

# ECONOMIC FREEDOM INDEX AND FOREIGN DIRECT INVESTMENT: BRIDGING THE GAP BETWEEN DEVELOPED AND EMERGING ECONOMIES

---

**Alidemaj, A.H., Krivins, A., Durguti, E., McArdle, J.**

---

*Avni H. Alidemaj / UBT- University for Business and Technology, Faculty of Political Science, Prishtina, Kosovo. Email: avni.alidemaj1@ubt-uni.net*

*Anatolijs Krivins / Daugavpils University, Department of Law, Management Science, and Economics, Daugavpils, Latvia. Email: anatolijs.krivins@du.lv*

*Esat Durguti / University Isa Boletini, Faculty of Economics, Department of Banking, Finance and Accounting, Prishtina, Kosovo. Email: esat.durguti@umib.net (corresponding author)*

*John McArdle / Bertolon School of Business, Salem State University, Accounting and Finance Department, Salem, USA. Email: jmcardle@salemstate.edu*

## Abstract

The working paper examines several variables of the Economic Freedom Index and the effect of GDP on foreign direct investment (FDI) in the 6 European Union economies (EU6) and the 6 Western Balkan economies (WB6). This study aims to explore whether these determinants affect foreign direct investments in EU6 and WB6 towards other international economies. To accomplish the stated aim, we used secondary panel data on an annual basis from the trusted databases of the Heritage Foundation and the World Bank, covering the period 2017–2023, comprising a total of 42 observations for each panel. The mathematical modeling paradigm employed is Two-Stage Least Squares (2SLS). The discoveries demonstrate that government integrity, tax burden, and business freedom statistically positively affect FDI, whereas only judicial effectiveness and trade freedom negatively affect FDI in the EU6 context. Meanwhile, in the context of WB6, the discoveries demonstrate that government integrity, business freedom, tax burden, and GDP statistically positively affect FDI, whereas judicial effectiveness and trade freedom negatively affect it. Considering the perspective of scientific contribution and creativity, the research emphasises several significant issues for the regulatory authorities that have as an ongoing agenda the encouragement of FDI entering. Policy development structures, particularly those of WB6, should establish or redesign policies that provide an attractive environment for potential investors.

**Implications for Central European audience:** The findings suggest that fostering government integrity, reducing tax burdens, and promoting business freedom are decisive for attracting FDI. Despite the fact that these factors positively influence FDI in both EU6 and WB6 economies, judicial effectiveness and trade freedom pose challenges, especially in the EU6 context. For policymakers, especially in WB6 countries, the research highlights the need to create a stable and investor-friendly environment. Central European regulators can draw from these insights to design or adjust policies that encourage greater foreign investment and bolster economic competitiveness in the region.

**Keywords:** economic freedom index; gross domestic product; foreign direct investment

**JEL Classification:** F4, F43, O47

# Introduction

During the last few decades, there has been a tremendous increase in foreign direct investment (FDI) inflows. It is one of the key drivers of increased domestic and global investment, capital accumulation, and economic growth in developing countries; enables the sharing of production and management methods, improves labor regulation, expands the number of potential jobs created, and provides opportunities for the improvement of the service industry, which benefits from the use of telecommunications, transportation, banking, and finance. The number of advantages that determinants provide has made them the subject of empirical and theoretical studies (Wencong et al., 2020). "Economic freedom" is the right of individuals to manage their labor and property. It is intimately linked with democracy, gross domestic product, healthy societies, human development, a clean environment, and poverty extermination. Economic freedom may be divided into the rule of law, size of the government, effectiveness of regulatory agencies, and open markets. The size of the government includes government spending, fiscal health, and the amount of tax burden (TB) the government has to carry. Effective functioning of the judiciary, property rights protection, and government integrity (GI) are the factors contributing to the rule of law. Open markets include trading, investing, and the use of financial policies. Business, labor, and financial factors combine to form regulatory efficiency. Economic liberty is measured by four major types of indicators, and all of them carry equal importance in realising its advantages (Singh & Gal, 2020).

There is a substantial connection between the quality of government institutions and the amount of FDI. There is a reduction in the amount of corruption that occurs when governments exhibit high levels of integrity, which in turn reduces the potential hazards and expenses that arise from investing in an economy. As a result of these conducive circumstances, foreign investors are urged to invest resources, which in turn promotes growth in the economy and developmental progress. A low level of government integrity (GI) complicates and destabilises business operations due to the potential for corrupt practices, thereby discouraging investment. On the other hand, high GI not only attracts more significant FDI inflow but also induces a more welcoming overall investment environment (van der Elst, 2019). The effective functioning of the judiciary is one of the important features in shaping the FDI landscape. An efficient, transparent, and fair judicial system provides investors with legal security because it effectively enforces contracts and property rights. Reliable judicial effectiveness (JE) assures the investor of the minimisation of risks, especially in emerging markets. Conversely, the JE that is ineffective or corrupt may discourage investment by increasing the risks and costs involved in resolving claims. This relationship calls for the need to have solid legal structures that facilitate the proper and fair execution of statutes to promote a stable and favorable environment for FDI (Bellani, 2014).

On the other hand, a respectable number of economic research studies have been carried out to examine the effect that TB has on FDI, which is an issue of extreme complexity and many dimensions. Generally speaking, higher taxes tend to discourage FDI by reducing post-tax returns from investments, thus making a country less attractive to foreign investors. De Mooij and Ederveen (2003) in their survey of the effects of corporate taxes on FDI showed that there was a significantly negative effect. The authors estimated that a one percent increase in the corporate tax rate tends to reduce FDI by three percent (De Mooij & Ederveen,

2003). Taxes impact the profitability of potential projects and thus determine where to invest and how much to invest. In this process, what matters is the tax structure with its stable and predictable components. Investors generally prefer environments with certainty and ease of paying taxes and try to minimise the overall tax liability in the world with legal means, such as tax treaties and exemptions. Hence, countries compete for FDI with tax competition, which may lead to a "race to the bottom" and continuous reductions in taxes to attract investors, which may have detrimental effects on the long-term public finances. Business freedom (BF) is determined by an organisation's capacity to start up, conduct, and terminate its operations within a set of regulations. This component is important in attaining foreign direct investment (FDI). A favourable environment for investors can be developed by implementing clear, transparent, and efficient policies. The cost and complexity of regulation decrease in higher BF countries, making them more attractive for foreign investors. Therefore, Busse and Groizard (2008) argue that countries with high levels of BF attract FDI to other countries. Investors appreciate markets that are easy to cross over because they do not want many bureaucratic problems or bad odds of arbitrary changes in business conditions. Hence, this is highly observable in the energy and telecommunications industries that require much interaction with executive branch officials. Concerning repatriation of earnings and exit from markets, investors prefer jurisdictions with dependable commercial policies. Consequently, they will invest more in places that are considered to have stable administrative settings; these lower investment risks are seen as being wiser.

Trade freedom (TF) that involves lower tariffs, fewer import restrictions, simplified customs procedures, and a lack of trade barriers is crucial in attracting FDI. These economies usually ease market entry for businesses, thereby creating a climate that is favorable to foreign investors who are attracted by the free market ideas of the economy. According to a study by Kersan-Škabić (2019), there is a clear correlation between trade openness and increased FDI. This openness facilitates larger companies' entry into new markets and enhances their operational flexibility by reducing costs and delays in moving goods and services across international borders. Consequently, FT can stimulate economic growth, enhance technology transfer, and increase competitiveness for both the recipient country and the investing businesses. Economies with greater TF are more likely to attract investments in industries like manufacturing and services, which depend heavily on export markets and global supply chains. Hence, having a liberal trade regime is essential in enticing long-term foreign investments. It is important to note that FDI plays a vital role in moving from a centrally planned economy to market-based economies and also in achieving the SDGs. Policymakers and scholars should therefore think of effective ways to attract as well as utilise FDI since it is an essential source of financing for this transition. This study aims to examine the impact of various factors, including GI, JE, TB, BF, TF, and GDP, on the magnitude of FDI inflows into the national economies of the EU6 compared to the WB6. To fulfill the study's stated aims, we have made an effort to answer the following questions:

**RQ<sub>1</sub>:** *How do certain economic freedom indices contribute to the creation of favorable conditions for the attraction of FDI?*

**RQ<sub>2</sub>:** *What is the correlation between a country's GDP and the allure of FDI?*

This study innovatively examines the influence of EFI characteristics on the increase of FDI by analysing research topics. It highlights the necessity of meeting specific criteria (GI, JE, TB, BF, and TF) to attract FDI, particularly when comparing developed and developing economies. Consequently, governmental reforms should prioritise enhancing the overall performance of these criteria to promote social growth. The study offers practical insights to inform state institutions' policy decisions, facilitating the attraction of FDI and expediting the country's economic growth.

