

Relación entre el desarrollo humano y la inversión extranjera directa: una revisión de la literatura

Ricardo Apolinar Cárdenas¹ 

Recibido: Marzo 2024 • Evaluado: Abril 2024 • Aceptado: Junio 2024

Resumen

El objetivo de este artículo es examinar la relación entre el desarrollo humano y la Inversión Extranjera Directa (IED) en bases de datos especializadas. La metodología empleada fue una revisión sistemática de la literatura, utilizando las bases de datos Web of Science (WOS) y SCOPUS, específicamente archivos .bib, que posteriormente se procesaron con el paquete estadístico R-Studio 4.2.0, su biblioteca bibliométrica y sus herramientas Biblioshine. En la primera búsqueda, se encontraron 511 artículos, de los cuales, tras el proceso de síntesis, se seleccionaron 100 para su análisis. El principal hallazgo es que existe una relación consistente entre el desarrollo humano y la IED, ya sea unidireccional o bidireccional. En conclusión, se observa que la IED impacta positivamente en el desarrollo humano, así como que los países cuentan con ciertas condiciones que permiten la absorción eficiente de los beneficios de la IED, como la transferencia tecnológica de maquinaria y capital humano.

Palabras clave: Desarrollo humano, IED, crecimiento económico, desarrollo social, capital humano.

¹ Docente del programa de Economía de la Universidad de los Llanos. Doctor en Economía y Empresa de la universidad Autónoma de Barcelona. Correo: rapolinar@unillanos.edu.co

Relation between human development and Foreign Direct Investment: a review of literature

Abstract

The propose of this article is to examine the relationship between human development and Foreign Direct Investment in specialized data bases. The methodology used was a systematic review of literature, using Web of Science (WOS) and SCOPUS data base, specifically bib files which afterwards were processed through the statistics package R-Studio 4.2.0 and its bibliometrics library and its biblioshine tools. In the first research, 511 articles were found from which after the synthesis process 100 were selected to be analyzed. The main finding is that there is a consistent relationship between Human Development and FDI being this relationship unidirectional or bidirectional. As a conclusion, it's found that FDI impacts positively on human development as well as the countries have certain conditions that allows the efficient absorption of the benefits of FDI as technological transfer of machinery and human capital.

Keywords: Human development, FDI, economics growth, social development, human capital.

Cómo citar: Apolinar Cárdenas, R. (2024). Relation between human development and foreign direct investment: A review of literature. *Revista Territorio y Desarrollo*, 8(2), 65–129.

Introduction

In the field of economic science, there is evidence of relevance in the debate on whether investment generates economic growth or human development, the latter concept being understood as the interaction of three factors, educational level, life expectancy and economic income of the population. Specialized articles on this research topic show different ways of understanding development, ranging from the economic, social and human spheres. Likewise, multiple causal relationships were found between FDI and human development. In some cases, researchers place economic growth as the most important variable in terms of the development of a population.

Since the classical and neoclassical school, the importance of investment (foreign investment

included within) has been insisted as a determinant of economic growth. In this regard, the Marxist school shows that the investment, understood as capital, is energized by the rate of profit and its purpose is its permanent valorization in the hands of the owners of the means of production, who ultimately end up concentrating the majority of the social product. Along these lines, authors such as Manfred Max Neef² question this accumulation process and suggest that if economic growth is not a function of human development, it makes no sense.

This literature review has a systematic character and has covered research in both developed and developing economies over a period of 22 years, where it has been demonstrated that the relationship between the FDI and human development is an ongoing debate. Where authors such as Arrow (1962), Romer (1990) and Barro (1991) are still the authors who set the standard for academic discussion.

Methodology

The research process that allowed to establish the relation between human development and Foreign Direct Investment (FDI) was a systematic literature review which carried out to have a holistic positioning of the research. Thus, two databases were consulted, SCOPUS and Web of Science (WOS), using five key words namely “human”, “development”, “foreign”, “direct”, “investment”. Later, through the statistics package R-Studio 4.2.0, specifically, bibliometrics library and biblioshine tool, the databases were unified getting the relation of articles published per year, academic journal, in academic journals by author and in academic journals by author per citation per year, from 1999 to 2020. This information shows that the research topic is relevant and current for the economic science.

The systematic review found 225 articles in WOS and 289 in SCOPUS, for a total of 514 articles, which 3 documents were duplicated remaining 511. As shown in the figure 1, the articles published per year from 1999 to 2020 have grown significantly. It's worth indicating that there were two ascending cycles, one from 1999 to 2012 that had an increase of 3800% and other from 2013 to 2020 with a growth of 215%. This trend can be explained for the positioning of Issues related to

² Chilean economist, Right Livelihood Award winner in 1983.

the commitment that the investment should have with the care of the environment and general well-being.

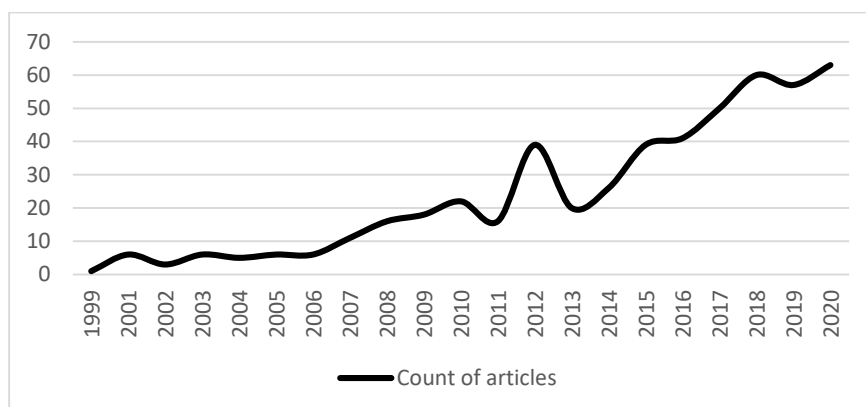


Figure 1. Relation between human development and foreign direct investment articles published per year 1999–2020.

From the most important academic journals, as shown in the figure 2, these 20 academic journals represented the 35% of the publications in 22 years. Of those, the academic journals *World Development*, *International Business*, *Journal of International Trade & Economic Development*, *China Economic Review*, *Economic modelling* and *Emerging Markets Finance and Trade* represented the 59,6%. It was observed that in the economic science every time it's more marked the discussion between economic growth, social development and human development, in both developing and developed economies.

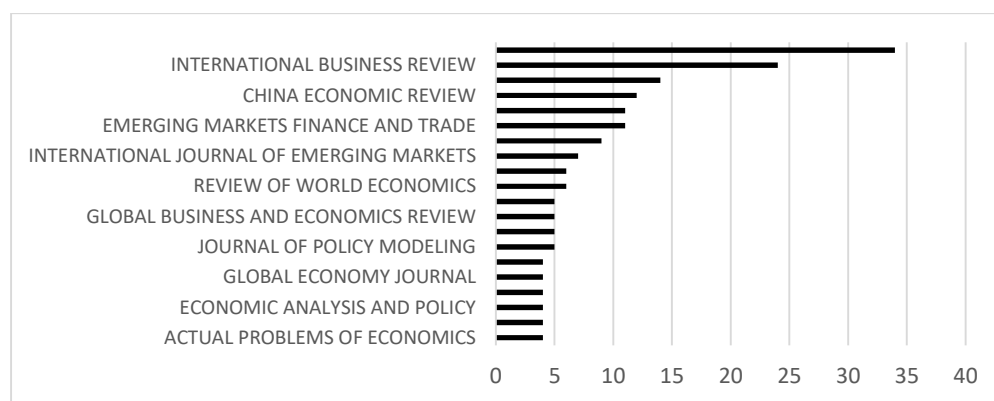


Figure 2. Relation between human development and foreign direct investment articles published per academic journal 1999–2020.

In relation to the articles published in academic journals by author, it was Sajjid Anwar, a researcher at University of the Sunshine Coast localized in Australia, the one who has researched the relationship between FDI, economic growth and human capital. Also is Xiaming Liu, a researcher at University of London, who has focused more on the determinants of the FDI. Finally, it's Constantina Kottaridi, a researcher at University of Piraeus of Grecia, one expert in the topic the relationship between FDI and Human Capital.



Figure 3. Relation between human development and foreign direct investment articles published in academic journals by author 1999–2020.

In the case of the articles published in academic journals by author per citation by year from 1999 to 2020, the most important author was Belton Fleisher, researcher of the Ohio State University in topics related with the relationship between human capital and regional inequality. After is Magnus Blomstrom, researcher of the Stockholm School of Economics with a research paper about technology transfer and FDI. For last is Henrik Hansen of the University of Copenhagen, who investigated the nexus between foreign aid and economic growth.

