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## The FDI and Economic Growth in the Western Balkans: The Role of Institutions

Edib Smolo<sup>1</sup>

### ABSTRACT

This study explores the impact of foreign direct investment (FDI) and institutional quality on the economic growth of the Western Balkan economies – Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, and Serbia. The conventional wisdom says that FDI plays a significant role in economic development and that institutional development may also affect this relationship. Using a panel data analysis for 20 years (2000-2019) and in contrast to this conventional wisdom, the study shows that FDI significantly negatively impacts growth within the sample countries. At the same time, the results indicate that institutional development has a significantly negative or no role on growth directly. The results depend on the proxy used for institutional development. Furthermore, when FDI and institutional development measures interact, both indicators become insignificant, including their interaction terms. This may be because the institutions within the sample countries are at low levels of development to make any significant impact on either growth or FDI-growth relationship.

### ملخص

تستكشف هذه الدراسة تأثير الاستثمار الأجنبي المباشر (FDI) والجودة المؤسسية على النمو الاقتصادي لاقتصادات غرب البلقان - ألبانيا والبوسنة والهرسك والجبل الأسود ومقدونيا الشمالية وصربيا. وتفيد الحكمة التقليدية أن الاستثمار الأجنبي المباشر يلعب دورا مهما في التنمية الاقتصادية وأن التطور المؤسسي قد يؤثر أيضا على هذه العلاقة. باستخدام تحليل بيانات اللوحة لمدة 20 عاما (2000-2019) وعلى عكس هذه الحكمة التقليدية، تُظهر الدراسة أن الاستثمار الأجنبي المباشر يؤثر بشكل كبير على النمو داخل بلدان العينة. وفي الوقت نفسه، تشير النتائج إلى أن التطور المؤسسي له دور سلبي أو لا دور له في النمو بشكل مباشر. وتعتمد النتائج على الممثل المستخدم للتطوير المؤسسي. وعلاوة على ذلك، عندما يتفاعل الاستثمار الأجنبي المباشر وتدابير التنمية المؤسسية، يصبح كلا

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المؤشرين غير مهم، بما في ذلك شروط التفاعل بينهما. وقد يكون هذا بسبب أن المؤسسات داخل بلدان العينة في مستويات منخفضة من التطور لإحداث أي تأثير كبير على علاقة النمو أو نمو الاستثمار الأجنبي المباشر.

### ABSTRAITE

Cette étude explore l'impact des investissements directs étrangers (IDE) et de la qualité des institutions sur la croissance économique des économies des Balkans occidentaux - Albanie, Bosnie-Herzégovine, Monténégro, Macédoine du Nord et Serbie. La sagesse conventionnelle veut que les IDE jouent un rôle important dans le développement économique et que le développement institutionnel puisse également affecter cette relation. En utilisant une analyse de données de panel sur 20 ans (2000-2019) et contrairement à cette sagesse conventionnelle, l'étude montre que les IDE ont un impact négatif significatif sur la croissance au sein des pays de l'échantillon. Par ailleurs, les résultats indiquent que le développement institutionnel a un rôle significativement négatif ou nul sur la croissance directement. Les résultats dépendent de l'indicateur utilisé pour le développement institutionnel. En outre, lorsque les mesures des IDE et du développement institutionnel interagissent, les deux indicateurs deviennent non significatifs, y compris leurs termes d'interaction. Cela peut s'expliquer par le fait que les institutions dans les pays de l'échantillon sont à des niveaux de développement faibles pour avoir un impact significatif sur la croissance ou sur la relation IDE-croissance.

**JEL classification:** C23, E2, F21, F43, O43, P2

**Keywords:** institutional development, foreign direct investment, FDI, economic growth, transition economies, Western Balkan.

## 1. INTRODUCTION

The Western Balkan region that encompasses Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia has been the central stage to several world affairs that sometimes changed the global history. During the 1990's period, the region faced several military conflicts that, for several years, impacted the region's development. Since then, these countries have been moving to the market economy at a languid pace. Although significant changes have been introduced within the countries' economic and political arena, they are far from meeting the European Union's (EU) standards to which the region aspires.

Impacts of foreign direct investment (FDI) and institutional development attracted significant attention among researchers. Depending on the underlying conditions in a particular state, these variables may cast different effects on economic growth. However, the overall impact of FDI and institutional development is expected to be positive. In particular, it is expected that FDI would lead to spillovers and technological innovation of know-how to the less developed economies (Kisswani et al., 2015). Thus, any type of FDI is generally welcomed, especially in the case of transition economies such as those from the Western Balkans. The significance of FDI is closely related to the development of financial sectors and institutions, political stability, and the quality of human capital. Perhaps among the main reasons for low levels of FDI inflow into the Western Balkan region are the underdevelopment of financial sectors and institutions.

As economic growth is affected by many factors, the same is true for FDI inflows. According to Hunady and Orviska (2014), a country's economic openness, labor and firing costs, income level, public debt, and financial and economic crisis significantly impact FDI. At the same time, the study finds no significant effect of corporate tax rates on FDI. All these point to the importance of institutional quality and effectiveness for the practical impact of FDI on growth.

Being transition economies, the Western Balkan countries are undertaking numerous institutional reforms. Over the years, improvements have been made on this ground, but much needs to be done. The region is ranked among the highest corrupted ones where the rule of law is at its lowest. (Popovic et al., 2020). These factors affect the foreign direct investment (FDI) inflows and economic growth of these countries.

The Western Balkans countries in particular and transition economies, in general, are in dire need of FDI inflows that would support infrastructural and other developmental projects that could boost economic growth. The main objective of this study is to look at the effect of FDI and institutional development on economic growth, focusing on the Western Balkans countries. These countries are important for several reasons. First, due to its strategic position within geopolitical and geoeconomic relations, the region represents an overall threat to the stability of the EU and the wider area. Functional and stable economies of the region would benefit the stability of the EU as well. Second, the Western Balkan countries are potential candidates for the EU enlargement agenda. Inheriting countries

with weak institutions could lead to possible disagreement between the EU member states and eventually the EU's instability. Third, being transition economies, the study provides an evaluation of the institutional development of the region. This can also be seen as a success or a failure of the EU, as the EU has played an active role in the region's development since the 1990s.