## 1 Literature review

Considering the seriousness of the current scenario, in recent years, numerous academics have been conducting specialised research on designing and employing correlated models within various metrics referring to FDI, GI, JE, TB, BF, TF, and GDP. Our evaluation of the scientific literature indicates that to construct the above models, a comprehensive examination of the interaction of characteristic values, effective priority, and analysis of considerable quantities of data is necessary. Therefore, reflecting on this vantage, we will shed light in an explicit and detailed manner on each variable considered in the research.

### 1.1 Key determinants affecting foreign direct investment

Based on an in-depth examination of recently published academic research, particularly FDI, it can be concluded that FDI is influenced by an extensive number of factors that have been widely explored in recent academic articles. In light of this analysis, the categories that can be combined comprise macroeconomic, institutional, political stability, physical infrastructure, and cultural and socioeconomic. The research is expected to concentrate on examining the EFI parameters, which are influenced by an interplay of macroeconomic and institutional variables. Observed studies consistently demonstrate that market size, often measured through GDP, and growth potential are fundamental factors influencing FDI. Expanding markets provide more potential for sales and profits, which inevitably attracts a greater volume of FDI. A recent study led by Joo and Shawl (2023) reveals that countries with strong economic growth are more likely to obtain larger FDI inflows. Expanding the scope of investigation, Chen and Jiang (2023) used a mixture of macroeconomic factors, institutional and technological advances, examining the G20 countries, discovered that institutional factors, trade openness, and innovations in technology create advantages in attracting FDI. Hao (2023) observed the presence of interaction through the ARDL approach among trade openness, industrial economic growth, and capital formation in FDI, covering the period 1990 to 2021 in the context of China's economy.

On the reverse side, research addressing topics such as government integrity (GI) and judicial effectiveness (JE) may display overall patterns and possible perspectives; however, such research is incapable of offering precise and comprehensive quantitative results. For instance, Zeng (2022) contends that regulatory measures for transactions with related parties in the context of China are not widely implemented, suggesting that their influence is likely to be limited due to a lack of government resources and expertise. Razzaq (2024) has explored the influence of fintech ability, resource accessibility, business freedom, trade freedom, and GDP, additionally, Chala (2024) addresses the influence of EFI and ease of doing business in the chain of international trade, Cong et al. (2024) explored both the direct and indirect consequences of free trade in emerging, developing, and advanced economies. Singh and Gal (2020) examined from an international outlook the influence of EFI, where the tax burden

(TB) parameter is also included as an essential parameter for attracting FDI within the same vein, the authors Martins et al. (2023) additionally examined the relevance of EFI, and technological innovations enhance the attraction of FDI in China's economy. Similarly, certain research efforts, for instance, Busse and Groizard (2008) addressed factors of political stability, and Donaubauer et al. (2016) explored infrastructure investments as reflected in FDI. Regarding the context of the human capital contribution to FDI, the researchers Abbas et al. (2022) explored how they interact through a cross-sectional analysis comprising 103 economies with emerging and developed economies. The remaining section is dedicated to the discussion of the variables contained within the study as well as the presentation of the research hypothesis.

## 1.2 Economic freedom index determinants shaping foreign direct investment

Recent research has emphasised the crucial importance of GI in attracting FDI in light of recent developments. Concerning this interest, numerous researchers have employed numerous measures regarding the influence of GI on attracting FDI. Singh and Gal (2020) claim that the successful implementation of EFI parameters is necessary for attracting FDI, reducing barriers for potential investors, minimising transaction costs, and ensuring stability. Conversely, if these parameters aren't implemented properly, they may adversely affect the reputation of the governments. Within a similar vein, Islam et al. (2023) intended to explore the influence of GI and corruption control on sustainable development in stock markets. They employed mixed linear and non-linear methodologies to explore the economic performance of Pakistan. Durguti et al. (2024) offer a comprehensive evaluation of several important governance indicators, covering topics like corruption, the rule of law, the regulatory framework, and government effectiveness. The discoveries of the research provide solid evidence that the explored parameters prove that there is a contrasting influence within the countries of South-Eastern Europe and the countries of the European Union. Governments with sound governance by adopting good practices and exhibiting low levels of corruption are empirically viewed as less hazardous and more stable, and consequently provide attractive advantages for foreign investors (Globerman & Shapiro, 2002).

Judicial effectiveness (JE), commonly referred to as the ability of the judicial system to enforce agreements, protect property rights, and sustain an independent judiciary, performs an imperative role in determining advantageous circumstances for attracting FDI. Tag (2021), following the GMM methodology, explored the sample of 150 distinct countries worldwide, spanning the period from 2000 to 2016. The results and conclusions of this research extend consistent evidence of the presence of a positive interaction between JE and FDI. Accordingly, multiple research efforts stress the importance of JE sub-components in attracting FDI. Martins et al. (2023) searched for the influence of JE (property rights - patents and contract enforcement) on FDI, employing a panel sample of 27 countries (including European, Asian, and African countries) covering the period 2003 to 2018. The outcomes demonstrated by this research supply evidence that property rights and patents possess a significant positive influence on the attractiveness of FDI. From a different prism, JE is treated differently by Duque and Quintero (2022), concluding that environmental conflicts bring socio-legal consequences related to the acquisition of rights, transformation of the

conflict, and the legitimacy of compliance with the law. Additionally, Santiso (2022) extends further, proclaiming that the digitisation of government operations can be complicated; nevertheless, it is considered a great strategy to address harmful phenomena that directly influence judicial efficiency.

The current dynamics of development and scientific research emphasise the complex structure and significance of fiscal packages (taxes) as well as their influence on FDI. This phenomenon goes beyond the conventional mindset that countries with less taxation are more attractive to investors. As stated by Becker et al. (2012), tax rates play an imperative part, but the consistency and simplicity of the tax package for international investors are equally significant. Additionally, they recommend creating a predictable and transparent taxation system, which would decrease uncertainty and provide a more comfortable environment for FDI. Experimental data consistently reinforce the premise that countries with reduced tax burdens (TB) can be more attractive to investors. Within this mindset, Mosquera Valderrama (2021) has performed a cross-sectional examination, presenting evidence that economies that have the lowest TB offer benefits for attracting FDI, underlining that the effect is significantly mitigated by the quality of governance and the institutional structure. From a different perspective, Gao and Liu (2021), who performed an examination of 199 countries covering the period from 2005 to 2018 via a regression approach, concluded that countries with low incomes that have high rates of TB are associated negatively with FDI. Similarly, Zhang et al. (2024) discovered that the small-caliber macro tax burden has a positive incentive effect on economic growth, whereas the large-caliber macro tax burden performs oppositely.