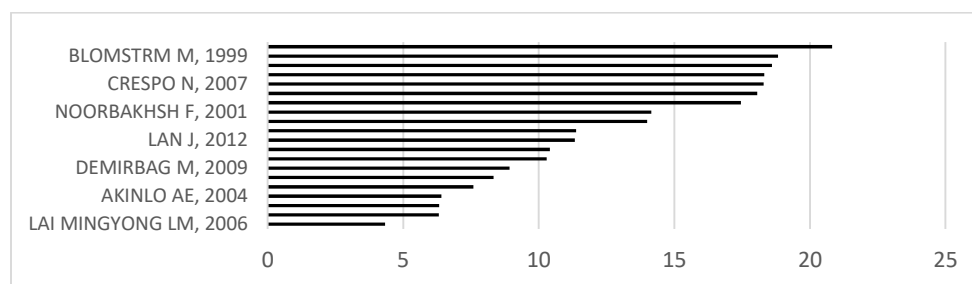


Figure 4. Relation between human development and foreign direct investment articles published in academic journals by author per citation for year 1999–2020.

Discussion

The discussion of the literature review finished up from 493 to 100 articles and synthesized on 4 axes that reveal a relationship between Foreign Direct Investment and Human Development, finding that the most significant proxy variables for HD were Human Development Index, Human Capital and Social Development. The main axes of this discussion are the following: a) FDI, human development and human capital; b) FDI and economic growth; c) FDI and social development; d) FDI determinants. Besides, each axe has four summary tables that contain information about authors, year of publication, research objective, dependent variables, methodology and key findings.

a. FDI, human development and human capital

The relationship between FDI, human capital and human development covers 29 articles as it is shown in the Table 1. It was chosen as dependent variable Human Development Index (HDI) and as independent variable FDI. Other authors established as dependent variable Human Capital as a proxy of human development. In other cases, FDI was also found as dependent variable of human capital and HDI. However, in either cases whether the FDI is a dependent or independent variable, the relationship with human development, most of the cases was positive. Likewise, it was verified the impact of FDI and human capital over economic growth, productivity, pollution emissions intensity and national income, among others.

One of the most important axes of this discussion were the causal relationship between FDI and human development, being this last variable measured using Human Development Index –HDI– as proxy variable which has three components: life expectancy at birth, educational level and income level. In African countries FDI improved significantly the HDI (Onakoya, Johnson & Ogundajo, 2019), however its impact can be more important if it goes beyond the mining sector to industrial sector (Soumaré, 2015) or telecommunications sector (David, 2019). In the case of the European Union –EU– there was a mutual causality between FDI (Bayar, Remeikiene, Androniceanu & Jucevicius, 2020) and human development. In emerging economies, Reiter & Steensma (2010) maintains that FDI contributes more to HDI when the Government of the host country protects the industrial sector, if it doesn't, its impact is negative, as García & Valenciano

(2016) show for the economy of Costa Rica. Finally, Ishnazarov & Cevik (2017) found other proxy of the foreign capital as international aid which positively impacts HDI in the Organization of Islamic Cooperation (OIC) member countries.

Other important axe was the relationship between FDI and human capital, but this time the proxy variable was the educational level of the population. For African economies FDI positively impacted to human capital (Kaulihowa & Adjasi, 2019), as well as for developing countries (Asali, Cristobal-Campoamor & Shaked, 2016) and east Asian countries (Zhuang, 2017). Finally, Kheng, Sun & Anwar (2017) found a bi-directional causality between FDI and human capital and raise the need to coordinate the governmental policies.

Other study raised the unidirectional relationship between human capital and FDI, stablishing this last variable as dependent. In this way improving the human capital level of a country, makes it look more attractive for FDI inflow, this is demonstrated for Austria (Tsauroi, 2015), Sub-Saharan Africa (Cleeve, Debrah & Yiheyis, 2015) and other countries (Sadeghi, Shahrestani, Kiani & Torabi, 2020). It's important to clarify that the effect of Human Capital is more significant when the economy has an intermediate level of development (Morita & Sugawara, 2015) and low level of corruption (Dutta, Kar & Saha, 2017).

In a more orthodox stream the studies of FDI and human capital impact economic growth. In the case of Chinese cities was found that FDI is a determinant of economic growth as long as there is a significant endowment of human capital (Su & Liu, 2016); this was also demonstrated in Malaysia (Baharumshah, & Almasaied, 2009), Philippines (Agbola, 2014) and Commonwealth of Independent States (Azam & Ahmed, 2015). In this order of ideas, Kottaridi & Stengos (2010) found that for developing economies it's necessary an optimal level of human capital for the FDI to generate economic growth and raised that can exist a non-linear effect.

As an alternative for economic growth it was found the productivity which was measured by the proxy variable Total Factor Productivity (TFP). Thus, Elmawazini, Atallah, Nwankwo & Dissou (2013) and Elmawazini, Saleeby, Ibn & Farouk (2018) conclude that FDI increases the productivity thanks to technology transfer but this is only possible if the developing countries have

a minimum of human development. Moreover, Tsamadias, Pegkas, Mamatzakis & Staikouras (2019) found that for Non-European Countries the FDI does not generate increased productivity. Finally, there are papers where it's shown the impact of FDI and human capital on other dependents variables like FDI', pollution emissions intensity (Lan, Kakinaka & Huang, 2012), the real volume of affiliate sales (Choi, 2015), cross-border acquisitions (Owen & Yawson, 2010), innovative outputs (Perugini, Pompei & Signorelli, 2008) and income (Vollmecke, Jindra & Marek, 2016).

Table 1. FDI, Human capital and human development

N°	Study	Research objective	Dependent variable(s)	Methodology	Key findings
1	Bayar, et al. (2020)	Evaluating the impact of shadow economies and human Development on Foreign Direct Investment inflows as a possible determinant of competitiveness in UE from 1995-2015	Foreign Direct Investment; Human Development Index	Full Modified Ordinary Least Squares (FMOLS); ECM	The shadow economy and human development are significant determinants of FDI inflows. the causality analysis revealed a mutual interaction between FDI inflows and human development for all the countries in the sample

2	Sadeghi, et al. (2020)	Examine if the economic complexity helps for Foreign Investment Direct attraction in 79 countries in the period 1980-2014	Foreign Investment Direct	Panel data Generalized Model of Moments (GMM)	The main results show that the Economic Complexity Index and Human Capital had a positive relationship with FDI in the countries under study
3	David, O. (2019)	Investigating the effect of telecommunication operations on economic growth and human development in African countries from 2000-2016	Economics Growth; Human Development Index	GMM	Telecommunication operations promote economic growth and human development in Africa. An appropriate policy to improve overall investment in the telecommunications sector in Africa will have a spillover effect cut across other sectors and the general economic performance

4	Kaulihowa, T. & Adjasi, C. (2019)	Examine the non-linear effect of FDI on disaggregated levels of human capital development in African countries from 2000 to 2017	Human Capital	GMM	The FDI can be one factor important in the rises of Human Capital in Africa
5	Onakoya, et al. (2019)	Investigating the nexus between trade liberalization and poverty in Africa from 2005-2014	Human Development Index	GMM	FDI and inflation rate had a positive relationship with human development index while exchange rate and trade openness was negatively
6	Tsamadias, et al. (2019)	Investigate the interplay between Research and Development (R&D), Human Capital (HC), Foreign Direct Investment (FDI) and	Total Factor Productivity (TFP)	Panel data with Vector Autoregression (VAR)	The first result was the R&H and HC had a positive impact on TFP in Non-European Countries and European countries belong to the OECD. While the FDI had a positive impact only in the Non-European Countries

		Total Factor Productivity (TFP) in The Organization for Economic Co-operation and Development (OECD) countries in 1995-2015			
7	Elmawazini , et al. (2018)	Investigating the impact of FDI and human development on labor productivity growth in transition economies from 2000-2012	Labor productivity growth	GMM	An insignificant impact of FDI is found on productivity growth in transition economies. One explanation is that the 14 transition economies that are included in this study do not reach a minimum human development threshold level.
8	Dutta, et al. (2017)	Exploring the interactive impact of corruption and human capital on FDI	Foreign Investment Direct	GMM	If one country is low corrupt in relation with a high corrupt country the FDI inward will rise by almost 40% for an equal rise in human capital stock