For this research, we will apply the pooled OLS and fixed-effects methods developed by Driscoll-Kraay (1998). This method is the best suitable for the sample where the period (T) is larger than group (N). By using Driscoll-Kraay standard errors regression, we will be able to meet the objective.

The rest of the paper is structured as follows. Section 2 provides a literature review. Section 3 describes the data and methodology used, while section 4 discusses empirical results. Finally, Section 5 offers concluding remarks.

## **2. LITERATURE REVIEW**

The relationship between economic growth and the level of FDI on one side and institutional quality/development on the other has attracted considerable attention among scholars, yet results are far from being conclusive. In the following subsections, we are discussing these studies and their findings briefly.

Over the years, the developed world attracted the majority of the international FDI. However, in recent years this trend has been changing. According to the World Investment Report (UNCTAD, 2019), the global flows of FDI in 2018 decreased to \$1.3 trillion (from \$1.5 trillion in 2017) with a fall of 13 percent, the lowest since the 2008 global financial crisis. The inflows to developing countries have been steadily rising with an annual 2 percent increase and have now reached a share of 54 percent of the global FDI amount, an all-time high.

When it comes to empirical studies, the literature provides conflicting results. For instance, Blomstoerm et al. (1992) found a positive correlation between FDI inflows (measured as a percentage of GDP) and GDP per capita across developed countries. They argue the countries with higher per-capita income levels benefit from FDI inflows more than countries with lower per capita income levels. According to them, local businesses in developing countries are too far behind in technological and

human capital levels, making them less competitive and less attractive to large corporations. Similar findings are reported by Bengoa & Sanchez-Robles (2003), Zhang (2001), Elboiashi (2015), and Borenstein (1998). They emphasized how FDI inflows are highly significant for the economy only if the host country meets minimum requirements of human capital needed, i.e., that the economy is absorbent enough to use and efficiently utilize the FDI.

In contrast to the above studies, some authors challenge the positive impact of FDI on economic growth. For instance, FDI inflows may reduce the labor productivity and local firms' comparative advantages, as the results show that firms not receiving FDI had better performance in specific regional industries (Lutz & Talavera, 2004; Minović et al., 2021). Further, Anetor (2020) finds that FDI has a significantly negative impact, while portfolio investment has a positive but insignificant effect on the economic growth of sub-Saharan African (SSA) countries. In addition, other studies show no significant impact of FDI on development either in developed or developing economies (Carkovic & Levine, 2002), 17 transition economies of the Central and Eastern Europe region (Lyroudi et al., 2004), as well as in the case of three different country groups<sup>2</sup> (Angelopoulou & Liargovas, 2014) and the Western Balkan countries (Estrin & Uvalić, 2016).

Similarly, the literature on institutional development and economic growth relationship attracted a lot of attention among researchers. The literature's most commonly used institutional development measures are property rights, press freedom, bureaucratic procedures, democracy levels, political stability, business environment indices, and others. While research results are primarily straightforward, suggesting the positive impact of a highly-developed institutional framework on economic growth, many factors influence institutional development itself. Consequently, Murtaza and Faridi (2016) find that efficient government and functional democracy lead to institutional efficiency that eventually lead to economic growth in the case of Pakistan. In the case of SSA countries, institutional quality contributes to economic growth both directly and indirectly through public debt (Sani et al., 2019). Similarly, reviewing the literature over the 1992–2016 period, Urbano et al. (2019)

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<sup>2</sup> The three different groups are 27 EU, 16 EMU member states, and 18 transition economies with an emphasis on different levels of economic integration within the unions as well as across the states individually.

claim that institutions contribute to economic growth through entrepreneurship.

Controlling nations' bureaucratic quality, property rights, and political stability is crucial for economic growth and investment (Knack & Keefer, 1995). In line with that, corruption negatively impacts economic growth (Easterly, 1999; Hakimi & Hamdi, 2017; Minović et al., 2021). Similarly, the concentration of political authority in few hands within a society (an elite segment with great political power, as is the case with the majority of the Western Balkan countries) would lead to institutions and regulations that benefit only a tiny proportion of the society (Nigar, 2015). Hence, this leads to non-efficient resource allocation, directing them to the upper-income level of society and hindering the economic growth prospects (Sonin, 2003; Nigar, 2015).

In this regard and based on the existing literature, both FDI and institutions are necessary for economic growth. Improving overall institutional quality would lead to better economic growth and FDI inflows (Van Bon, 2019; Hayat, 2019; Raza et al., 2019). These results, however, are more evident for the low and middle-income countries. As for the high-income countries, the study found that FDI inflows slow down economic growth (Hayat, 2019). Corruption – another proxy of institutional development – hinders the economic growth of MENA countries by negatively affecting investment and FDI inflows (Hakimi & Hamdi, 2017). Furthermore, Haini (2020) found a positive and significant impact of the rule of law on economic growth, and it plays a complementary role in financial development. The complementary role of institutional quality is also found by Kutan et al. (2017), who detects the positive impact of FDI inflows on growth.

In contrast, Agbloyor et al. (2016) found no impact of either FDI or institutions on growth in SSA countries. The results also show that the effect of FDI on growth is not affected by institutions. Also focusing on SSA, Asamoah et al. (2019) found positive and negative impacts of institutional quality and FDI on economic growth. On top of that, while positive on growth, institutional quality hinders the positive effects of FDI and trade openness on growth (Nguyen et al., 2018). It seems that the positive impact of FDI on economic growth depends on the level (threshold) of institutional development (Jude & Leveuge, 2015; Trojette, 2016). Hence, before attracting FDI, developing countries should enhance their institutional quality.