Modern scientific research reinforces the theory of the interaction across BF, TF, and FDI. For instance, the study administered by the authors Tag and Degirmen (2022) explores a perspective regarding the institutional economy via the GMM estimate methodology, using a sample of 19 years of data for 127 different countries around the globe. The insights that have been discovered by this research contend that there is verification that FDI increases in countries that have good performance in the rule of law, provide ease for business and trade freedom, and reduce the barriers that regulatory bodies impose on investors regarding businesses. Analysing a critical point of view, the influence of BF and TF on investments in the context of global value chains is based on research conducted by Chala (2024), applying panel data for 41 Sub-African countries employing the Tobit estimator methodology with fixed effects. The conclusions of this research confirmed evidence that the components of EFI, specifically BF and TF, beneficially influence the involvement in global values changes. Similarly, Cong et al. (2024), applying information obtained from 75 developed and developing countries, explored the interactions between TF and the interest rate as well as how they correspond with FDI. The discoveries provide evidence that TF doesn't display any significant (or linear) interaction with interest rates, but nevertheless has resulted in a moderately beneficial interaction with high-technology trade and FDI. Additionally, Ciftci and Durusu-Ciftci (2021), analysing each of the components of EFI to FDI by employing the panel Granger test for causality to explore cross-sectional heterogeneity for the countries that are involved, suggest that there is a slight contribution across these parameters.

### 1.3 Nexus between GDP and FDI

Based on conventional theories, one of the primary evaluators of the creation of social well-being is considered GDP growth, which, in another sense, may be translated as an indicator of a robust and developing economy, leading to attractive predispositions for foreign investors. As stated by Magazzino and Mele (2022), economies with a high GDP growth rate are viewed as more desirable to foreign investors; additionally, this influences the perception that these economies possess modern infrastructure as well as the most effective constitutional and financial systems. The researcher validates the hypothesis by performing a Granger causality test on the interplay of GDP and FDI, for instance, Malta's economy from 1971 to 2017. The conclusions of this analysis support the neutrality hypothesis, as each interaction with statistical significance has consequences on GDP and FDI. Therefore, to advance this phenomenon even further, the conclusion is derived that, in addition to the factors highlighted above, the size of the market also creates more advantages for the attraction of FDI. Durguti and Malaj (2021) offered direct evidence that multinational companies tend to allocate their investments toward economies that have extensive market potential, by capitalising on more clients and potential for earnings growth.

## 2 Methodology

The overarching mission of this paradigm is to investigate the unique effects of the economic freedom index (EFI) and GDP on FDI. To accomplish and validate the premises proposed in the theoretical background section, it encompassed two panel sets: EU6 (Austria, Czech Republic, Denmark, Germany, Greece, and Italy) as well as WB6 (Albania, Bosnia and Herzegovina, Kosovo, North Macedonia, Montenegro, and Serbia). Explicitly, this section elaborates in detail on the data sample that was employed, continuing with a discussion of the variables incorporated into the inquiry, the diagnostic tests, and the specifications of the econometric model.

### 2.1 Study sample

To investigate the interaction of certain variables known as the EFI and GDP on FDI, we organise our study into two distinct panels: one for the EU6 economies and another for the WB6 economies, spanning the years 2017-2023. The economies that comprise our sample are significant stakeholders in international trade, particularly for WB6 economies, and exhibit heterogeneity in terms of size and economic development. The motivation for the selection of the sample for the EU6 countries is based on several key specifics, starting with the trade relations, as they all fall within the broader definition of Central European countries, while also taking into account the economic and cultural distance between the countries. However, in the context of utilising indicators addressed in our research, a qualitative approach is applied during their construction, which is considered very important for considering the economic and cultural distance between the countries, known as national bias (for more, see Browne et al., 2013). Regarding the construction and ranking of these parameters, various institutions have consistently published the Economic Freedom Index at the global level. However, according to Ochel and Röhn (2006), the necessity of constructing this index and its publication does not primarily aim to assess the level of competitiveness of nations but to

evaluate some of the differences in the stability of institutions and policies with economic freedom (EFI). The parameters for the EFI were obtained from the website of the Heritage Foundation; meanwhile, data for GDP and FDI were obtained from the World Bank. Furthermore, this data is presented annually and has been adjusted under specific requirements for in-depth empirical scrutiny. The components of EFI are specified by the Heritage Foundation, and these components are determined by 12 categories of qualitative and quantitative characteristics. Our inquiries encompass an assortment of five of them. During the realisation of a study of this nature, the characteristics of the panel data will be examined (e.g., economies, certain industries, or communities) in terms of heterogeneity, as well as in certain situations, the effects in specific time frames (Pindado & Requejo, 2015). Similarly, with repeated explanations of multiple cross-sections, scholars can examine and interpret impressive changes with short time series employing a panel data approach (Hans-Jurgen et al. 2013). In comparison, one of the most significant benefits connected with the use of panel data is that it empowers possibilities to explore concerns regarding heterogeneity, i.e., to predict or control the unobserved heterogeneity of economies or explicit periods (Pesaran, 2015). Accordingly, based on these clarifications, employing panel data has specific benefits since the estimated determinants offer more significant details, accuracy, and reliability with a reduced likelihood of collinearity across variables (Seetaram & Petit, 2012). In other words, concerning the specified variables, our research has selected to employ panel data.

## 2.2 Measurements and selection of variables

The foundations of the EFI examination may be traced back to the eighteenth century, when Adam Smith<sup>i</sup> formulated the theory that emphasised the importance of free trade and private property rights in fostering economic growth and progress. Subsequently, these indices were enhanced as a component of the new institutional economy, which explicitly examines political-economic institutions and economic growth. In their books, Hayek (1991) and Friedman (1962) have presented evidence that today's lifestyles have been made possible by the synergy of entrepreneurial activities and the exchange of creativity through markets over the twentieth century. Currently, the Heritage Foundation conducts the EFI evaluation, which scores 184 countries via 12 distinct categories. This sort of evaluation is widely acknowledged and regarded for its credibility. Based on the methodology applied by the institution on EFI, each factor is evaluated according to the ranking from 0 to 100 (dividing them into four categories: free, mostly free, moderately free, and mostly unfree). Hence, employing the theorised paradigm and the specified variables, we will thoroughly explore and evaluate the present scenario of the variable.

*A priori*, the dependent variable within the present investigation is identified as FDI, as recommended by numerous researchers, and has been pronounced as an accelerator of economic growth within a specific economy. Therefore, Belesity Bekalu (2022), analysing Sub-Saharan countries throughout the period 1988–2019, discovered that FDI in short periods has a statistically insignificant influence on economic growth; nevertheless, in the long term, it has a positive statistical influence on economic growth. Sayari et al. (2018) reached identical conclusions, stressing that there is a positive statistical interaction in non-linear terms between EFI components and FDI in Western and Central Eastern Europe.



The rationale behind selecting Government Integrity (GI) as a crucial independent variable stems from its direct correlation with the level of integrity within a government. This integrity, or lack thereof, often arises due to practices that diminish public trust and discourage investment in the economy. Consequently, it has significant implications for the growth and cost of economic activities. GI is entirely related to the issue of corruption, which is presented as a systematic concern of government institutions and decision-making from practices, for instance, extortion, bribery, nepotism, and appropriation of material goods. Some of the components that are used to evaluate (score) this index are the perception of corruption, bribery risk, and corruption control. The evaluation of this index is done through this formula:

$$GI_i = 100 \times (sub\_components_i - sub\_components_{min}) / (sub\_components_{max} - sub\_components_{min}) \quad (1)$$

Wherein:

*Sub\_components<sub>i</sub>*: denotes the data for the estimator for economies *i*.

*Sub\_components<sub>max</sub>*: denotes the greater boundaries for the equivalent data set.

*Sub\_components<sub>min</sub>*: denotes the lower boundaries for the equivalent data set.

*GI<sub>i</sub>*: denotes the calculated score of the sub-factor for economies *i*.

Judicial effectiveness – (JE) - was additionally selected as an independent variable in the context of our research, as it is regarded as a critical determinant in numerous instances, including the attraction of foreign investors and creating an opinion on the protection of the rights of all citizens, as well as businesses and other stakeholders. The measure is derived from the average rating of the three components, namely judicial independence, judicial content and process, and the public's impression of the quality of the provision of civil services. The scoring formula for each sub-component remains identical to the GI measurement. Tax burden (TB) is a measure of tax burden that reflects the marginal tax rates (which incorporate personal, corporate, and indirect taxes) imposed by all levels of government. The measurement of this component is the result of three sub-components (both personal income and corporation tax rates, and the overall burden as a percentage of GDP) based on the average value; therefore, the results of the tax burden are calculated through the quadratic function of the cost of each tax burden. The data for individual sub-components is converted from a ranking of 0–100, within the formula below:

$$Tax\ burden_{ij} = 100 - \alpha (Sub\_components_{ij})^2 \quad (2)$$

Wherein:

*Tax burden<sub>ij</sub>* denotes the tax burden in economies *i* for sub-component *j*, the *sub-component* has the same meaning as in the previous explanations, and  $\alpha$ : represents the defined coefficient equal to 0.03.