9	Kheng, et al. (2017)	Examining the interrelationship between FDI and human capital from developing countries over the 1980-2011	Foreign Direct Investment; Human Capital	GMM; Three Stage Least Squares (3SLS)	A significant bi-directional causality is found between human capital and FDI, which suggests that FDI and human capital development policies need to be coordinated.
10	Ishnazarov, D. & Cevik, N. (2017)	Examining the impact of Official Development Assistance (ODA) in the components human development from Organization of Islamic Cooperation (OIC) member countries from 2002-2015	Human Development Index	GMM	ODA is an effective tool for human development. Likewise, civil violence is a powerful deterrent of Human Development

11	Zhuang, H. (2017)	Examining the effect of inward FDI on human capital accumulation in East Asian countries from 1985-2010	Human Capital	GMM; Two Stage Least Squares (2SLS)	An increase of FDI is associated with an increase in secondary schooling, yet has a negative impact on tertiary schooling. Likewise, FDI from OECD countries presents positive effects on both secondary and tertiary schooling in east Asian countries
12	Asali, et al. (2016)	Examining the optimal FDI levels in relation to human capital in the world from 1990-2000	Human Capital	2SLS; Butterfly Distributed Residuals (BDR)	It's significance of a positive (linear) and a negative (non-linear) impact of FDI stocks on tertiary schooling, which are exclusively relevant in developing countries
13	García I. & Valenciano J. (2016)	Analyzing the impact of foreign agricultural chains on human development in Costa Rica from 2000-2011	Human Development Index	Global Index	Agro-chains with a strong presence of FDI had a significant economic growth but questionable in terms of human development

14	Su, Y. & Liu, Z. (2016)	Examining the determinants of economic growth, focusing on the role of Foreign Direct Investment (FDI) and Human Capital in Chinese cities between 1991 and 2010	Economic Growth	GMM	FDI has a positive effect on the per capita GDP growth rate and this effect is intensified by the human capital endowment of the city
15	Vollmecke, et al. (2016)	Examining the impact of Human Capital and FDI agglomeration within Income of the regions the European Union in the	Income	Markov Chain	There is a weak process of convergence of global income in all regions of the EU in the period of study analyzed

		long-term between 2003 and 2010			
16	Azam, M. & Ahmed, A. (2015)	Examining the impacts of Human Capital and Foreign Direct Investment on economic growth in ten countries from commonwealth of independent states (CIS) in 1993-2011	Economic Growth	GMM	As this research used two proxies to measure human capital, which were educational level and life expectancy, it concludes that to improve economic growth it is necessary to maintain optimal levels of investment in health and education
17	Cleeve, et al. (2015)	Assessing the impact of Human Capital on FDI inflows to Sub-Saharan Africa from 1980-2012	Foreign Direct Investment	GMM; Estimated Generalized Least Squares (EGLS)	All measures of HK have a significant influence on FDI, as are the traditional variables in Sub-Saharan Africa from 1980-2012

18	Choi, N. (2015)	Examining the impact of human capital on FDI in the United States in relation to the rest of the world from 1985-2004	The real volume of affiliate sales	GMM	A Host Country's quality of educational attainment plays an independent role in attracting FDI
19	Morita, T. & Sugawara, K. (2015)	Analyzing the effect of human capital level on FDI in a small open developing country	Foreign Direct Investment	Overlapping Generation Model (OGM)	When the human capital level in the developing country is sufficiently small, manufactured goods firms do not conduct FDI and the economy in the developing country is trapped in poverty
20	Soumaré, I. (2015)	Examining the relationship between Foreign Investment Direct inflows and welfare improvement in north african countries from 1990-2011	Human Development Index (HDI) and Economic Growth	GMM	This paper finds a strongly positive relationship between FDI and welfare improvements at the level of North Africa as a whole.

21	Tsaurai, K. (2015)	Investigating the relationship between Human Capital development and Foreign Direct Investment from Austria in 1981-2012	FDI	Error Correction Model (ECM)	It's necessary to increase investment in human capital, measured by the student-teacher ratio, for improving FDI entry to Austria
22	Agbola, F. (2014)	Analyzing the impact of FDI and Human Capital on economic growth in Philippines from 1965-2010	Economics Growth	Canonical Cointegrating Regression (CCR)	FDI is an important vehicle for achieving economic growth in the Philippines, but only when there is sufficient absorptive capacity created by increased human capital and infrastructure development
23	Lan, et al. (2012)	Examining the relationship between human capital, FDI and pollution emissions in China from 1996-2006.	Pollution Emissions Intensity/FDI	GMM	The impact of FDI on pollution emission is highly dependent on the level of human capital. FDI is negatively associated with pollution emissions in provinces with the

					higher levels of human capital
24	Elmawazini, et al. (2013)	Investigating the relationship between FDI and human development as a measure of host country absorptive capacity in developed and developing countries from 1966-2000	Productivity level	Cross-Sectionally Correlated and Timewise Autoregressive (CCTA)	Technology diffusion from us foreign affiliates has a positive and significant impact on labor productivity only if host countries have a minimum level of human development.
25	Kottaridi, C. & Stengos, T. (2010)	Examining the relationship between FDI and economic growth in 45 countries from 1970-2004	Economic Growth	GMM and semi-parametric Partially Linear Additive Regression (PLAR)	There is a non-linear effect of human capital in the presence of FDI inflows on economic growth. it is also suggested that FDI inflows is increasing growth in middle-income countries, while there is a 'two-regime' FDI effect for high-

					income countries. this new result appears to be independent of the OECD member countries
26	Reiter, S. & Steensma, H. (2010)	Analyzing the impact of FDI on human development of developing countries from 1980-2005	Human Development Index	Data Panel Fixed Effect	FDI inflows are more strongly positively related to improvement in human development when FDI policy restricts foreign investors from entering some economic sectors
27	Owen, S. & Yawson, A. (2010)	Examining the role of human development in US companies' decisions to engage in cross-border acquisitions from 2000-2006	Cross-border acquisitions	Tobit Regression	US firms make acquisitions in countries with strong HDI levels. Alternative factors such as institutional quality, life expectancy, telephone usage and school enrolments also have a positive influence on the cross-border acquisition decision

28	Baharumsha h, A. & Almasaied S. (2009)	Exploring the role of Foreign Direct Investment (FDI) in economic growth in Malaysia from 1974-2004	Economic Growth	ECM	FDI has a positive and significant effect on economic growth, but its effect is of lesser magnitude than that of domestic investment. Human capital and financial markets interact with FDI and, thus, are important for both short- and long- term growth processes
29	Perugini, et al. (2008)	Exploring the theoretical and empirical relationships between innovative inputs and innovative outputs in the EU-27 countries from 2000-2005	Innovative outputs	Cluster analysis; Discriminant analysis	Findings provide evidence of strong East/West specificities, but also of marked heterogeneity within the CEECS, thus supporting our approach, which emphasises complexity and the specificities of production and economic conditions

b. FDI and economic growth

The relationship between FDI and economic growth covers 34 articles as it is shown in the Table 2. As proxy variable of economic growth were found two variables: Gross Domestic Product (GDP) and Total Factor Productivity. From an orthodox perspective these are significant when

measuring human development, so that, FDI and human capital would have a positive impact on human development. It is fairly interesting analyzing the multiple interactions among these variables for emerging economies as well as for developed economies.

The first relationship found was associated with the effect of FDI on productivity. Li & Tanna (2019) found that in order to have more gains due to FDI inflows, developing countries should improve more the quality of their institutions than human capital. In other hand, Wang & Wong (2009) mentioned that productivity is promoted only when the host country reaches a threshold level of human capital. Besides that, Roy (2016) affirmed that if the host country has a low technological level, the FDI effect on productivity is not significant (Herzer & Donaubauer, 2018). In the Chinese case, price distortions in the firms can be mitigated by the FDI inflows (Cheng, Wang, Peng, & Kong, 2020).

On the other hand, there is a relationship between FDI and economic growth. In African emerging economies there is not a direct relationship between FDI and economic growth except when the FDI inflow tends to boost the exports, likewise, it is the economic growth the one that attracts FDI (Zandile & Phiri, 2019; Kumar, 2019; Olofin, Aiyegbusi, & Adebayo, 2019). However, in the short-run there is bidirectional causality between economic growth and FDI (Kumar 2019). For developed economies, Mohanasundaram & Karthikeyan (2015) found a positive association between FDI and economic growth and Pegkas (2015) raises that exists a positive long-run cointegrating among those two variables (Ghosh, 2019); in that same direction Sarker, B. & Khan (2020) and Khalilov & Yi (2020) manifest that economic growth affects unidirectionally to FDI, while Wu, Yuan, Wang, Cao, & Zhou (2020) establish that the relation among those two variables is the inverse u shape.