All in all, this study contributes to and fills in the gaps within the existing literature on FDI-institutions-growth relationships in several ways. First, the current literature on FDI-growth, institutions-growth, FDI-institutions-growth relationships provides mixed results. Second, these relationships have not been adequately addressed within the Western Balkan countries. Only a few papers discuss this region that is strategically very important for the overall stability of the EU and the region. Furthermore, these countries are on the EU membership waiting list, and this membership is subject to, among other things, countries' institutional development that is currently not at the desired level. This study represents an attempt to quantify the existing conditions of institutions within the region and provide valuable recommendations to policymakers. Third, the sample countries belong to the transition economies group of countries undergoing structural changes moving from a command economy to a market economy. As such, they belong to developing economies. The existing literature indicates that the impact of FDI and institutions on growth within those countries is different from their impacts on the growth of developed, well-established market economies. While a broader list of transition economies may provide specific results due to heterogeneity, the Western Balkan countries share many similarities that could provide meaningful insight into relationships under investigation.

### **3. DATA AND METHODOLOGY**

#### **3.1 Model and Methods Used**

Numerous estimation techniques have been used in the literature, from the pooled OLS (POLS), the random effect (RE), the fixed effects (FE), to the instrumental variable (IV) estimator, and the generalized methods of moments (GMM) method. The GMM method is suitable for models with a long (N) and a short (T). However, our sample consists of a short (N) and a relatively long (T) as we have a panel consisting of only 5 countries and covering 20 years. Hence, we cannot use the GMM technique.

The RE method assumes that each country in our sample has its error term. For this method to work, these individual error terms are not to be correlated with our explanatory variables. If this assumption is not valid, the RE estimation results would be inconsistent and biased. In contrast, the FE method, also known as the least squares dummy variable (LSDV),



assumes different constants for each country in the sample (Asteriou et al., 2005; Flannery & Hankins, 2013).

However, many panel data suffer from cross-sectional or ‘spatial’ dependence, as Driscoll and Kraay (1998) claimed. This is especially true for macroeconomic studies with a non-random selection of groups (states, countries, or industries) over time. These groups are ‘subject to both observable and unobservable common disturbances.’ Failing to tackle the issue of spatial dependence, standard techniques would produce consistent parameters but with inconsistent standard errors (Driscoll & Kraay, 1998; Hoechle, 2007). In other words, for standard errors in panel data studies to be valid, cross-sectional individuals should be uncorrelated (Vogelsang, 2012). Transforming the orthogonality conditions addresses issues of spatial and temporal dependence. Even though the spatial correlation consistent standard error estimator requires a large  $T$ , it is found to provide superior results even in finite-samples with short  $T$  compared to traditional techniques that do not cater to spatial dependence (Driscoll & Kraay, 1998).

For this purpose, we use the STATA command ‘xtscc’ developed by Hoechle (2007). It provides POLS and FE (within) estimates with Driscoll and Kraay’s (1998) standard errors. The Hausman test (Hausman, 1978) is used to choose between POLS and FE models. However, to get a robust Hausman test in the case of spatial and temporal dependence, we follow Hoechle (2007), who fits the auxiliary regression suggested by Wooldridge (2002) with Driscoll and Kraay’s standard errors. The null hypothesis of no FE, i.e., that  $E(\alpha + \varepsilon_{it}|X_{it}) = 0$  is tested. A significant p-value ( $p < 0.05$ ) of the F stat from the test of  $\gamma = 0$  rejects the null and supports FE. Otherwise, we should rely on the POLS estimator (see Hoechle, 2007).

Thus, in line with Azam and Ahmed (2015), we use the following model to estimate the impact of FDI and institutional development on economic growth:

$$Y_{it} = \alpha + \beta FDI_{it} + \delta ID_{it} + \theta X_{it} + \varepsilon_{it} \quad (1)$$

where for country  $i$  (the cross-sectional dimension) at time  $t$  (the time dimension),  $Y_{it}$  is the annual real per capita GDP growth rate,  $FDI_{it}$  represents FDI inflows,  $ID_{it}$  is a measure of institutional development,  $X_{it}$  is a vector of all control variables, and  $\varepsilon_{it}$  is a random error term that

captures all other variables. A similar model has been used by (Hayat, 2019; Trojette, 2016; Van Bon, 2019). Estimation using model (1) above will show the effects of the FDI and institutional development on economic growth in our sample countries.

Furthermore, to see whether the FDI-growth relationship depends on institutional development, we introduce an interaction term to equation (1) as presented in equation (2) below:

$$GDP_{it} = \alpha + \beta FDI_{it} + \delta ID_{it} + \vartheta(FDI_{it} \times ID_{it}) + \theta X_{it} + \varepsilon_{it} \quad (2)$$

where  $FDI_{it} \times ID_{it}$  represents the interaction variable. Other terms are as defined earlier.

Having an interaction term in our dynamic panel data model will help us evaluate the impact of the lagged value of growth, FDI, institutional development, and our control variables on growth. At the same time, it will help us evaluate the impact of institutional development on the FDI-growth nexus. Finally, in line with Hayat (2019), we transform all variables in natural logarithm form except GDP, FDI, and institutional quality variables.

### 3.2 Data

To investigate the relationship between FDI and institutional development on one and economic growth on the other side, the study utilizes few panel data techniques on the Western Balkan countries – Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, and Serbia.<sup>3</sup> These economies are relatively small, developing, and transitioning from planned/command to market economy.

In this regard, the study will use annual time series data of the selected macroeconomic indicators. All data are sourced from the World Bank's database and cover the period of 2000-2019, making it a total of 20 years.<sup>4</sup> As we are covering 20 years and 5 countries (cross-sectional units), there should be 100 observations in total (20 x 5). However, as

<sup>3</sup> Although Croatia belongs to the Western Balkans, we excluded it from the sample as she joined the EU on 1 July 2013. On the other hand, there are sufficient data for Kosovo and thus we excluded Kosovo from the study as well.

<sup>4</sup> We opt for this period due to the fact that majority of the Western Balkan countries went through turbulent times during the '90s and it took some years for these countries to get their economies back on track.

several countries reported no data, each variable's total number of observations may not be the same. However, we are dealing with a strongly balanced panel.