In addition, the two components that are associated with our research are business freedom (BF) and trade freedom (TF). BF in overall evaluation takes into consideration the sub-factors' access to electricity, exposure to hazards from the business environment, the quality of

regulation, and women's economic inclusion. Meanwhile, the general evaluation of TB is interwoven with many sub-factors, which are mainly related to the minimum wage, additional payments, paid annual leave, severance payments, work productivity, etc. Thus, even these two evaluators, during their general ranking, apply the same methodology as GI, determined by the Heritage Foundation<sup>ii</sup>. Finally, GDP is set to assess if the level of economic development of these economies can have any significant statistical impact on the attraction of FDI. The inspiration for deciding on each of these components is based on the extensive number of studies performed in this domain; however, our awareness is on the studies performed by the researchers (Martins et al., 2023; Singh & Gal, 2020).

### 2.3 Data analysis approach

The study intends to explore the variables and motivations that influence the dynamics of FDI in the economies of EU6 and WB6, emphasising the underlying drivers and motives of the EFI and GDP. To accomplish the stated aim, the research examines panel data that is separated into two distinct groups. To properly explore this data, the heterogeneity of the dynamics within the economies included in the study should be taken into consideration, and simultaneously, it permits extensive data analysis and improves the efficiency of the findings. Essentially, various academics employ various approaches; however, when dealing with panel data, modeling with random, fixed effects, or 2SLS is commonly used. Therefore, in such scenarios, there is a quiet consensus among academics on the adoption of any of these approaches compared to other econometric approaches. Consequently, in this sense, it's certainly necessary to explain that any employed econometric approach has its merits and limitations. Regarding the paragraphs that come next, certain of the arguments will be offered with the application of these approaches, beginning with random effects, which proceed from the presupposition of homogeneous, limited, and complicated data. An examination of this data with additional interest incorporates random effects or fixed effects (Asteriou & Hall, 2007). A model that is fitted with random effects is a regression with a constant random term, which relies on the approach known as the order of least squares (OLS) that takes into consideration only time series and cross-sectional characteristics (Hansen, 2007). As a result, the technique tends to generate accurate predictions when we have modest variations in the time series; on the contrary, if their specific impact correlates with certain explanatory factors, then biased and unpredictable evaluations are likely to potentially occur. On the other hand, the fixed effects technique relies on the presumption that any of the individual economies can influence or bias the independent variables or the results (Bai et al., 2021). The justification for the presumed existence of a correlation within the error term of the dependent and independent variables. Fixed-effects modeling overcomes the effect of the time-invariant attributes, ensuring that we can compute the clear effect of the predictors on the outcome variable.

Two-stage least squares (2SLS) is considered a sophisticated strategy, particularly when dealing with endogeneity issues that arise when independent variables are connected to the error term in a regression model (Mariano, 2011). It is important, especially under circumstances such as instrumental variable evaluation. Within numerous instances, the variables of interest may be altered by unobserved factors that consequently affect the dependent variable. Regarding our concrete scenario, the data applied for exploration appears to be exogenous, excluding the dependent variable FDI, as well as GDP growth.

Hence, this is the main justification behind employing the 2SLS technique. The general formula of this approach is:

$$Y = \beta_0 * 1 + \beta_1 X_1 + \dots + \beta_n X_n + \varepsilon \quad (3)$$

Where:

$Y$  - is the dependent variable,  $\beta_0 * 1$  - is a constant, and  $\beta_1 X_1 + \dots + \beta_n X_n$  - are the size vector in columns  $[n \times 1]$ , as well as  $\varepsilon$ , the likely error of the model? Beginning with this standard formula, in the context of our examination, the mathematical framework looks like this:

$$FDI_{i,t} = \beta_0 * 1 + \beta_1(GI_{i,t}) + \beta_2(JE_{i,t}) + \beta_3(TB_{i,t}) + \beta_4(BF_{i,t}) + \beta_5(TF_{i,t}) + \beta_6(GDP_{i,t}) + \varepsilon_{it} \quad (4)$$

Where:

$FDI_{i,t}$  – indicates the dependent variable,  $\beta_1$  to  $\beta_6$  - Indicates the constant of each independent variable that is included in the model,  $i$  - indicates the individual effects within the economies comprised in the exploration,  $t$  - Indicates the period over which the study was performed, as well as  $\varepsilon_{it}$  - Indicates the predicted likely error.

### 3 Research results

#### 3.1 Descriptive statistics

The research endeavor offers an overview in Table 1 comprising initial comprehensive observations regarding the mean, standard deviations (SD), and minimal and maximum values of the data. Descriptive statistics are employed to evaluate the dispersion and nature of the data. The preliminary results of FDI, considering the WB6 countries, showed a mean value of 6.27 with an SD of 3.08 percent. For example, the EU6 countries display a mean value of 1.92 with an SD of 2.39 percent. In light of this outlook, it may be inferred that developed economies mainly invest in specific sectors in developing countries. Regarding the economies comprising the WB6, North Macedonia recorded a minimum value of 0.06 in 2020, in contrast to Montenegro, which recorded a maximum value of 14.00 in 2022. Among the economies comprising the EU6, Austria recorded a minimum value of -6.29 in 2018, in contrast to Denmark, which reached a maximum value of 6.76 in 2022.

**Table 1 | Descriptive statistics**

<b>WB6 Economies</b>	<b>Obs</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>FDI</b>	42	6.272	3.084	0.062	14.006
<b>GI</b>	42	40.939	5.324	28.401	52.000
<b>JE</b>	42	45.239	10.314	22.803	61.400
<b>TB</b>	42	88.511	3.974	82.000	94.000
<b>BF</b>	42	69.602	9.424	45.710	82.900
<b>TF</b>	42	80.798	5.924	68.000	88.400
<b>GDP</b>	42	3.168	4.659	-15.307	13.043
<b>EU6 Economies</b>	<b>Obs</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>FDI</b>	42	1.919	2.386	-6.287	6.757
<b>GI</b>	42	68.431	17.820	37.700	100.000
<b>JE</b>	42	69.976	17.587	9.000	95.300
<b>TB</b>	42	58.040	12.574	37.200	82.900
<b>BF</b>	42	77.936	7.596	67.200	93.900
<b>TF</b>	42	83.538	3.365	78.600	87.000
<b>GDP</b>	42	1.707	3.839	-9.316	8.379

Source: Author's calculation

The overarching aim of research remains to measure the effectiveness of selected EFI index components that are emphasised as independent variables. Within the unique context of WB6 economies, the GI has a mean value of 40.94 and an SD of 5.32. Regarding the context of the EU6, the GI mean value is 68.43, accompanied by an SD of 17.8. Furthermore, relying on the Heritage methodology, which is categorised into four classifications (0 to 100; where 0 to 25 is mostly unfree, 26 to 50 is moderately free, 51 to 75 is mostly free, and 75 to 100 free), the GI scoring for economies of WB6 is assessed at the moderate level, meanwhile, the economies of EU6 are assessed at the appropriate level (mostly free). To continue even further, approximately slightly different outcomes have resulted for the JE component, where the WB6 economies have a mean value of 45.24, whereas the EU6 economies have a mean value of 69.98. The minimum value registered for JE within WB6 is 22.80, registered in 2021 in Albania, while the maximum is 61.40, registered in North Macedonia. Considering the background of the comparison with the countries under analysis, it is noticed that the lowest score within the EU6 is 47.60, recorded in 2019 in the Czech Republic, whereas the maximum is 95.30, recorded in 2022 in Germany.