In the case of the impact or effect of FDI on economic growth there are investigations that in their objectives raised a unidirectionality direction among FDI and economic growth. So, it was found that FDI is significantly important for economic growth and it's a determinant for activating other variables like domestic investment, working market and financial development (Li, & Liu, 2005; Blin & Ouattara, 2009; Habibi & Karimi, 2017; Jimborean & Kelber, 2017; Cahyadin & Sarmidi, 2019; Jehangir, Lee & Park, 2020; Ben, 2020), also it's important to highlight that FDI contributes

to economic growth through human capital (Jun, 2015; Liu, 2016; Ramzan, Sheng, Fatima & Jiao, 2019; Zhang, Cheng & He, 2020). However, Bermejo & Werner (2018) conclude that FDI does not cause economic growth in the Spanish economy even with all the tax benefits it has, the same for Egypt's economy (Hanafy & Marktanner, 2019), African countries (Awolusi, Adeyeye & Pelsler, 2017) and Asian economies (Bakari & Tiba, 2019). Finally, other results were also found about the significance of the impact being relative to the specific characteristics of each economic sector (Edwards, Naanwaab & Romero, 2017), for example, in Liberia the FDI positively impacted the sector iron-ore while the agriculture didn't (Bunte, Desai, Gbala, Parks & Runfola, 2018). After all, it was found a paper about the impact of not only of FDI but of other variables on economic growth like the government capital expenditure (Kolawole & Odubunmi, 2015), exports (Nguyen, 2020) and lower exchange rate (Ahmad, Draz & Yang, 2019).

Table 2. FDI and economic growth

N°	Study	Research objective	Dependent variable(s)	Methodology	Key findings
1	Ben, R. (2020)	Investigating is the impact of FDI in promoting economic growth in developing economies from 1990-2016	Economic Growth	Semi-parametric GMM	The results show that employment, domestic investment and FDI were individually, separately positively, and significantly correlated with economic growth
2	Cheng, et al. (2020)	Investigating the impact of FDI in the productivity of China from 2003-2007	Productivity	POLS	FDI can mitigate the negative impact of factor price distortions on total factor productivity

3	Jehangir, et al. (2020)	Investigating the effect of FDI on the economic growth of Pakistan from 1974-2018	Economic Growth	ARDL	In the long run, FDI, gross fixed capital formation and labor force participation have positive effect on the economic growth, whereas military expenditures have negative effect
4	Khalilov L. & Yi, C. (2020)	Finding the relationship between economic growth and foreign direct investment (FDI) in the Commonwealth of Independent States (CIS) and Central and Eastern European Countries (CEECs) using endogenous technological change model	Economic Growth	GMM	The investigation finds that FDI is an important factor explaining economic growth in the pooled group and CEECS, although it is not significant in the case of CIS

		from 2003-2014			
5	Nguyen H. (2020)	Assessing the impact of FDI and international trade on Vietnam's economic growth from 2000-2018	Economic Growth	POLS	FDI has a positive and statistically significant influence on economic growth of Vietnam. Export also has positive and statistically significant impact to the economic growth, while import has a negative but not statistically significant effect
6	Sarker, B., & Khan, F. (2020)	Investigating the causal nexus between FDI and GDP in Bangladesh from 1972-2017	Economic Growth	Augmented Autoregressive Distributed Lag (augmented ARDL)	The results indicated the presence of a unidirectional causality running from GDP to FDI in Bangladesh from 1972-2017
7	Wu, et al. (2020)	Examining the nonlinear relation between FDI and economic growth in China cities	Economic Growth	POLS	It's attributed the inverse u shape of FDI and growth to both tax distortion and crowd-out effect.

		from 1998-2014			
8	Zhang, Y., Cheng, Z. & He, Q. (2020)	Analyzing the mechanism of China's FDI spillover effect in BRDC from 2003-2017	Economic Growth	VAR	Results suggest a dynamic interactive causality mechanism. So FDI promotes the economic growth of BRDC through technical efficiency, human capital and institutional transition with combined lags of five, nine and eight years
9	Ahmad, et al. (2019)	Investigating the relationship between China's exchange rate, FDI inflows, and economic development from 1981-2013	Economic Growth	ARDL; VECM; GMM	The Chinese economy benefitted from a lower exchange rate over this period, and that there was a direct link between FDI inflows and economic development on an aggregate level both in the long and short run
10	Bakari, S. & Tiba, S. (2019)	Examining the impact of openness, Foreign Investment	Economic Growth	GMM	Foreign Direct Investment and exports are negatively affecting the growth path. Also, the population, imports,

		inflows, and domestic investment on economic growth in Asian economies from 2002-2017			and final consumption expenditure have no real impact on economic growth
11	Cahyadin, M. & Sarmidi, T. (2019)	Estimating the impact of FDI, labour, and external debt on economic growth in Indonesia and Malaysia from 1980-2016	Economic Growth	ARDL; ECM	FDI, labour force and external debt have a significant impact on the economic growth in the long- and short- run in both countries
12	Ghosh, S. (2019)	Examining the role of FDI, capital formation, and expansion of female education on economic growth of Japan and South Korea	Economic Growth	ARDL	There is cointegration among the variables specified in the model when per capita GDP is the dependent variable for Japan, and for South Korea the cointegrating relationship is evident for the GDP, FDI and K model respectively

		from 1971-2014			
13	Hanafy, S. & Marktanner, M. (2019)	Investigating the effects of aggregate and sectoral FDI on Egypt's economic growth from 1992-2007	Economic Growth	GMM	Neither aggregate nor sectoral FDI has an unconditional effect on economic growth. Also reject human capital as a channel of absorptive capacity
14	Kumar, A. (2019)	Analyzing the cost and benefits of capital inflow in emerging economies from 1963-2018	Economic Growth; FDI	GMM	There is a presence of a strong causality between FDI equity flows and a weak and lagged causality between short term capital flows and economic growth
15	Li, C. & Tanna, S. (2019)	Analyzing relationship between FDI and productivity growth for developing countries from 1984-2010	Productivity ; FDI	GMM	The relevance of the human capital contingency effect diminishes when the effect of institutions is also considered, which suggests that improving institutions is relatively more important than human capital development for

					developing countries to realise productivity gains from FDI
16	Olofin, et al. (2019)	Revisiting the determinants of FDI and economic growth on Nigeria from 2007-2013	Economic Growth; FDI	Spatial Lag Model; Fully Modified Ordinary Least Square (FMOLS)	Countries' locations do not play any significant role in determining FDI inflow to Nigeria. Also FDI, manufacturing sector, tax revenue, financial development, health expenditure, net trade and human capital have a positive relationship with income growth
17	Ramzan, M., Sheng, B., Fatima, S. & Jiao, Z. (2019)	Exploring the effect FDI in economic growth for developing economies from 1980-2015	Economic Growth	GMM-Difference	Human capital threshold exists above which FDI exhibits a positive impact and below where it shows a detrimental effect on economic growth
18	Zandile, Z. & Phiri, A. (2019)	Investigating the FDI-growth nexus for Burkina Faso from 1970-2017	Economic Growth	ARDL	Findings fail to establish any direct or indirect effects of FDI on economic growth except for FDI's positive interaction with export-oriented growth, albeit

					being constrained to the short-run
19	Bermejo J. & Werner, R. (2018)	Analyzing the impact of FDI in growth of Spain from 1984-2010	Economic Growth	Autoregressive Distributed Lag (ADL)	The favorable Spanish circumstances yield no evidence for FDI to stimulate economic growth. The spanish EU and euro entry are also found to have had no positive effect on growth
20	Bunte, et al. (2018)	Examining the impact of FDI on economic growth in Liberia from 2006-2012	Economic Growth	Difference-in-Differences (DID)	There is find heterogeneous treatment effects across sectors and investor types: mining (specifically iron-ore) investments projects have positive growth effects, while agriculture and forestry investment projects do not; furthermore, concessions granted to Chinese investors have positive growth effects while those given to U.S. investors do not