Following the existing literature, this study uses the real per capita GDP growth (GDP) to measure economic growth. Several studies use different FDI proxies. Still, the most common proxy for FDI is net FDI inflows as a percentage of GDP. Institutional development is measured either by overall institutional quality (control of corruption, political stability, and the rule of law) from the Heritage Foundation (Procházka & Čermáková, 2015) or by institutional development variable provided by the World Governance Indicators (WGI) developed by Kaufmann et al. (2010). Kaufmann et al. (2010) mention six indicators of institutional quality, namely: estimates of control of corruption (CCE), government effectiveness (GEE), political stability (PSE), regulatory quality (RQE), the rule of law (RLE), and voice and accountability (VAE). These indicators are measured on a scale from  $-2.5$  to  $+2.5$ , where the largest scale implies superior institutional quality and vice versa.

Following Buchanan et al. (2012), we consider all those indicators individually to test their impact on growth and FDI-growth relationship. We cannot use them jointly in a single equation as these indicators are highly correlated (Globerman & Shapiro, 2002; Buchanan et al., 2012). For this reason and in line with Knack and Keefer (1995), Globerman and Shapiro (2002), Buchanan et al. (2012), and Sani et al. (2019), we use the principal component analysis (PCA) to construct the institutional quality (IQ) index based on those indicators.

As for control variables, we use several macroeconomic variables to control their impacts on economic growth as the literature points out their significance in determining economic growth. In particular, we use gross capital formation (GCF) representing investment (Ibrahim et al., 2017), trade openness (TO), the labor force (LF) as measured by the total number of the labor force, and inflation (I) (Beck et al., 2014; Bist, 2018; Ibrahim et al., 2017; Sabir et al., 2019; Swamy & Dharani, 2019; Trojette, 2016).

Table 1 presents the descriptive statistics of the variables used in this study. A significant variation of the real GDP per capita growth is evident in Table 1, with mean and standard deviation being 3.7 percent and 2.7 percent, respectively. The lowest negative GDP per capita growth of  $-5.99$  percent is recorded in Montenegro and the highest, 9.31 percent, in

Albania. The same is true for FDI and institutional development as measured by the Heritage Foundation. The FDI ranges from 0.54 percent in North Macedonia to 37.27 percent of GDP in Montenegro. Institutional development is lowest in Bosnia and Herzegovina and highest in North Macedonia. A great deal of variation is detected in the case of inflation that ranges from a minimum of -2.76 percent to a maximum of 86.83 percent. To take the logarithm, we add a constant number 3 to the inflation rate. As described earlier, all institutional quality variables are in the -2.5 and 2.5 range.

**Table 1: Descriptive Statistics**

Variable	Sign	Obs	Mean	Std. Dev.	Min	Max
GDP per capita growth (annual %)	GDP	100	3.7	2.703	-5.997	9.311
FDI - net inflows (% of GDP)	FDI	88	7.047	5.595	.536	37.272
Institutional development	ID	99	58.069	7.45	36.6	71.3
Institutional quality index	IQ	100	-.687	.212	-1.382	-.303
Control of corruption: estimate	CCE	100	-.404	.236	-1.177	.023
Government effectiveness: estimate	GEE	100	-.152	.575	-.96	2.766
Political stability: estimate	PSE	100	-.247	.428	-1.643	.816
Regulatory quality: estimate	RQE	100	-.018	.325	-.856	.885
Rule of law: estimate	RLE	100	-.349	.294	-1.272	.335
Voice and accountability: estimate	VAE	100	.032	.187	-.638	.336
Gross capital formation (% of GDP)	GCF	100	24.388	6.15	9.165	41.177
Trade (% of GDP)	TO	100	90.523	19.101	22.492	138.827
Labor force - total	LF	100	1,406,622. 2	993,922.8 4	231,38 7	3,354,61 5
Inflation - GDP deflator (annual %)	INF	100	6.281	12.533	-2.758	86.826

#### 4. ANALYSIS OF RESULTS

Table 2 provides the estimated results based on Eq (1) using the pooled ordinary least square (POLS) and the fixed-effects (FE) estimators with Driscoll-Kraay standard errors and various indicators for institutional development. In particular, models (1) and (2) are using institutional development (ID) proxy based on the Heritage Foundation data; models (3) and (4) rely on the institutional quality (IQ) index constructed applying PSA on six institutional quality indicators developed by Kaufmann et al. (2010). Furthermore, each of these six indicators is used

individually. Hence, control of corruption (CCE), government effectiveness (GEE), political stability (PSE), regulatory quality (RQE), rule of law (RLE), and voice and accountability (VAE) and used in models (5) and (6), (7) and (8), (9) and (10), (11) and (12), (13) and (14), and (15) and (16), respectively.

As pointed out in the previous section, we use the Hausman test, as suggested by Hoechle (2007), to determine whether we should rely on FE or POLS results. Based on this test, FE estimation results are preferred except when ID is used in model (1), where we should rely on results provided by the POLS estimator. Furthermore, the R2 results from Table 2 reveal that our models explain from 71.4 percent to 78.5 percent variation in economic growth.

In general, our results indicate that FDI has a significantly negative impact on economic growth in the selected Western Balkan countries. These results align with results reported by Anetor (2020) and partially with those of Lutz and Talavera (2004). As for institutional development, the results are inconclusive and even conflicting depending on a proxy used. ID, a proxy from the Heritage Foundation, reveals a significantly negative impact of institutional development on economic growth. Having in mind widespread corruption and overall (under)development of institutions in our sample countries, this result comes as no surprise and support arguments provided by Easterly (1999), Sonin (2003), Nigar (2015), Hakimi and Hamdi (2017) and Minović et al. (2021). In other models, our proxies for institutional development are either positive or negative but insignificant in all relevant models, the finding in line with those of Agbloyor et al. (2016).<sup>5</sup>

As for control variables, GCF is found to have a significantly positive impact on growth in all models, which is not the case with other variables (Anetor, 2020). In models (1) and (12), INF has a negative and significant impact (Anetor, 2020), while the significantly positive effect of TO is found only in the model (12) (Nigar, 2015). Finally, LF has an insignificant impact on growth with positive and negative signs (Nigar, 2015).