Based on a consideration of the fiscal policy implemented by these countries, it can be witnessed that TB, in WB6, has a mean value of 88.51, which is compared to the EU6 countries, which ended with a mean value of 58.04. Therefore, looking through this prism, TB is considered a supplementary advantage for attracting foreign investments for the WB6 countries, compared to the EU6. Additionally, the remaining two components, BF and TF, in both assessed panels proved to be within an approximate mean value in the range of 69.06 and 77.93, respectively 80.79 and 83.54. Finally, the controlling variable included is GDP growth, since it is directly tied to FDI. The mean value of FDI for WB6 countries is 3.17; however, for EU6 countries, it turned out to be 1.71. Table 1 provides comprehensive details on other observed information.

### 3.2 Correlation analysis

To further strengthen the research methodology and clarify the interaction among the variables, a correlation analysis was performed. A summary of this analysis is displayed in Table 2. The discoveries of this analysis suggest that FDI has a slight positive interaction with every single variable, except for TB, which indicates a moderate negative interaction in the setting of WB6 economies.

**Table 2 | Correlation analysis**

<b>WB6 Economies</b>	<b>FDI</b>	<b>GI</b>	<b>JE</b>	<b>TB</b>	<b>BF</b>	<b>TF</b>	<b>GDP</b>	<b>VIF</b>
<b>FDI</b>	1.000							“-“
<b>GI</b>	0.282	1.000						1.50
<b>JE</b>	0.018	0.475	1.000					1.51
<b>TB</b>	-0.433	0.231	0.195	1.000				1.61
<b>BF</b>	0.218	0.512	0.489	0.350	1.000			1.94
<b>TF</b>	0.185	-0.036	-0.105	-0.444	0.141	1.000		1.55
<b>GDP</b>	0.154	0.028	-0.047	0.102	-0.045	-0.214	1.000	1.06
<b>VIF mean</b>	“-“	“-“	“-“	“-“	“-“	“-“	“-“	1.53
<b>EU6 Economies</b>	<b>FDI</b>	<b>GI</b>	<b>JE</b>	<b>TB</b>	<b>BF</b>	<b>TF</b>	<b>GDP</b>	<b>VIF</b>
<b>FDI</b>	1.000							“-“
<b>GI</b>	-0.061	1.000						3.20
<b>JE</b>	-0.110	0.414	1.000					2.37
<b>TB</b>	0.403	-0.439	-0.416	1.000				1.51
<b>BF</b>	0.077	0.544	0.414	-0.543	1.000			2.47
<b>TF</b>	-0.170	0.007	-0.218	0.010	-0.011	1.000		1.16
<b>GDP</b>	0.216	0.002	0.126	-0.022	0.048	-0.233	1.000	1.07
<b>VIF mean</b>	“-“	“-“	“-“	“-“	“-“	“-“	“-“	<b>1.96</b>

Source: Author's calculation

Meanwhile, within the EU6 economies, there exists a moderate positive interaction observed with TB, however, a slight positive interaction has been observed with BF and GDP. There is a presence of moderate negative interaction within the GI, JE, and TF. Considering an analogy within the degree of interaction, it is important to emphasise the TB parameter, which at first demonstrates that WB6 imposes a fiscal package that is attractive for FDI, compared to EU6. This methodology, in addition to identifying the degree of interaction, can also be employed to identify if the data used may have constraints associated with multicollinearity. Through carefully examining the coefficient for every single variable, it is discovered that any correlation coefficient does not have a value exceeding 0.75 ( $r \geq 0.75$ ).

Based on the conclusions obtained by Gujarati (2004), who claims that the problem with multicollinearity emerges in scenarios when the independent variables inside a regression analysis are correlated, and if their magnitude is considerable, then we may have obstacles in specifying the model. Its main conclusion is that, if the coefficients of this analysis are less than 0.75 ( $r \leq 0.75$ ), the data does not contain concerns with multicollinearity. Accordingly, relying on the apostrophised arguments within our research, the largest coefficient is 0.544. Additionally, to the preceding examination, we performed a vector inflation factor (VIF) analysis to strengthen reliability. The analysis proceeds with the premise that if each parameter included in the analysis has a value higher than five ( $\beta \geq 5$ ), then we are dealing with issues of multicollinearity (Wooldridge, 2012). The discoveries reported in Table 2 confirm that in both panels, we do not have an individual value greater than 3.2 (in the EU6 panel) for the GI index. Meanwhile, a further argument is that under both instances, the mean value of VIF is 1.53 for the instance of WB6, respectively, 1.96 for the instance of EU6. As an overall conclusion, relying on the reported results, we confirm that the adaptation of the data in the model is appropriate and well-defined.

### 3.3 Unit root and cointegration test

Given the specific attributes and patterns of the panel data, a unit root examination was performed to reinforce the argument regarding the stability of the model's composition. Such evaluation is essential for ensuring the validity and stability of the mathematical modeling research. Hence, to discover if the data exhibits unit roots, the Levin-Lin-Chu examination was performed in the present scenario. As stated by Levendis (2023), this examination relies on the premise that results can be inaccurate if the data are not stationary.

**Table 3 | Unit root & cointegration test**

Variables	WB6 Economies				EU6 Economies			
	At level		1 <sup>st</sup> difference		At level		1 <sup>st</sup> difference	
	Statistic	p-value	Statistic	p-value	Statistic	p-value	Statistic	p-value
<b>FDI</b>	-8.1627	0.0000	-	0.0000	-3.0319	0.0012	-8.9310	0.0000
<b>GI</b>	-4.6485	0.0000	-	0.0000	-6.9005	0.0000	-	0.0000
<b>JE</b>	-3.0702	0.0011	-3.9457	0.0000	-0.5212	0.3011	-6.6126	0.0000
<b>TB</b>	-2.1370	0.0163	-2.4839	0.0003	-2.2171	0.0133	-5.9549	0.0000
<b>BF</b>	-	0.0000	-8.7625	0.0000	-3.3151	0.0005	-5.1934	0.0000
<b>TF</b>	-9.5626	0.0000	-	0.0000	-5.1019	0.0000	-4.9012	0.0000
<b>GDP</b>	-5.3690	0.0000	-6.8293	0.0000	-3.1925	0.0007	-3.8010	0.0001
<i>Co-integration test</i>								
<b>Pedroni test</b>	<i>Statistic</i>		<i>p-value</i>		<i>Statistic</i>		<i>p-value</i>	
	-9.5321		0.0000		-9.9225		0.0000	

Source: Author's calculation

Upon examining the outcomes reported in Table 3, it becomes visible that every parameter in the WB6 economies is stationary, except the TB parameter at a probability level of 1 percent. To convert whole parameters to the premise of stationarity, the data were placed in the first difference  $I(1)$ , and as a result of these steps, every single parameter ended up being

stationary. Conversely, considering the EU6 economies, it is evident that the parameters that are not stationary in level are JE and TB, and by placing them within the first difference, they become stationary. More precisely, these insights offer us robust indications that the data employed in the econometric approach would provide persistent outcomes. For examining the long-term interactions within EFI parameters, as well as GDP on FDI, and whether every parameter is integrated inside the model, the Pedroni test was performed. Our reported outcomes offer evidence that both panels of data are significant at the 1 percent probability threshold, and due to this, we can surmise that there is a long-term interaction within these characteristics, and they are adequately integrated (Neal, 2014).

### 3.4 Model fitting

In this section, the necessary tests will be discussed in the context of advancing the robustness of the research, which leads to the provision of reliability and accuracy in the selection of the model. Based on the results presented in the second part of Table 4, the Wald  $\chi^2$  in both cases is significant with probability ( $p = 0.000$ ), which gives us indications that the data are adequately incorporated. Another consideration that strengthens this conclusion is  $R^2$ , which in the instance of WB6 has a coefficient of 0.471, whereas in the instance of EU6, it has a coefficient of 0.486. Expressed explicitly for the instance of WB6, the independent variables explain 47.1 percent of FDI, while in the instance of EU6, the independent variables explain 48.6 percent of FDI. Before running the model selection test, the data are evaluated for heteroscedasticity problems. Within this setting, the Breusch/Pagan test was performed, and it was discovered in both instances, with the probability being greater than  $p > 0.05$  (WB6 with a  $p = 0.071$ ; EU6 with a  $p = 0.066$ ), presenting evidence that the data do not contain concerns with heteroscedasticity.