21	Herzer, D. & Donaubauer, J. (2018)	Examining the long-run effect of the level of FDI on the level of Total Factor Productivity (TFP) for developing countries from 1981-2011	Total Factor Productivity	GMM; ECM	It is found that FDI has, on average, a negative long-run effect on TFP in developing countries; long-run causality runs in only one direction, from FDI to TFP; in the short run, TFP has a negative effect on FDI, and the long-run effect of FDI of TFP differs between selected groups of countries
22	Awolusi, et al. (2017)	Investigating the effect of FDI on economic growth in African economies from 1980-2014	Economic Growth	2SLS	The impact of FDI on economic growth in African countries is limited or negligible. Also government policies on FDI play significant roles in facilitating improved economic growth in African countries
	Edwards, J., Naanwaab, C. & Romero, A. (2017)	Investigating the effect that FDI has on economic growth in the	Economic Growth	POLS	The marginal effect FDI has on growth is indeed sensitive to many specification issues. Not only does it vary by income level and

		world from 1982-2011			conditioning set, but also varies by sector and over time
23	Habibi, F & Karimi, M. (2017)	Investigating the impact of FDI in economic growth of Iran and Gulf Cooperation Council (GCC) from 1980-2014	Economic Growth	ARDL	FDI is one of the major drivers of economic growth in Iran and GCC countries
24	Jimborean, R. & Kelber, A. (2017)	Providing new insights on the developments and the drivers of FDI in Central and Eastern European countries from 1993-2014	Economic Growth	GMM	Exist positive and statistically significant contribution of FDI inflows to economic growth over the period 1993–2014
25	Liu, W. (2016)	Examining the impact of intellectual property rights	Economic Growth	GMM	Domestic investment share, FDI, R&D capacity, openness to trade, human capital and

		protection, FDI and research and development on economic growth of the host country from 1970-2007			IPRS protection all have statistically significant and positive impacts on economic growth
26	Roy, S. (2016)	Examining the effect of FDI in Total Factor Productivity in developing economies from 1980-2000	Productivity	POLS	The net effect of FDI on TFP growth decreases with the increase in distance between country and the technological frontier country
27	Jun, S. (2015)	Examining the effects of FDI on south Asian economies' output growth from 1960-2013	Economic Growth	DOLS; FMOLS	Among various regressors, FDI, financial development, human capital, and government consumption show the most significant positive effects on output growth
28	Kolawole, B. & Odubunmi, S. (2015)	Examining the impact the Government Capital Expenditure	Economic Growth	ECM	The both of government capital expenditure and growth granger caused each other, as a unidirectional causality

		and FDI on economic growth in Nigeria from 1980-2012			was established between growth and FDI. however, a granger no-causality relationship existed between Government Capital Expenditure and FDI
29	Mohanasundaram, T. & Karthikeyan, P. (2015)	Finding the interrelationship between FDI and Gross Domestic Product (GDP) in India from 2000-2014	Economic Growth; FDI	VAR	There is a positive association between the FDI inflows and GDP in the Indian economy. Also explores the unidirectional relationship flowing from FDI to GDP
30	Pegkas, P. (2015)	Analyzing the relationship between FDI and economic growth in EUROZONE countries from 2002-2012	Economic Growth; FDI	GMM	There is a positive long-run cointegrating relationship between FDI stock and economic growth
31	Tsaurai, K. & Odhiambo, N. (2012)	Examining the relationship between FDI and economic growth in Zimbabwe	FDI	ARDL	There is a distinct unidirectional causal flow from economic growth to FDI, but not vice versa. Therefore, recommends that

		from 1980-2010			Zimbabwe should pursue pro-growth policies and strategies, in order to promote FDI
32	Blin, M. & Ouattara, B. (2009)	Investigating the impact FDI in economic growth of Mauritius from 1975-2000	Economic Growth	ARDL	FDI exerts a highly significant positive impact on economic growth in Mauritius. As for domestic investments, private investment shows positive and highly significant impact, whilst the effect of public investment is positive but only significant at the 10 percent level
33	Wang, M. & Wong, M. (2009)	Investigating the relationship between FDI and economic growth in the host country from 1970-1989	Economic Growth; Productivity	3SLS	FDI promotes productivity growth only when the host country reaches a threshold level of human capital; and FDI promotes capital growth only when a certain level of financial development is achieved

34	Li, X. & Liu, X. (2005)	Investigating the impact FDI in economic growth in the host country from 1970-1999	Economic Growth	GMM	FDI not only directly promotes economic growth by itself but also indirectly does so via its interaction terms
----	-------------------------	--	-----------------	-----	--

c. FDI and social development

The relationship between FDI and social development covers 22 articles as it is shown in the Table 3. Improving the well-being of every individual in a society is a key strategy to reach citizens full potential which has a positive effect on social and economic development. Countries seek to attract FDI due to the several social and economic advantages that it brings in an economy having a good FDI inflow. In fact, when talking about the relationship between FDI net inflows and poverty reduction rate, it is found that FDI significantly reduces poverty (Gohou & Soumare 2012; Teixeira, Aac. & Loureiro As. (2019). Besides, trade and FDI have significant effects on income inequality (Nolintha & Yee, 2016). Moreover, results were not found significant in case of human development index (Khan & Nawaz 2019) and in Latin America, Quiñonez, Saenz & Solorzano (2018) mention that FDI is not significantly associated with the reduction of poverty while some other variables like macroeconomic stability, infrastructure, human capital development and financial development are significantly associated with the reduction of poverty.

In countries with strong levels of investment in human capital, education and human development tend to have better results absorbing the benefits of FDI inflows (Miniesy & Adams 2016; Nolintha & Yee, 2016). Empirical contributions have shown that health is a constituent part of human capital thus the quality of the health system may be considered an important FDI attractor factor (Giammanco & Gitto 2019). Foreign direct investments represent an important element of economic development of any development region and its functioning based on the principles of market economy (Enescu & Enescu 2015). It is found that FDI facilitates growth by enhancing

physical and human capital accumulation which at the same time has a positive contribution of FDI to employment (Liu, Luo, Qiu & Zhang 2014; Jude & Silaghi, 2016).

Quality of institution is another variable that plays an important role enhancing economic growth by boosting the investment in human and physical capital (Subasat & Bellos 2013; Ahmad, Muhammad & Siddiqi, 2020). Besides, it has a positive impact on FDI in all group of countries (Sabir, Rafique & Abbas, 2019). The quality of local institutions and the governmental measures sustaining FDI should be able to attract more investment because it reduces uncertainty as well as the cost of doing business and improves productivity prospect so that economic growth is increased but it depends on the sector where FDI inflow arrives (Tun, Azman-Saini & Law 2012). As a conclusion, it is stated that institutional quality is a more important determinant of FDI in developed countries than in developing countries. (Sabir, Rafique & Abbas, 2019; Uddin, Chowdhury, Zafar, Shafique & Liu, 2019). Multinational firms tend to invest in countries with low civil but with high political liberties (Adam & Filippaios, 2007). In the case of informal institutions such as trust, social networks and corruption, it's important to mention their relevance for the purpose of attracting FDI (Mondolo, 2019).

On the other hand, FDI also has a relation with welfare, education, employment and corruption. In poorer countries the impact of FDI on welfare is a greater than in wealthier countries (Gohou & Soumare, 2012). Whereas, the efficiency of the impact of FDI is driven by the level of education in the different regions. (Miningou & Tapsoba 2020) due to that, Miningou & Tapsoba (2020) mention that it is important to improve the efficiency of education since it helps to attract FDI specially in nonresource rich countries, landlocked countries and with low and medium human development levels. In fact, the employment situation of some countries could have been better if they had had more improvement in education (Miniesy & Adams (2016). On the contrary, in the case of Montenegro the influence of foreign direct investments on employment does not have statistical significance (Gardaevi, 2018). Other institutional determinants are Corruption and Gender Parity Index which are significant on explaining FDI inflows in India and China (Gupta, P. (2019)

Table 3. FDI and social development

N°	Study	Research objective	Dependent variable(s)	Methodology	Key findings
1	Ahmad, et al. (2020)	Examining the relationship between bureaucratic quality and FDI inflows for selected South Asian countries from 1995-2015	FDI	Driscoll and Kraay robust standard errors approach	It is found that bureaucratic quality plays an important role in attracting FDI inflows to South Asia
2	Mingou, W. & Tapsoba, S. (2020)	Examining the effect of the efficiency of the education system on FDI.	FDI	Stochastic Frontier Model	It is shown that the efficiency level varies across regions and countries and appears to be driven by higher education and secondary vocational education
3	Giammanco, M. & Gitto, I. (2019)	Investigating the role of different National institutional settings in attracting FDI within the 28	Public Health	GLS Methodology	Its found that health is a component of human infrastructure and is influenced by public policies and governments. Both human infrastructure (resources-population

		member states of the European Union in the period 2000–2013. more specifically, the research is focused on the relationship between health expenditure and FDI.			health) and governance infrastructure (institutions-health systems) are key features of a country and determine its potential in attracting FDI.
4	Gupta, P. (2019)	Determining whether institutional quality has any significant impact on the FDI inflows in the specific context of the two most emerging economies of the world, that is, India and China conducted on annual data of ten years	FDI	Panel data regression modelling. Ordinary least square [OLS], fixed effects, and random effects	It is revealed that Corruption and Gender Parity Index are the two most significant institutional determinants impacting the FDI inflows in both India and China commonly.

		period from 2007 to 2017.			
5	Khan, I. & Nawaz, Z. (2019)	Examining the relationship between trade, foreign direct investment (FDI) and income inequality for commonwealth of independent states (CIS), using annual data from 1990 to 2016.	Income Inequality	System-generalized method of moments (SYS-GMM) estimator	It is stated that Trade and FDI have significant effects on income inequality when interacted with Gini-index; in case of trade, an inverted U-shaped curve holds as purposed by the trade theory.