In short, based on the estimation results from Table 2, we can conclude

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<sup>5</sup> Significantly negative impact is found in the case of regulatory quality estimate (RQE) using POLS in model (11). However, based on the Hausman test, we should rely here on FE estimation results from model (12).

that FDI decreases economic growth significantly when it comes to the Western Balkan countries. However, based on the majority results, we find no direct impact of institutional development proxies on growth. This could be attributed to deficient levels of institutional development (and overwhelming corruption) within the sample countries. It is pointed in previous studies that they need to reach certain levels to affect growth after all (see Jude & Levieuge, 2015; Trojette, 2016).

Table 2: FDI-Institutions-Growth nexus: GDP per capita as the dependent variable

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE
FDI	-0.085** (0.030)	-0.138** (0.048)	-0.059 (0.034)	-0.143** (0.051)	-0.059 (0.034)	-0.143** (0.051)	-0.045 (0.043)	-0.141** (0.043)	-0.143 (0.071)	-0.141* (0.057)	-0.095* (0.040)	-0.143** (0.049)	-0.060 (0.036)	-0.136** (0.051)	-0.088 (0.047)	-0.136** (0.050)
ID		-0.177** (0.045)														
IQ			1.322 (1.203)	2.566 (2.034)												
CCE					1.188 (1.081)	2.306 (1.828)										
GEE							-1.043 (0.714)	3.318 (1.579)								
PSE									1.826 (1.015)	0.243 (0.748)						
RQE											-4.444** (1.445)	-3.089 (1.816)				
RLE													-0.250 (2.429)	0.292 (1.810)		
VAE															2.130 (1.407)	-0.375 (1.132)
GCF	5.475** (1.558)	3.719** (0.823)	3.737* (1.642)	3.902** (1.023)	3.737* (1.642)	3.902** (1.023)	3.580* (1.519)	4.504*** (0.975)	2.940* (1.132)	3.548** (1.097)	5.484** (1.557)	3.485** (0.971)	3.367** (1.191)	3.471** (0.953)	3.568** (1.522)	3.323** (0.960)
TO	-1.436 (0.692)	1.769 (1.440)	-0.889 (0.986)	1.170 (0.794)	-0.889 (0.986)	1.170 (0.794)	0.048 (1.195)	0.672 (1.360)	-0.372 (0.911)	1.765 (1.640)	2.250 (0.925)	2.866** (1.263)	-0.011 (2.079)	2.090 (1.440)	-0.110 (1.116)	2.297 (1.274)
LF	-0.016	2.587	0.384	-1.910	0.384	-1.910	0.301	-0.228	0.311	3.364	0.101	6.117	0.297	3.417	0.233	3.416

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE
INF	(0.282)	(5.252)	(0.392)	(8.363)	(0.392)	(8.363)	(0.351)	(4.821)	(0.364)	(5.337)	(0.221)	(6.279)	(0.341)	(5.067)	(0.333)	(5.427)
	-0.428*	-0.394*	-0.396	-0.321	-0.396	-0.321	-0.280	-0.339	-0.196	-0.364	-0.368*	-0.387*	-0.356	-0.364	-0.297	-0.391
	(0.169)	(0.174)	(0.190)	(0.174)	(0.190)	(0.174)	(0.214)	(0.199)	(0.242)	(0.175)	(0.140)	(0.180)	(0.209)	(0.194)	(0.143)	(0.197)
Constant	4.744	-48.978	-	16.578	-	15.747	-	-6.967	-	-62.811	-	-104.432	-	-62.080	-	-62.580
	(8.077)	(70.975)	-	(115.810)	-	(115.227)	-	(64.665)	-	(70.486)	-	(86.251)	-	(67.195)	-	(73.120)
Year Dummy	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Obs.	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
No. of groups	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
R <sup>2</sup>	0.771	0.778	0.716	0.778	0.716	0.783	0.720	0.785	0.739	0.778	0.772	0.784	0.714	0.778	0.722	0.778
F-stat.	138.350	3930.461	121.206	5411.237	121.206	2569.580	143.064	7480.445	91.247	1629.249	17.603	7489.395	263.605	448.203	111.860	6346.370
F-stat. <i>p</i> -val.	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.006)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Hausman	-	1.872	-	14.277	-	14.004	-	6.275	-	27.484	-	10.490	-	28.228	-	27.265
Hausman <i>p</i> -val.	-	(0.282)	-	(0.012)	-	(0.012)	-	(0.050)	-	(0.003)	-	(0.020)	-	(0.003)	-	(0.003)

**Note:** Regression with Driscoll-Kraay standard errors. GDP - GDP per capita growth (annual %); FDI - Foreign direct investment, net inflows (% of GDP); ID - Institutional development; IQ - Institutional quality; CCE - Control of corruption: estimate; GEE - Government effectiveness: estimate; PSE - Political stability: estimate; RQE - Regulatory quality: estimate; RLE - Rule of law: estimate; VAE - Voice and accountability: estimate; GCF - Log of Gross capital formation (% of GDP); TO - Log of Trade (% of GDP); LF - Log of Labor force - total; Log of Inflation - GDP deflator (annual %). Standard errors in parentheses. Significance level \*\*\* p<0.01, \*\* p<0.05, \* p<0.10.



Table 3: FDI-Institutions-Growth nexus: interaction models

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE
FDI	-0.650 (0.408)	-0.126 (0.309)	0.109 (0.400)	-0.229 (0.287)	0.016 (0.180)	-0.183 (0.136)	0.000 (0.072)	-0.138 (0.072)	-0.122 (0.083)	-0.116 (0.061)	-0.071 (0.043)	-0.125* (0.050)	-0.071 (0.058)	-0.197** (0.044)	-0.136 (0.109)	-0.157 (0.076)
ID	-0.225*** (0.043)	-0.038 (0.055)														
FDIxD	0.010 (0.007)	-0.000 (0.005)														
IQ			-0.193 (3.194)	3.055 (3.278)												
FDI×IQ			0.289 (0.687)	-0.142 (0.478)												
CCE					-0.173 (2.871)	2.745 (2.946)										
FDI×CCE					0.260 (0.617)	-0.128 (0.430)										
GEE							-2.757 (2.271)	3.229 (2.427)								
FDI×GEE							0.360 (0.374)	0.018 (0.256)								
PSE									2.545** (0.832)	1.091 (0.852)						
FDI×PSE									-0.103 (0.104)	-0.113 (0.107)						
RQE											-6.050** (1.886)	-4.328 (2.695)				
FDI×RQE											0.307 (0.234)	0.145 (0.176)				
RLE													0.456 (4.720)	4.019 (3.555)		
FDI×RLE													-0.073 (0.377)	-0.319 (0.236)		

