueller (2012) that economic freedom is a robust determinant of sustained growth. This result underscores the importance of adopting methodologies like ARDL, which explicitly model both short-run adjustments and long-run equilibria, thereby addressing the limitations of studies such as Nelson and Singh (1998) and Saribas (2009) which relied on static or fixed-effects models that fail to capture temporal dynamics.

The insignificance of the short-run coefficient may reflect institutional rigidities or adjustment lags, a nuance often overlooked in cross-sectional or limited-timeframe studies like those of Cebula (2011) and Wu (2011). This finding resonates with Alexandrakis and Livanis (2013), who observed mixed effects depending on contextual factors, suggesting that the institutional and cultural backdrop omitted in many analyses mediates the short-run efficacy of economic freedom policies. Conversely, the strong long-run relationship supports the argument of Fabro and Aixalá (2012) and Kilic and Arica (2014) that, despite measurement challenges in freedom indices, the cumulative effect of market-oriented reforms ultimately fosters growth. Importantly, our use of ARDL mitigates

endogeneity concerns raised by Piątek et al. (2013) and Peev and Mueller (2012) as the model's lag structure accounts for potential reverse causality while isolating long-term effects.

The study's key contribution lies in its methodological rigor and its reconciliation of conflicting findings in the literature. By demonstrating that economic freedom's growth dividends manifest only over time, we provide empirical validation for theoretical models emphasizing institutional path dependence (Acemoglu & Robinson, 2012). Moreover, the results caution against premature policy evaluations a critique applicable to Us-Swaleheen and Stansel (2007) and Dawson (2003), whose reliance on short panels or arbitrary lags may have obscured the delayed benefits of reform. Future research should explore the nonlinearities and threshold effects hinted at by the short-run/long-run disparity, potentially integrating governance quality or cultural variables to address the gaps noted in Alexandrakis and Livanis (2013). Overall, this study advances the literature by affirming economic freedom's long-term growth imperative while highlighting the necessity of dynamic methodologies to uncover such relationships.

5. CONCLUSION

The study results demonstrated that economic freedom significantly affects the economy positively in the long run, whereas civil liberties also positively influence both economic growth and foreign direct investment in both the short run and long run. On the other hand, the study established that political rights have a negative impact on long-term growth, implying that in the Middle East region, democratic expansion is associated with policy uncertainties that dampen growth. Additionally, the study found that foreign direct investment in the Middle East is driven by civil liberties and not political stability or economic freedom, thus highlighting the importance of institutional transparency. As a result, the findings emphasize the significance of institutional quality as a key driver of sustained economic performance in the Middle East.

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