6	Mondolo, J. (2019)	Shedding more light on a puzzling, elusive concept - Informal institutions- also by drawing comparisons with related constructs; to overview the main types of informal institution and their effects on FDI inflows.	FDI	Meta-analysis	It was found that informal institutions, such as trust, social networks and corruption, matter for the purpose of attracting FDI
7	Sabir, et al. (2019)	Investigating the impact of institutional quality on FDI inflows for low, lower-middle, upper-middle and high-income countries for the sample period of 1996-2016.	FDI	System generalized method of moments (GMM).	It is confirmed that institutional quality has a positive impact on FDI in all group of countries.

8	Teixeira, A. & Loureiro A. (2019)	Studying what extent, inward FDI contributes to income inequality and poverty in the long-run in Portugal between from 1973 to 2016.	inequality and poverty	Time series data	It was found that increased flows of inward FDI are associated with a less unequal income distribution and lower poverty rates.
9	Uddin, et al. (2019)	Examining the institutional determinants of Pakistani FDI inflows from 1972 to 2016.and also examining the relative importance of those factors.	FDI	multivariate OLS model	It has been found that certain institutional determinants have strong positive effect on FDI inflows. Among the institutional variables, regulation has been found to be most important to influence inward FDI flow to Pakistan
10	Gardaevi, A. (2018)	Understanding the effects of FDI on Employment in Montenegro over the period from 2005-2017.	Employment	LSM, Time series stationary testing, Dickey-Fuller test (ADF) and Perron test.	It is tested that Foreign direct investments increase by 1%, employment in Montenegro can be expected to increase by an average of 0.0058%.

11	Quiñonez, et al. (2018)	Examining the effect of foreign direct investment on Latin Americas poverty incidence considering 13 economies from the region during the 2000-2014 period.	Poverty	Panel data analysis	It is demonstrated that FDI is not significantly associated with the reduction of poverty in Latin America, in contrast with macroeconomic stability, infrastructure, human capital development and financial development which are significantly associated with the reduction of poverty in the region.
12	Majeed, M. (2017)	Investigating the impact of foreign direct investment (FDI) on inequality using a panel data set of 65 developing countries.	Inequality	Panel Data Set	It is discovered that the impact of FDI is not homogenous on host countries as FDI inflows exert inequality-narrowing effect only in countries that have stronger investment in human capital, better financial sector and a high level of economic development
13	Jude, C. & Silaghi, M. (2016)	Studying the role of FDI as a determinant	Employment	Dynamic labor demand model and GMM	This research Indicates that FDI leads to a phenomenon

		of employment by using a dynamic labor demand model applied for a panel of 20 central and Eastern European Countries during the period 1995-2012.			of creative destruction. It also shows evidence of a skill bias of production in foreign affiliates, as human capital favors a positive contribution of FDI to Employment
14	Miniesy, R., & Adams, J. (2016)	Approaching the impact of Chinese outward FDI in employment in seven African economies from 2003-2013	Local employment	'Net additionalty' Methodology	Chinese Outward Foreign Direct Investment can have substantial Indirect Employment effects and induced Employment effects can be significant under certain conditions
15	Nolintha, V. & Yee, I. (2016)	Investigating about the changes in Inequality in Laos between 2002/03 and 2007/08 when there was a	Inequality	NA	It is found that both inequality in consumption expenditure and in assets have raised in this period.

		rapid influx of FDI.			
16	Enescu, M. (2015)	Analyzing the foreign Direct Investment in the Economic Development in Romania for the time period 2005-2013	Economic Growth	Descriptive statistics	Economic growth represents a complex process of increasing the dimensions of the National economy, based on the collective use of increasingly Efficient Production Factors, dimensions expressed by the size of Gross domestic product and National income per capita
17	Haberly, D & Wjcik, D. (2015)	shedind new light on geographical, historical and political determinants of offshore FDI	FDI	Gravity model specification, using PQML estimation	Offshore FDI links are particularly strong between colonial powers and their current and former colonies. The OECD, while officially leading an agenda against tax evasion, internalizes significant offshore FDI within its membership. Indeed,

					offshore FDI is pervasive, affecting wealthy economies as much as developing countries.
18	Liu, et al. (2014)	Examining the channels through which FDI affects China's regional growth and inequality from 1978 to 2011.	Growth and Inequality	Dynamic Panel Estimation	It is found that FDI facilitates growth by enhancing physical and human capital accumulation. It is also discovered that FDI also has a negative effect on output growth by crowding out domestic investment, reducing local government revenue, and increasing the opportunity cost of technology innovations
19	Subasat, T. & Bellos, S. (2013)	Verifying the results of governance analysis and FDI in the	FDI	Panel Gravity Model Approach	It is confirmed that the FDI enhancement role of poor governance exists not only in the

		context of selected Latin American countries.			transition countries but also in Latin America.
20	Gohou, G., Soumare, I. (2012)	Examining the relationship between foreign direct investment (FDI) inflows and welfare (or poverty reduction) in five African free-trade	Welfare	Panel Regression	This analysis confirms the positive and strongly significant relationship between FDI net inflows and poverty reduction in Africa
21	Tun, et al. (2012)	Examining whether domestic institutional quality has any important role in attracting FDI in the 77 selected countries for the period on data averaged over the 1981-2005.	FDI/GDP	GMM	First, it is found that the Institution is an important determinant of FDI . Secondly FDI is also seeking human capital and trade openness. Finally, FDI is not influenced by market size and infrastructure quality

22	Adam, A. & Filippaios, F. (2007)	Distinguishing between civil and political liberties and propose that multinational firms tend to invest in countries with low civil but with high political liberties.	FDI	Panel data-fixed effects analysis	It is shown that the negative relationship between civil liberties and FDI is hump-shaped. A threshold level of civil liberties exists, below which repression of civil liberties is associated with more FDI. The results are explained by different economic motives for FDI in different groups of countries.
----	----------------------------------	---	-----	-----------------------------------	--

d. FDI Determinants

The determinants of FDI were analyzed after reviewing 15 articles as it is shown in the Table 4. In this part, the most relevant finding was the positive impact of human capital on FDI for emerging and develop countries. Likewise, there were analyzed more determinants that could be a proxy for FDI as institution quality, labor force, macroeconomic stability, infrastructure, business environment, corruption level and health among others.

The first relationship observed regarding the determinants of FDI is that human capital has a positive impact on determining FDI (Rjoub, Aga, Abu. & Bein 2017), Conversely, it is also estimated that to determine the FDI depends on the set of variables (Moosa, 2015). In addition, human capital is set to be a significant coefficient in relation to FDI. In developing countries, FDI inflows may be beneficial for both the investing entity and host government. Investing in human capital ensures the absorption of substantial skills and technology spillovers from FDI promoting sustainable long-term economic growth (Kumari & Sharma 2017; Abimbola & Oludiran, 2018).

Additionally, host countries are decisively affected by FDI inflows which are a significant form of capital flows in most of the cases towards developing countries affecting its economic growth, macroeconomic stability, infrastructure and governmental policy (Bilgili, Tlce & Doan, 2012; Metaxas & Kechagia, 2016). Moreover, it is demonstrated that some of the most statistically significant determinants for attracting FDI are openness level, market size and infrastructure availability (Choong & Iam, 2010; Asongu, Akpan & Isihak, 2018). Furthermore, 5 robustly significant determinants of FDI were found: FDI (previous year), DGP, Labor Force, Trade Openness and Tax. (Ashurov, Abdullah, Rosman, & Haron 2020).