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE
VAE																
FDIXVAE																
GCF	5.648** (1.481)	3.699** (1.033)	3.931* (1.624)	3.910** (1.038)	3.931* (1.624)	3.910** (1.038)	4.086* (1.521)	4.546** (1.153)	2.855* (1.194)	3.722** (1.176)	5.624** (1.508)	3.827** (1.144)	3.440** (1.225)	3.629** (0.924)	3.563** (1.427)	3.168** (0.937)
TO	-1.062 (0.763)	1.786 (1.398)	-0.985 (1.102)	1.224 (0.864)	-0.985 (1.102)	1.224 (0.864)	0.085 (1.219)	0.634 (1.657)	-0.086 (0.832)	1.836 (1.483)	0.840 (0.714)	2.760* (1.237)	-0.006 (2.055)	2.663 (1.484)	-0.428 (1.163)	2.241 (1.339)
LF	0.105 (0.300)	2.597 (5.425)	0.516 (0.550)	-1.449 (7.434)	0.516 (0.550)	-1.449 (7.434)	0.564 (0.423)	-0.264 (4.462)	0.216 (0.332)	1.257 (6.557)	0.276 (0.243)	7.029 (6.165)	0.287 (0.345)	3.079 (4.459)	0.274 (0.374)	4.192 (7.036)
INF	-0.274 (0.215)	-0.396* (0.184)	-0.420* (0.194)	-0.337* (0.140)	-0.420* (0.194)	-0.337* (0.140)	-0.208 (0.256)	-0.335 (0.178)	-0.298 (0.257)	-0.431** (0.148)	-0.239 (0.144)	-0.359 (0.174)	-0.392 (0.303)	-0.453* (0.195)	-0.235 (0.202)	-0.379 (0.191)
Constant	-	-48.209 (74.839)	-	10.309 (102.828)	-	9.320 (102.000)	-	-6.461 (59.685)	-	-31.807 (87.739)	-	-116.266 (84.715)	-	-58.455 (61.054)	-	-72.579 (93.574)
Year Dummy	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Obs.	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
No. of groups	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
R <sup>2</sup>	0.777	0.778	0.721	0.783	0.721	0.783	0.736	0.785	0.747	0.788	0.782	0.786	0.714	0.793	0.728	0.779
F-stat	61.283	5399.392	94.365	3273.533	94.365	3273.529	120.158	2048.126	852.773	4119.241	200.439	401.769	444.186	1813.803	242.516	2876.669
F-stat p-val.	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hausman	-	1.762 (0.302)	-	23.027 (0.005)	-	23.430 (0.005)	-	4.973 (0.073)	-	27.719 (0.003)	-	13.839 (0.012)	-	22.009 (0.005)	-	20.136 (0.006)

*Note:* Regression with Driscoll-Kraay standard errors. GDP - GDP per capita growth (annual %); FDI - Foreign direct investment, net inflows (% of GDP); ID - Institutional development; FDIxID - FDI & ID interaction term; IQ - Institutional quality; FDIxIQ - FDI & IQ interaction term; CCE - Control of corruption; estimate; FDIxCCE - FDI & CCE interaction term; GEE - Government effectiveness; estimate; FDIxGEE - FDI & GEE interaction term; PSE - Political stability; estimate; FDIxPSE - FDI & PSE interaction term; RQE - Regulatory quality; estimate; FDIxRQE - FDI & RQE interaction term; RLE - Rule of law; estimate; FDIxRLE - FDI & RLE interaction term; VAE - Voice and accountability; estimate; FDIxVAE - FDI & VAE interaction term; GCF - Log of Gross capital formation (% of GDP); TO - Log of Trade (% of GDP); LF - Log of Labor force - total; Log of Inflation - GDP deflator (annual %). Standard errors in parentheses. Significance level \*\*\* p<0.01, \*\* p<0.05, \* p<0.10

Now, we turn to **Table 3** that provides results for *Eq (2)* that investigates the impact of FDI and institutions on growth and whether the FDI-growth relationship depends on levels of institutional development. Based on the Hausman tests, the results based on FE estimations are preferred except in models (1) and (7), where we should rely on POLS.

In general, introducing interaction terms in our models makes the majority of our main variables insignificant. For instance, FDI has a significantly negative impact, in line with our previous results, only in models (12) and (14). In other models, we find it both positive and negative but insignificant (Carkovic & Levine, 2002; Lyroudi et al., 2004; Angelopoulou & Liargovas, 2014; Estrin & Uvalić, 2016). Similarly, the majority of institutional development coefficients are insignificant. The significantly negative impact of institutions on growth is confirmed only in the model (1). However, the results indicate no significant effect of institution on FDI-growth relationship as interaction terms are statistically insignificant. Similar results are reported by Agbloyor et al. (2016), Asamoah et al. (2019), and Trojette (2016). It seems that both FDI and institutions need to be developed further to affect economic growth significantly. As pointed by Jude & Levieuge (2015) and Trojette (2016), institutional development should reach a threshold to affect either growth or FDI-growth relationship.

## 5. CONCLUSION

This study revisited the FDI-growth and institution-growth relationships, focusing on five Western Balkan economies – Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, and Serbia. Moving from the command to market economies, these countries underwent significant economic, political, and social changes that led to structural and institutional changes.

Focusing on the 2000-2019 period and utilizing the Driscoll-Kraay standard errors regression, this study shows that FDI inflows have a significantly negative impact on growth. The effect of institutional development, on the other hand, is inconclusive. While the overall institutional development proxy developed by the Heritage Foundation reveals the same impact on growth as FDI, the other proxies are predominantly insignificant. Furthermore, the interaction model indicates that the effect of FDI is negative but insignificant, while the results for institutional development remain the same. Nevertheless, all interaction

terms are insignificant, showing that neither FDI nor institutional development impacts economic growth. Hence, the overall (under)development of institutions and pervasive corruption in our sample countries could be the main reasons for the insignificant impact of the institution on growth directly or indirectly via the FDI-growth relationship.