**Table 4 | Regression results**

Variables	2SLS approach – WB6		2SLS approach – EU6	
	$\beta$	$p \geq [z]$	$\beta$	$p \geq [z]$
GI	0.179	0.045	0.016	0.043
JE	-0.065	0.154	-0.044	0.009
TB	0.552	0.000	0.117	0.000
BF	0.146	0.012	0.157	0.002
TF	-0.086	0.280	-0.139	0.016
GDP	0.127	0.032	0.124	0.109
<b>Screening tests</b>				
Observation	42	"_"	42	"_"
Wald $\chi^2$	24.97	0.000	26.44	0.000
$R^2$	0.471	"_"	0.486	"_"
$\chi^2$ -test	"_"	0.071	"_"	0.066
Durbin score	$\chi^2(1) = 1.929$	0.000	$\chi^2(1) = 21.455$	0.003
Wu-Hausman	$F(1,27) = 1.529$	0.002	$F(1,27) = 21.137$	0.004

Source: Author's calculation

Durbin score and Wu-Hausman were employed to examine the endogeneity concern before deciding if the 2SLS approach is adequate. These evaluations begin under the assumption

that if the probability value is less than 0.05, then the null hypothesis should be rejected. Accordingly, within our actual instance, both panels (WB6 and EU6) have values less than 0.05 (see table 4:  $p = 0.000$ ;  $p = 0.002$  for WB6 and  $p = 0.003$ ;  $p = 0.004$  for EU6), therefore we have the confidence that FDI is an endogenous variable and the evaluation according to the 2SLS approach is adequate (Robert, 2020).

## 4 Discussion

Results obtained through the empirical examination reported in Table 4 demonstrate that GI within both groups has a statistically significant influence on FDI with a confidence interval of 95 percent. These discoveries adequately supply us with empirical evidence that may be analysed from two perspectives. Firstly, taking into consideration the approach of the statistical analysis and the impact of the outcome in both cases, it ends up being positive on FDI, hence meaning no difference between WB6 and EU6. Secondly, an increase of one unit of GI impacts an increase of 0.179 units in the case of WB6, and correspondingly, an increase of 0.016 units in the EU6. The results that were obtained are under the expectations; additionally, they are in the same spirit as the discoveries of the authors Islam et al. (2023), employing an integrated linear and non-linear approach for analysing the influence of GI and corruption control on economic growth, respectively, FDI. The outcomes they discovered indicate that an upward ranking of GI reflects positively on the attractiveness of FDI. Similar conclusions are supported by the authors Singh and Gal (2020), presenting evidence that the high ranking of EFI parameters in the countries of Southern Europe and Western Europe has considerable beneficial effects, despite the countries of Eastern and South Europe having an insignificant statistical effect on the attractiveness of FDI.

The JE variable, compared to the previous one, ended up resulting in a difference across both groups, wherein in the instance of WB6 it resulted in an insignificant adverse effect ( $p = 0.154$ ), however, regarding EU6 it exhibited a significant negative effect ( $p = 0.009$ ) with a probability level of 99 percent. The results presented for this variable provide indications that allow us to form an understanding that the ineffectiveness of JE is considered a factor influencing the decline in the attractiveness of FDI. Furthermore, in the WB6 countries, compared to the EU6 countries, it has been found to have a statistically insignificant influence. Additionally, for every unit decrease in JE, there will be an overall reduction of -0.065 units in FDI attraction for WB6, and -0.044 units for EU6, respectively. The conclusions of our study are in line with the philosophy of the studies performed by the authors Martins et al. (2023); Tag (2021); and Singh and Gal (2020) employing the static, dynamic, and mixed approach conclude that the ineffectiveness of the JE is reflected in the discouragement of FDI, whereas the high effectiveness of the JE is reflected in the improvement of advantageous circumstances for the attractiveness of FDI. An additional critical factor in making an environment attractive to investors is TB, which, from the results reported in Table 4, showed a statistically significant influence in both cases at the 99.9 percent credibility level. Our conclusion is based on the  $\beta = 0.552$  with  $p = 0.000$  for WB6 and  $\beta = 0.117$  with  $p = 0.000$  for EU6. Based on the information presented, we can conclude that the states contained within the analysis have a fiscal package that is conducive to promoting FDI throughout the observation period. An additional noteworthy conclusion for WB6 is that TB does not have any gap compared to EU6, and as such, from this perspective, they have aligned their fiscal policies based on EU directives. Our discoveries correspond with those of Mosquera Valderrama (2021), who contends that economies with low TB have an advantage in securing FDI. Zhang et al. (2024)



captured similar results, presenting consistent evidence that economies with low scores of TB have an advantage in attracting FDI, which leads to economic growth, whereas economies with high scores of TB had the reverse consequence.

On the other hand, two variables that cannot be treated as separate, BF and TF, in the context of our research, demonstrated a statistically significant discrepancy. BF for WB6 endures a statistically significant effect ( $\beta = 0.146$  with  $p = 0.012$ ), whereas for EU6 ( $\beta = 0.157$  with  $p = 0.002$ ), however, a gap exists within the TB variable, where in both instances it has reflected a negative effect, instead equaled to the level of statistical significance for WB6 it turned out to be insignificant ( $\beta = -0.086$  with  $p = 0.280$ ), whereas for EU6 it turned out to be a statistically significant effect ( $\beta = -0.139$  with  $p = 0.016$ ). After considering these discoveries, we can conclude that the economies of WB6 must continue to modernise their regulatory framework to create advantageous environments to be considered more positively in the spirit of TF. Our discoveries correspond in complete accordance with the conclusions of Singh and Gal (2020), examining the effect of EFI on attracting FDI within worldwide perspectives through the regression approach, offering consistent evidence that there is a negative correlation across these factors for Southeast European economies, respectively, Western Balkan economies. Employing a more sophisticated strategy, the authors Tag and Degirmen (2022) examined through the lens of institutional economics 127 economies globally through the GMM approach and have concluded that FDI can increase in those economies that have achieved satisfactory results concerning the enforcement of the law, the elimination of barriers for conducting business and as a result, they can have a beneficial effect on the increase of FDI.

Lastly, GDP, apart from the relevance inside our research, has resulted in significant statistical effects exclusively in the scenario of WB6 based on empirical evidence ( $\beta = 0.127$  with  $p = 0.032$ ), and with a confidence level of 95 percent. Conversely, within the EU6 economies, the empirical results demonstrate opposite results ( $\beta = 0.124$  with  $p = 0.109$ ). This result offers us evidence that an increase of each unit of GDP for the WB6 economies will influence the increase of 0.127 units of FDI, under conditions that the remaining constants remain constant. Our results were underpinned by many studies conducted earlier, and the same conclusion was reached by Cong et al. (2024) and Ciftci and Durusu-Ciftci (2021), indicating that the relationship between GDP and FDI is positive.