Nevertheless, it is also mentioned that domestic investment, natural resources and institutional quality are independent or insignificant determinants for attracting FDI inflows (Haq , Niazi & Sahto 2012; Asongu, Akpan, & Isihak, 2018). In countries like Malaysia and China, it is demonstrated that the most determinant variable is the openness level, which supports the hypothesis that FDI can be attracted to a country with more liberalized economic reforms (Choong & Iam, 2010). On the other hand, changes in total trade and domestic interest rates have a significant effect on FDI flows into Malaysia (Ho & Boot, 2017). While in Turkey FDI growth equation has significant structural changes in level and trend and that has significant coefficient shifts in explanatory variables (Bilgili, Tlce & Doan, 2012). Finally, Groh, & Wich (2012) rank 127 countries with respect to their FDI attraction, revealing the areas in which emerging countries should improve in order to narrow existing gaps.

Table 4. Determinants of FDI

N°	Study	Research objective	Dependent variable(s)	Methodology	Key findings
1	Ashurov, et al. (2020)	Identifying the determinants of FDI in the Central Asian countries from 2000 to 2017	FDI	GMM	It's found that five variables are robustly significant of FDI determinants: FDI (previous year), DGP, Labor Force, Trade Openness and Tax.

2	Abimbola, L. & Oludiran, A. (2018)	Answering the question of the determinants of FDI inflows to West african economic and Monetary Union. Finding the macroeconomic determinants of FDI in WAEMU for the period 1980-2010.	FDI	Panel Cointegration Analysis	It is shown that: (I) infrastructure development is one of the most important determinants that attract FDI to the region; alongside the human capital, financial development, macroeconomic stability, exchange rate and political stability; (II) not all the variables affect FDI the same way in the WAEMU Region; (III) there is a positive relationship between FDI and Economic Growth which implies that FDI stimulates economic Growth; (IV) it is also found a positive relationship between FDI and macroeconomic stability (inflation) in WAEMU; (v) financial development needs to be improved to enable more gain from FDI.
---	------------------------------------	---	-----	------------------------------	---

3	Asongu, et al. (2018)	Examining through Panel Data Analysis the factors that determine the direction of FDI to the fast-growing brics and mint countries from 2001 to 2011.	Net FDI inflow	Panel Data Analysis	It is demonstrated that market size, infrastructure availability, and trade openness play the most significant roles in attracting FDI to brics and mint, while the roles of availability of natural resources and institutional quality are insignificant.
4	Ho, C. & Boot, I. (2017)	Analyzing the impact of macroeconomic fundamentals and country specific determinants on FDI in the USA and Malaysia from 1981 to 2013.	FDI	Empirical tests	As a conclusion, it is mentioned that while the rate of economic growth and domestic credit draw more FDI into the USA, changes in total trade and domestic interest rates have a significant effect on FDI flows into Malaysia.

5	Kumari R. & Sharma S. (2017)	Identifying key determinants of FDI inflows in developing countries by using unbalanced panel data set pertaining to the years 1990-2012.	FDI	GMM	it is found that fixed effect estimation indicates that market size, trade openness, interest rate and human capital yield significant coefficients in relation to FDI inflow. the findings reveal that market size is the most significant determinant of FDI inflow.
6	Rjoub, et al. (2017)	Investigating empirically the determinants of FDI for the landlocked countries in sub-saharan africa over the period 1995-2013.	FDI	Panel Data Analysis	It is revealed that Domestic Investment, Trade (openness), Human Capital, Political Constraint, Natural Resource Endowment and the Market Size as having positive impact on determining FDI.
7	Metaxas, T. & Kechagia, P. (2016)	Studying how the FDI inflows is absorbed by the central Asian countries, studying the case of	FDI	Case Study	It is shown that Uzbekistan attracts FDI mostly because of its market size and its adequacy on natural resources.

		Uzbekistan that attracts limited amount of FDI.			
8	Iamsiraroj, S. & Doucouliagos, H. (2015)	Presenting a comprehensive assessment of the accumulated evidence on one factor, the success of economic growth in attracting FDI.	FDI	Meta-regression analysis (MRA).	it is shown that on average economic growth is an important determinant of FDI. Overall, there is a positive correlation between growth and FDI and this is much larger among single country case studies than with cross-country analysis.
9	Moosa, I. (2015)	Arguing that a large number of studies have been conducted to identify the determinants of FDI inflows but no consensus view has emerged. this is particular in the sense that	FDI	Literature Review	it is found that the estimated relations typically depend on the set of variables included in the regression equation. what may appear to be a significant determinant of FDI may be fragile, not robust.

		there is no widely accepted set of explanatory variables that can be regarded as the true determinants of FDI.			
10	Bilgili, F., Tlce, N. & Doan, T. (2012)	Studying the movements of FDI in turkey, and therefore, to understand the dynamics of FDI from 1988 to 2010.	FDI	State Space Model (SSM) - Markov Regime-Switching Models (MSMs).	this paper yields the outcome that Turkish FDI growth equation has significant structural changes in level and trend and that has significant coefficient shifts in explanatory variables
11	Groh, A. & Wich M. (2012)	Examining why some countries attract more foreign direct investment (FDI) than others.	FDI	Indice Global	As a result 127 countries with respect to their FDI attraction were ranked. It is also revealed the areas in which emerging countries should improve in order to narrow existing gaps

12	Haq, et al. (2012).	Tasting determinants of FDI in Paskistan using two regimes data: democratic (1990-1999) and military (2000-2007).	FDI	Granger Causality Model	Domestic investment is independent of the level of FDI inflows. in other words, it implies that a change in domestic investment is not influenced by FDI inflows.
13	Choong, C. & Iam, S. (2010).	Examining the determinants of foreign direct investment (FDI) in Malaysia, for the period 1970-2006.	LFDI	ADF test and Ng-Perron	Market size of both malaysia and china have major, and a statistically significant impact, on FDI inflow to malaysia. it also demonstrates that openness level of the country has a positive and statistically significant effect on FDI inflow, which supports the hypothesis that FDI can be attracted to a country with more liberalized economic reforms.

14	Katz, B. & Owen, J. (2006)	Analysing a situation where two governments consider competing to attract a foreign monopoly to their markets. competition involves offering incentives to the firm, lowering its marginal cost. the firm chooses to enter either of the markets, produce there and export to the other, to enter both with local production, or to reject all offers.	FDI	Teoretic game	it is found conditions when it is optimal for one country not to compete, preferring imports to improving its economy.
----	----------------------------	--	-----	---------------	--

15	Carstensen, K. & Toubal, F. (2004)	Examining the determinants of FDI into Central and Eastern European countries (CEECS).	FDI	Dynamic Panel Data Methods	It found that the variables selected have significant and plausible effects on FDI
----	------------------------------------	--	-----	----------------------------	--

2. Conclusion

It is important to highlight that the causal relationships between human development and FDI are diverse. Thus, this field of research allows addressing the relationship between these concepts of dynamics forms. So, as proxy variables of human development can be used the Gross Domestic Product, Human Capital, Index Human Development, FDI, Poverty, Institutions, among other.

This systematic review of the literature found the seminal articles in the topic of relationship between economic growth and human capital in the science economic are Arrow (1962), Romer (1990) and Barro (1991) with his explanations about the impact of human capital on economic growth. They are still important because they allow to give opening for establishing the relationship between human development and Foreign Direct Investment in studies as Sharma & Gani (2004), Gohou & Soumaré (2012) and Soltanpanah & Kamiri (2013).

After analyzing the relationship between FDI and social development evidently, it's found that FDI represents an important element of economic development of any development region since it has several benefits or advantages both socially and economically of bringing in FDI such as poverty reduction, improving welfare, income inequality reduction, more investment in human capital, more investment on education and more investment on human development. It also facilitates growth by enhancing physical and human capital accumulation which at the same time has a positive contribution of FDI to employment. It's important to mention that there is a bidirectional nexus between FDI and social development.

As a conclusion, it must be mentioned that there are many variables that different authors set as determinants of FDI inflows namely Human Capital, Openness Level, Market Size, Institution Quality, Labor Force, Interest Rate, Macroeconomic Stability, Infrastructure Availability, Business Environment, Corruption Level, Health, FDI (previous year), DGP and Tax. Having as some of the most determinants variables: Human capital, Openness Level, Market Size and Infrastructure Availability. Furthermore, all of them have a different impact coefficient on FDI inflows depending on the country.