Policymakers within the Western Balkan region, thus, should focus on improving the overall quality of institutions on one side and implementation of effective anti-corruption policies that would curb corruption on the other. Furthermore, the policymakers should find out the reasons behind the negative impact of the existing FDI on economic growth to reverse the situation. At the same time, the EU policymakers should put more pressure on the regional governments to develop and implement effective structural changes that would promote institutional development and restrain corruption activities. Without joint efforts by the domestic and EU policymakers, the Western Balkan region will still be lagging behind the EU member states and continue to attract less and less FDI inflows for its development projects.

**REFERENCES**

- Agbloyor, E. K., Gyeke-Dako, A., Kuipo, R., & Abor, J. Y. (2016). Foreign Direct Investment and Economic Growth in SSA: The Role of Institutions. *Thunderbird International Business Review*, 58(5), 479–497. <https://doi.org/10/ghrkfz>
- Anetor, F. O. (2020). Financial development threshold, private capital inflows, and economic growth: Evidence from sub-Saharan African countries. *International Journal of Development Issues*, 19(1), 77–92. <https://doi.org/10/ghrbwd>
- Angelopoulou, A., & Liargovas, P. (2014). Foreign Direct Investment and Growth: EU, EMU and Transition Economies. *Journal of Economic Integration*, 29(3), 470–495. JSTOR. <https://doi.org/10/ghrbwc>
- Asamoah, L. A., Mensah, E. K., & Bondzie, E. A. (2019). Trade openness, FDI and economic growth in sub-Saharan Africa: Do institutions matter? *Transnational Corporations Review*, 11(1), 65–79. <https://doi.org/10/ghkx3q>
- Asteriou, D., Dassiou, X., & Glycopantis, D. (2005). FDI and growth: Evidence from a panel of European transition countries. *SPOUDAI - Journal of Economics and Business*, 55(1), 9–30.
- Azam, M., & Ahmed, A. M. (2015). Role of human capital and foreign direct investment in promoting economic growth: Evidence from Commonwealth of Independent States. *International Journal of Social Economics*, 42(2), 98–111. <https://doi.org/10/ghd4hj>
- Beck, T., Degryse, H., & Kneer, C. (2014). Is more finance better? Disentangling intermediation and size effects of financial systems. *Journal of Financial Stability*, 10, 50–64.
- Bengoa, M., & Sanchez-Robles, B. (2003). Foreign direct investment, economic freedom and growth: New evidence from Latin America. *European Journal of Political Economy*, 19(3), 529–545. <https://doi.org/10/bn6smz>
- Bist, J. P. (2018). Financial development and economic growth: Evidence from a panel of 16 African and non-African low-income countries. *Cogent Economics & Finance*, 6(1), 1449780. <https://doi.org/10.1080/23322039.2018.1449780>
- Blomstrom, M., Lipsey, R. E., & Zejan, M. (1992). *What Explains Developing Country Growth?* National Bureau of Economic Research, WP No. 4132.

- Borensztein, E., Gregorio, J. D., & Lee, J.-W. (1998). How does foreign direct investment affect economic growth? *Journal of International Economics*, 45(1), 115–135. <https://doi.org/10/d7n25r>
- Buchanan, B. G., Le, Q. V., & Rishi, M. (2012). Foreign direct investment and institutional quality: Some empirical evidence. *International Review of Financial Analysis*, 21, 81–89. <https://doi.org/10/c2r6j5>
- Carkovic, M., & Levine, R. E. (2002). Does Foreign Direct Investment Accelerate Economic Growth? *SSRN Electronic Journal*. <https://doi.org/10/b75r9n>
- Driscoll, J. C., & Kraay, A. C. (1998). Consistent Covariance Matrix Estimation with Spatially Dependent Panel Data. *Review of Economics and Statistics*, 80(4), 549–560. <https://doi.org/10/b88vxp>
- Easterly, W. (1999). Life During Growth. *Journal of Economic Growth*, 4(3), 239–276. <https://doi.org/10/ddwjvc>
- Elboiashi, H. (2015). The effect of FDI on economic growth and the importance of host country characteristics. *Journal of Economics and International Finance*, 7(2), 25–41. <https://doi.org/10/ghrkfv>
- Estrin, S., & Uvalić, M. (2016). Foreign Direct Investment in the Western Balkans: What Role Has it Played During Transition? *Comparative Economic Studies*, 58(3), 455–483. <https://doi.org/10/ghrc57>
- Flannery, M. J., & Hankins, K. W. (2013). Estimating dynamic panel models in corporate finance. *Journal of Corporate Finance*, 19, 1–19. <https://doi.org/10/f4m95r>
- 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/dcmbjpb>
- Haini, H. (2020). Examining the relationship between finance, institutions and economic growth: Evidence from the ASEAN economies. *Economic Change and Restructuring*, 53(4), 519–542. <https://doi.org/10/ghrhq2>
- Hakimi, A., & Hamdi, H. (2017). Does corruption limit FDI and economic growth? Evidence from MENA countries. *International Journal of Emerging Markets*, 12(3), 550–571. <https://doi.org/10/ghrkhs>
- Hausman, J. A. (1978). Specification Tests in Econometrics. *Econometrica*, 46(6), 1251. <https://doi.org/10/bgbj6d>