## Conclusions

This research provided a comprehensive examination of the determining factors of FDI in six European Union economies (EU6) and six Western Balkan economies (WB6), including elements of the economic freedom index and GDP. Utilising secondary panel data from reliable sources such as the Heritage Foundation and the World Bank for the period 2017 to 2023, this study has applied a Two-Stage Least Squares (2SLS) methodology to uncover the influences on FDI. Therefore, based on the research questions presented in the introduction section and the econometric results, it is concluded that in the case of WB6, the variables of the Economic Freedom Index (GI, TB, and BF) have a positive and significant impact on FDI, while in the context of the macroeconomic variable GDP, a positive relationship has been observed. In comparison with the results for EU6, a slight difference is noted, where

a significant relationship in attracting FDI exists between GI, TB, and BF (which is identical to the case of WB6). The difference is highlighted in the parameters that have a negative relationship with JE and TF. Finally, the GDP variable in the EU6 economies has proven to have an insignificant statistical effect on FDI. The findings provide nuanced insights into how various economic variables influence FDI in these regions. Regarding EU6, it is established that GI, TB, and BF significantly and positively affect FDI. The results also show that increasing the level of GI also reduces the TB, makes the economy more favorable to FDI, and BF creates a good business environment that promotes inflowing investment. On the other hand, JE and TF harm FDI in EU6. This finding is intuitively not expected because it might be the case that an overly strict judicial system or high openness of trade might be factors that discourage investors concerned about the length of the legal process or the competitive pressure of the highly open market. The consequences of GI, BF, TB, and GDP are also encouraging factors influencing FDI in the WB6. These determinants emphasise the magnitude of a steady and transparent governance structure, liberal business circumstances, and low and manageable tax rates as features that attract FDI. An optimistic influence of GDP suggests that economic size and growth predictions represent a dynamic factor for FDI. However, JE and TF negatively impact FDI. Indeed, EU6 and WB6 post similar results; thus, these results suggest the existence of factors that may be perceived as barriers by potential investors.

### ***Policy Implications***

As earlier indicated, the results of this examination have tremendous implications for EU6 and WB6 policy-makers. The impact of GI on FDI shows that the transparency of government actions, fighting corruption, and accountability of officials have to be in the first place. Such actions will build investors' confidence and create a business setting that will be trusted. Moreover, efforts should be taken so that the tax policy is competitive while assuring fiscal sustainability, making these economies more attractive to foreign investors. For the EU6, a series of policies that emphasise BF, like a decrease in bureaucratic procedures, smoothing of business registration, and support for new and existing businesses, will be important. However, the negative impact of JE and TF signifies that these regions should balance ensuring legal certainty with avoiding too heavy legal frameworks that discourage investment. Policymakers would consider reforms that enhance the efficiency of the judiciary without undermining its fairness and predictability. In the WB6 context, similar policy recommendations would apply. The reinforcement of GI through anti-corruption measures and governance reforms is considered vital. Encouraging BF by reducing regulatory barriers and creating an entrepreneurial climate would further attract FDI. The positive interplay between GDP and FDI underlines strategies that boost economic growth and stability. However, as in the EU6, the negative influence of JE and TF calls for a balanced approach. Legal procedures need to be simplified, and a steady trade environment must be created where domestic markets are not overwhelmed with competition.

Moreover, specialised agencies or task forces that particularly look into issues of attracting and facilitating FDI should be established in both panels. Such agencies would be of great assistance to foreign investors in facilitating and guiding them in the confusion of local directives while still offering them incentives, especially for strategic divisions. Moreover, the attractiveness of the investment destinations may be further enhanced by international collaboration and the synchronisation of investment policy in both regions.

## Acknowledgment

We extend our heartfelt gratitude in advance to the Editor-in-Chief and the anonymous reviewers for their valuable suggestions and contributions, which will enhance the quality of this research.

**Funding:** There was no special funding for this study.

**Conflict of interest:** The authors declare that this article was not submitted or published elsewhere. The authors do not have any conflicts of interest.

## References

- Abbas, A., Moosa, I., & Ramiah, V. (2022). The contribution of human capital to foreign direct investment inflows in developing countries, *Journal of Intellectual Capital*, 23(1), 9–26. <https://doi.org/10.1108/JIC-12-2020-0388>.
- Asteriou, D., & Hall, S. G. (2007). *Applied Econometrics: a modern approach*, revised edition. Hampshire: Palgrave Macmillan, 46(2), 117–155.
- Bai, J., Choi, S.H. & Liao, Y. (2021). Feasible generalized least squares for panel data with cross-sectional and serial correlations. *Empirical Economics*, 60, 309–326. <https://doi.org/10.1007/s00181-020-01977-2>.
- Becker, J., Fuest, C., & Riedel, N. (2012). Corporate tax effects on the quality and quantity of FDI. *European Economic Review*. 56(8), 1495–1511. <https://doi.org/10.1016/j.euroecorev.2012.07.001>.
- Belesity Bekalu, A. (2022). The effect of foreign direct investment on the economic growth of Sub-Saharan African countries: An empirical approach. *Cogent Economics & Finance*, 10(1), <https://doi.org/10.1080/23322039.2022.2038862>.
- Bellani, M. (2014). *Judicial efficiency and foreign direct investments: evidence from OECD countries*. The University of Bologna, at the “Trade and Innovation Workshop”. <https://www.uniba.it/it/ricerca/dipartimenti/dse/e.g.i/egi2014-papers/bellani>.
- Browne, C., Geiger, Th., & Gutknecht, T. (2013). The Executive Opinion Survey: The Voice of the Business Community. *The Global Competitiveness Report, World Economic Forum*. 69–78.
- Busse, M., & Groizard, J. L. (2008). Foreign direct investment, regulations, and growth. *World Bank Economic Review*, 22(2), 255–276. <https://doi.org/10.1111/j.1467-9701.2008.01106.x>.
- Chala, B.W. (2024). Effects of economic freedom and ease of doing business on trade in global value chains: Evidence from sub-Saharan Africa. *African Development Review*, 36(1), 70–83. <https://doi.org/10.1111/1467-8268.12735>.
- Chen, F., & Jiang, G. (2023). The impact of institutional quality on foreign direct investment: empirical analysis based on mediating and moderating effects. *Economic Research-Ekonomska Istraživanja*, 36(2). <https://doi.org/10.1080/1331677X.2022.2134903>.
- Ciftci, C., & Durusu-Ciftci, D. (2022). Economic freedom, foreign direct investment, and economic growth: The role of sub-components of freedom. *The Journal of International Trade & Economic Development*, 31(2), 233–254. <https://doi.org/10.1080/09638199.2021.1962392>.

- Cong, S., Chin, L., & Kumarusamy, R. (2024). Does trade freedom affect exchange rate movement? A perspective of high-technology trade. *The Journal of International Trade & Economic Development*, 34(3), 1–21. <https://doi.org/10.1080/09638199.2024.2320164>.
- de Mooij, R. A., & Ederveen, S. (2003). Taxation and foreign direct investment: A synthesis of empirical research. *International Tax and Public Finance*, 10(6), 673–693. <https://doi.org/10.1023/A:1026329920854>.
- Donaubauer, J, Meyer, B, & Nunnenkamp, P. (2016). Aid, Infrastructure, and FDI: Assessing the Transmission Channel with a New Index of Infrastructure. *World Development*. 78, 230–245. <https://doi.org/10.1016/j.worlddev.2015.10.015>.
- Duque, C.G., & Quintero, C.M. (2022). The effectiveness of legal participation in the environmental conflict of the Rio Blanco Forest Reserve. *Revista Republicana*, 33, 217–236. <https://doi.org/10.21017/Rev.Repub.2022.v33.a135>.
- Durguti, E., & Malaj, A. (2021). A Dynamic Panel Gravity Model Application on Trade Openness Determinants: Evidence from Southern and Western European Countries. *Journal of Global Business and Technology*, 18(1), 1–15.
- Durguti, E., Alidemaj, A., & Krivins, A. (2024). Good Governance and Rule of Law Effect on GDP Growth: Lessons for Emerging Economies. *Journal of Liberty and International Affairs*, 10(1), 37–60. <https://doi.org/10.47305/JLIA24101041d>.
- Friedman, M. F. (1962). *Capitalism and Freedom*. Chicago: University of Chicago Press.
- Gao, M. & Liu, X. (2021). Tax Burden, Institutional Environment and Foreign Direct Investment Flow: From the Perspective of Asymmetric International Tax Competition. *China Finance and Economic Review*, 10(1), 66–85. <https://doi.org/10.1515/cfer-2021-0004>.
- Globerman, S., & Shapiro, D. (2002). Global Foreign Direct Investment Flows: The Role of Governance Infrastructure. *World Development*, 30(11), 1899–1919. [https://doi.org/10.1016/S0305-750X\(02\)00110-9](https://doi.org/10.1016/S0305-750X(02)00110-9).
- Gujarati, D. N. (2004). *Basic Econometrics, 4th Edition*. New York: McGraw-Hill Companies.
- Hansen, C., B. (2007). Generalized least squares inference in panel and multilevel models with serial correlation and fixed effects. *Journal of Econometrics*, 140(2), 670–694. <https://doi.org/10.1016/j.jeconom.2006.07.011>.
- Hans-Jurgen, A., Golsch, K., & Schmidt, A. W. (2013). *Applied panel data analysis for economic and social surveys*. Heidelberg: Springer Science & Business Media.
- Hao, Y. (2023). The dynamic relationship between trade openness, foreign direct investment, capital formation, and industrial economic growth in China: new evidence from ARDL bounds testing approach. *Humanities and Social Sciences Communications*, 10, 160. <https://doi.org/10.1057/s41599-023-01660-8>.
- Hayek, F.A. (1991). *Economic freedom*. Basil: Blackwell.
- Islam, K., Bilal, A.R., Saeed, Z., Sardar, S., & Kamboh, H.M (2023). Impact of government integrity and corruption on sustainable stock market development: linear and nonlinear evidence from Pakistan. *Economic Change and Restructuring*, 56, 2529–2556. <https://doi.org/10.1007/s10644-023-09523-7>.
- Joo, B. A., & Shawl, S. (2023). Understanding the Relationship Between Foreign Direct Investment and Economic Growth in BRICS: Panel ARDL Approach. *Vikalpa*, 48(2), 100–113. <https://doi.org/10.1177/02560909231180078>.