- Hayat, A. (2019). Foreign direct investments, institutional quality, and economic growth. *The Journal of International Trade & Economic Development*, 28(5), 561–579. <https://doi.org/10/ghrhrp>
- Hoechle, D. (2007). Robust Standard Errors for Panel Regressions with Cross-Sectional Dependence. *The Stata Journal: Promoting Communications on Statistics and Stata*, 7(3), 281–312. <https://doi.org/10/gf4j23>
- Hunady, J., & Orviska, M. (2014). Determinants of Foreign Direct Investment in EU Countries – Do Corporate Taxes Really Matter? *Procedia Economics and Finance*, 12, 243–250. <https://doi.org/10/ghrfkt>
- Ibrahim, S., Abdullahi, A. B., Azman-Saini, W. N. W., & Rahman, M. A. (2017). Finance-Growth Nexus: Evidence Based On New Measures Of Finance. *International Journal of Economics and Management*, 11(1), 17–29.
- Jude, C., & Levieuge, G. (2015). Growth Effect of FDI in Developing Economies: The Role of Institutional Quality. *SSRN Electronic Journal*. <https://doi.org/10/ghrhn>
- Kaufmann, D., Kraay, A., & Mastruzzi, M. (2010). *The worldwide governance indicators: Methodology and analytical issues*. The World Bank. <https://doi.org/10.1596/1813-9450-5430>
- Kisswani, K. M., Kein, A., & Shetty, S. T. (2015). The impact of FDI inflows on real GDP in Estonia: Evidence from a cointegration approach and causality test. *The Journal of Developing Areas*, 49(4), 25–40. <https://doi.org/10/ghrbm6>
- Knack, S., & Keefer, P. (1995). Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures. *Economics & Politics*, 7(3), 207–227. <https://doi.org/10/btrbhs>
- Kutan, A. M., Samargandi, N., & Sohag, K. (2017). Does Institutional Quality Matter for Financial Development and Growth? Further Evidence from MENA Countries. *Australian Economic Papers*, 56(3), 228–248. <https://doi.org/10/gfhx9c>
- Lutz, S., & Talavera, O. (2004). Do Ukrainian Firms Benefit from FDI? *Economics of Planning*, 37(2), 77–98. <https://doi.org/10/bzhjgq>
- Lyroudi, K., Papanastasiou, J., & Vamvakidis, A. (2004). Foreign Direct Investment and Economic Growth in Transition Economies. *South Eastern Europe Journal of Economics*, 1(2), 97–110.
- Minović, J., Stevanović, S., & Aleksić, V. (2021). The Relationship between Foreign Direct Investment and Institutional Quality in

- Western Balkan Countries. *Journal of Balkan and Near Eastern Studies*, 23(1), 40–61. <https://doi.org/10/ghrc62>
- Murtaza, G., & Faridi, M. Z. (2016). Economic Institutions and Growth Nexus: The Role of Governance and Democratic Institutions—Evidence from Time Varying Parameters' (TVPs) Models. *The Pakistan Development Review*, 55(4), 675–688. JSTOR. <https://doi.org/10/ghrbtf>
- Nguyen, C. P., Su, T. D., & Nguyen, T. V. H. (2018). Institutional Quality and Economic Growth: The Case of Emerging Economies. *Theoretical Economics Letters*, 08(11), 1943–1956. <https://doi.org/10/ghrkht>
- Nigar, N. (2015). The Composite Impact of Institutional Quality and Inequality on Economic Growth. *The Pakistan Development Review*, 54(4I-II), 779–791. <https://doi.org/10/ghrbtw>
- Popovic, G., Eric, O., & Stanic, S. (2020). Trade Openness, Institutions and Economic Growth of the Western Balkans Countries. *Montenegrin Journal of Economics*, 16(3), 173–184. <https://doi.org/10/gmmj73>
- Procházka, P., & Čermáková, K. (2015). Influence of Selected Institutional Factors on the Economic Growth: Case Open Markets. *Procedia Economics and Finance*, 30, 702–709. <https://doi.org/10/ghrhfsf>
- Raza, S. A., Shah, N., & Arif, I. (2019). Relationship Between FDI and Economic Growth in the Presence of Good Governance System: Evidence from OECD Countries. *Global Business Review*, 097215091983348. <https://doi.org/10/ghrhtf>
- Sabir, S., Rafique, A., & Abbas, K. (2019). Institutions and FDI: Evidence from developed and developing countries. *Financial Innovation*, 5(1), 8. <https://doi.org/10/ggtctd>
- Sani, A., Said, R., Ismail, N. W., & Mazlan, N. S. (2019). Public Debt, Institutional Quality and Economic Growth in Sub-Saharan Africa. *Institutions and Economies*, 39-64% @ 2232-1349.
- Sonin, K. (2003). Why the rich may favor poor protection of property rights. *Journal of Comparative Economics*, 31(4), 715–731. <https://doi.org/10/fhr6z8>
- Swamy, V., & Dharani, M. (2019). The dynamics of finance-growth nexus in advanced economies. *International Review of Economics & Finance*, 64, 122–146. <https://doi.org/10.1016/j.iref.2019.06.001>



- Trojette, I. (2016). The Effect of Foreign Direct Investment on Economic Growth: The Institutional Threshold. *Region et Developpement*, 43, 111–138.
- UNCTAD. (2019). *World Investment Report 2019: Special Economic Zones*. United Nations Conference on Trade and Development. [https://unctad.org/en/PublicationsLibrary/wir2019\\_en.pdf](https://unctad.org/en/PublicationsLibrary/wir2019_en.pdf)
- Urbano, D., Aparicio, S., & Audretsch, D. (2019). Twenty-five years of research on institutions, entrepreneurship, and economic growth: What has been learned? *Small Business Economics*, 53(1), 21–49. <https://doi.org/10/ghrnsk>
- Van Bon, N. (2019). The Role of Institutional Quality in the Relationship Between FDI and Economic Growth in Vietnam: Empirical Evidence from Provincial Data. *The Singapore Economic Review*, 64(03), 601–623. <https://doi.org/10/ghrns3>
- Vogelsang, T. J. (2012). Heteroskedasticity, autocorrelation, and spatial correlation robust inference in linear panel models with fixed-effects. *Journal of Econometrics*, 166(2), 303–319. <https://doi.org/10/dchq37>
- Wooldridge, J. M. (2002). *Econometric Analysis of Cross Section and Panel Data*. MIT Press.
- Zhang, K. (2001). Does Foreign Direct Investment Promote Economic Growth? Evidence from East Asia and Latin America. *Contemporary Economic Policy*, 19(2), 175–185. <https://doi.org/10/b7c9jg>