- Kersan-Škabić, I. (2019). The drivers of global value chain (GVC) participation in EU member states. *Economic Research-Ekonomska Istraživanja*, 32(1), 1204–1218. <https://doi.org/10.1080/1331677X.2019.1629978>.
- Levendis, J.D. (2023). *Unit Root Tests. Time Series Econometrics*. Springer Texts in Business and Economics. Springer, Cham. [https://doi.org/10.1007/978-3-031-37310-7\\_7](https://doi.org/10.1007/978-3-031-37310-7_7).
- Magazzino, C., & Mele, M. (2022). Can a change in FDI accelerate GDP growth? Time-series and ANNs evidence on Malta. *Journal of Economic Asymmetries*, 25, e00243. <https://doi.org/10.1016/j.jeca.2022.e00243>.
- Mariano, R.S. (2011). *Two-Stage Least Squares*. International Encyclopaedia of Statistical Science. Springer, Berlin, Heidelberg. [https://doi.org/10.1007/978-3-642-04898-2\\_599](https://doi.org/10.1007/978-3-642-04898-2_599).
- Martins, JM., Gul, A., Nuno-Mata, M., Arslan-Haider, S., & Ahmad, S. (2023). Do economic freedom, innovation, and technology enhance Chinese FDI? A cross-country panel data analysis. *Heliyon*. 9(6), 1–10. <https://doi.org/10.1016/j.heliyon.2023.e16668>.
- Mosquera Valderrama, I.J. (2021). Tax Incentives: From an Investment, Tax, and Sustainable Development Perspective. In: Chaisse, J., Choukroune, L., Jusoh, S. (eds) *Handbook of International Investment Law and Policy*. Springer, Singapore. [https://doi.org/10.1007/978-981-13-3615-7\\_31](https://doi.org/10.1007/978-981-13-3615-7_31).
- Neal, T. (2014). Panel Cointegration Analysis with Xtpedroni. *The Stata Journal*, 14(3), 684–692. <https://doi.org/10.1177/1536867X1401400312>.
- Ochel, W., & Röhn, O. (2006). Ranking of Countries - The WEF, IMD, Fraser, and Heritage Indices. *Institut für Wirtschaftsforschung an der Universität München, München*. 4(2), 48–60. <https://hdl.handle.net/10419/166879>.
- Pesaran, M. H. (2015). *Time series and panel data econometrics*. United Kingdom: Oxford University Press.
- Pindado, J., & Requejo, I. (2015). Panel Data: A Methodology for Model Specification and Testing. *Wiley Encyclopedia of Management*. 4, 1–18. <https://doi.org/10.1002/9781118785317.weom040013>.
- Razzaq, A. (2024). Impact of fintech readiness, natural resources, and business freedom on economic growth in the CAREC region. *Resources Policy*, 90, 104846. <https://doi.org/10.1016/j.resourpol.2024.104846>.
- Robert, H. P. (2020). Durbin–Wu–Hausman Specification Tests. Handbook of Financial Econometrics, Mathematics, Statistics, and Machine Learning. Chapter 28. *World Scientific*. [https://doi.org/10.1142/9789811202391\\_0028](https://doi.org/10.1142/9789811202391_0028).
- Santiso, C. (2022). Govtech against corruption: What are the integrity dividends of government digitalization? *Data & Policy*, 4, e39. <https://doi.org/10.1017/dap.2022.31>.
- Sayari, N., Sari, R., & Hammoudeh, S. (2018). The impact of value-added components of GDP and FDI on economic freedom in Europe. *Economic Systems*, 42(2), 282–294. <https://doi.org/10.1016/j.ecosys.2017.03.003>.
- Seetaram, N., & Petit, S. (2012). Panel data analysis. In L. Dwyer, A. Gill, & N. Seetaram (Eds.), *Handbook of research methods in tourism* (pp. 127–145). Edward Elgar Publishing.

- Singh, D. & Gal, Z. (2020). Economic Freedom and its Impact on Foreign Direct Investment: Global Overview. *Review of Economic Perspectives*, 20(1) 73–90. <https://doi.org/10.2478/revecp-2020-0004>.
- Tag, M.N. (2021). Judicial institutions of property rights protection and foreign direct investment inflows. *International Review of Law and Economics*. 65, 105975. <https://doi.org/10.1016/j.irle.2020.105975>.
- Tag, N.M., & Degirmen, S. (2022). Economic freedom and foreign direct investment: Are they related? *Economic Analysis and Policy*. 73, 737–752. <https://doi.org/10.1016/j.eap.2021.12.020>.
- van der Elst, J. M. M. A. R. (2019). The Economic Impact of Anti-Corruption Legislation on Foreign Investor Perceptions of Corruption. [Doctoral dissertation, College of Business at Florida Institute of Technology]. <https://repository.fit.edu/etd/79>.
- Wencong, L., Ikboljon, K., Ibromkhim, K., & Yakhyobek, A. (2020). Foreign Direct Investment, Natural Resources, Economic Freedom, and Sea-Access: Evidence from the Commonwealth of Independent States. *Sustainability*, 12(8), 3135. <https://doi.org/10.3390/su12083135>.
- Wooldridge, J. M. (2012). *Introductory econometrics: A modern approach* (6th ed.). Cengage learning.
- Zeng, J.S. (2022). The effectiveness of judicial and public enforcement of regulation on related-party transactions in China. *Journal of Corporate Law Studies*, 22(1), 505–534. <https://doi.org/10.1080/14735970.2022.2107075>.
- Zhang, X., Huang, Y., & Wei, F. (2024). The incentive effects of the macro tax burden on economic growth: A negative or positive incentive effect? Analysis based on panel data. *International Review of Economics & Finance*. 93, 128–147. <https://doi.org/10.1016/j.iref.2024.03.006>.

---

**The research article passed the double-blind review process. | Received:** 5 October 2024; **Revised:** 30 November 2024; **Accepted:** 26 December 2024; **Available online:** 16 June 2025; **Published in the regular issue:** 18 December 2025.

---

<sup>i</sup> See: Library of Congress. "Adam Smith: The Theory of Sentiments. <https://catdir.loc.gov/catdir/samples/cam031/2001037390.pdf>.

<sup>ii</sup> The index of Economic Freedom Methodology - <https://www.heritage.org/index/pages/about#indexMethodology>.