References

- Abimbola, In. & Oludiran, As. (2018). Major determinants of Foreign Direct Investment in the West African economic and monetary region. *Iranian economic review*, 22(1), 121-162.
- Adam, A. & Filippaios, F. (2007). Foreign Direct Investment and civil liberties: a new perspective. *European journal of political economy*, 23(4), 1038-1052.
- Agbola, F. (2014). Modelling the impact of Foreign Direct Investment and human capital on economic growth: empirical evidence from the Philippines. *Journal of the Asia pacific economy*, 19 (2), 272-289.
- Ahmad, A., Muhammad, T. & Siddiqi, M. (2020). Bureaucratic quality and FDI inflows nexus: a South Asian perspective. *Romanian journal of economic forecasting*, 23(3), 149-168.
- Ahmad, F., Draz, M. & Yang, S. (2019). China's economic development: does exchange rate and FDI nexus matter? *Asian-pacific economic literature*, 33(2), 81-93.
- Arrow, K. (1962). The economic implications of learning by doing. *Rev. Econ. Stud.* 29(1), 155–173.
- Asali, M., Cristobal-Campoamor, A. & Shaked, A. (2016). Local human capital formation and optimal FDI. *Journal of international trade & economic development*, 25(5), 691-705.
- Ashurov, S., Abdullah, A., Rosman, R. & Haron, R. (2020). The determinants of Foreign Direct Investment in Central Asian region: a case study of Tajikistan, Kazakhstan, Kyrgyzstan, Turkmenistan and Uzbekistan (a quantitative analysis using GMM). *Russian journal of economics*, 6(2), 162-176.
- Asongu, S., Akpan, U. & Isihak S. (2018). Determinants of Foreign Direct Investment in Fast-growing economies: evidence from the Brics and Mint countries. *Financial innovation*, 4(1), 1-17.

- Awolusi O., Adeyeye, P. & Pelsler, T. (2017). Foreign Direct Investment and economic growth in Africa: a comparative analysis. *International journal of sustainable economy*, 9(3), 183-198.
- Azam, M. & Ahmed, A. (2015). Role of human capital and foreign direct investment in promoting economic growth: evidence from commonwealth of dependent states. *International journal of social economics*, 42(2), 98-111.
- Baharumshah, A. & Almasaied S. (2009). Foreign Direct Investment and economic growth in Malaysia: interactions with human capital and financial deepening. *Emerging markets finance and trade*, 45(1), 90-102.
- Bakari, S. & Tiba, S. (2019). The impact of trade openness, Foreign Direct Investment and domestic investment on economic growth: new evidence from Asian developing countries. *Economic research guardian*, 9(1), 46-54.
- Barro, R. (1991). Economic growth in a cross section of countries. *The quarterly Journal of Economics*, 106(2), 407-433.
- Bayar, Y., Remeikiene R., Androniceanu, L. & Jucevicius, R. (2020). The shadow economy, human development and Foreign Direct Investment inflows. *Journal of competitiveness*, 12(1), 5-21.
- Ben, R. (2020). Does Foreign Direct Investment affect growth in MENA countries? A semi-parametric fixed-effects approach. *Middle east development journal*, 12(1), 57-72.
- Bermejo J. & Werner, R. (2018). Does Foreign Direct Investment generate economic growth? A new empirical approach applied to Spain. *Economic geography*, 94(4), 425-456.
- Bilgili, F., Ilce, N. & Doan, T. (2012). The determinants of FDI in Turkey: a markov regime-switching approach. *Economic modelling*, 29(4), 1161-1169.
- Blin, M. & Ouattara, B. (2009). Foreign Direct Investment and economic growth in Mauritius: evidence from bounds test cointegration. *Economie internationale*, 117(1), 47-61.
- Bunte, J., Desai, H., Gbala, K., Parks, B. & Runfola, D. (2018). Natural resource sector FDI, government policy, and economic growth: quasi-experimental evidence from Liberia. *World development*, 107(1), 151-162.
- Cahyadin, M. & Sarmidi, T. (2019). The impact of Foreign Direct Investment, labour force, and external debt on economic growth in Indonesia and Malaysia. *Jurnal ekonomi Malaysia*, 53(1), 171-185.

- Carstensen, K. & Toubal, F. (2004). Foreign Direct Investment in Central and Eastern European countries: a dynamic panel analysis. *Journal of comparative economics*, 32(1), 3-22.
- Cheng, H., Wang, Z., Peng, D. & Kong, Q. (2020). Firm's outward foreign direct investment and efficiency loss of factor price distortion: evidence from Chinese firms. *International review of economics & finance*, 67(1), 176-188.
- Choi, N. (2015). Accounting for quality differences in human capital and Foreign Direct Investment. *Journal of international trade & economic development*, 24(2), 228-246.
- Choong Ck. & Iam Sy. (2010). The determinants of Foreign Direct Investment in Malaysia: a revisit. *Global economic review*, 39(2), 175-195.
- Cleeve, E., Debrah, Y. & Yiheyis, Z. (2015). Human capital and FDI inflow: an assessment of the african case. *World development*, 74(1), 1-14.
- David, O. (2019). Powering economic growth and development in Africa: telecommunication operations. *Applied economics*, 51(33), 3583-3607.
- Dutta, N., Kar, S. & Saha, S. (2017). Human capital and FDI: how does corruption affect the relationship? *Economic analysis and policy*, 56(1), 126-134.
- Edwards, J., Naanwaab, C. & Romero, A. (2017). Effect of FDI on real per capita GDP growth: a rolling window panel analysis of 60 countries, 1982-2011. *Applied econometrics and international development*, 17(1), 19-36.
- Elmawazini, K., Atallah, G., Nwankwo, S. & Dissou, Y. (2013). Us foreign affiliates, technology diffusion and host country human development: human development index versus human capital. *Industry and innovation*, 20(1), 69-91.
- Elmawazini, K., Saleeby, E., Ibn E. & Farouk, B. (2018). Tripartite decomposition of labor productivity growth, FDI and human development: evidence from transition economies. *Economic change and restructuring*, 51(2), 153-171.
- Enescu, M. & Enescu, M. (2015). Foreign Direct Investments in the economic development of Romania. *Studies in business and economics*, 10(3), 128-136.
- García I. & Valenciano J. (2016). Foreign Direct Investment and agribusiness chains in Costa Rica: toward a typology . *Revista economia y sociedad*, 21(1), 35-49.
- Gardaevi, A. (2018). Employment and Foreign Direct Investment: the Montenegro experience [Zaposlenost I Inozemna Izravna Ulaganja: Iskustvo Crne Gore]. *Ekonomski pregled*, 69(5), 552-570.

- Ghosh, S. (2019). Foreign Direct Investment, female education, capital formation, and economic growth in Japan and South Korea. *International economic journal*, 33(3), 509-536.
- Giammanco, Md. & Gitto, I. (2019). Health Expenditure and FDI in Europe. *Economic analysis and policy*, 62(1), 255-267.
- Gohou, G. & Oumar, I. (2012). Does Foreign Direct Investment Reduce Poverty in Africa and are there regional differences? *World development*, 40(1), 75-95.
- Groh, Ap. & Wich M. (2012) Emerging economies' attraction of Foreign Direct Investment. *Emerging markets review*, 13(2), 210-229.
- Gupta, P. (2019). Analysis of institutional determinants impacting FDI inflows in India and China using Panel Data Regression modelling. *Indian journal of economics and business*, 18(2), 467-486.
- Haberly, D & Wjcik, D. (2015). Tax havens and the production of offshore FDI: an empirical analysis. *Journal of economic geography*, 15(1), 75-101.
- Habibi, F & Karimi, M. (2017). Foreign Direct Investment and economic growth: evidence from Iran and GCC. *Iranian economic review*, 21(3), 601-620.
- Hanafy, S. & Marktanner, M. (2019). Sectoral FDI, absorptive capacity and economic growth - empirical evidence from Egyptian governorates. *Journal of international trade & economic development*, 28(1), 57-81.
- Haq Au., Niazi Gsk. & Sahto Q. (2012). Some new evidence on determinants of Foreign Direct Investment: a case study of Pakistan. *Actual problems of economics*, 130(1), 76-82.
- Herzer, D. & Donaubauer, J. (2018). The long-run effect of Foreign Direct Investment on total factor productivity in developing countries: a panel cointegration analysis. *Empirical economics*, 54(2), 309-342.
- Ho, C. & Boot, I. (2017). Fundamentals and country specific determinants of FDI: evidence from United States and Malaysia. *Pertanika journal of social sciences and humanities*, 25(2), 705-722.
- Iamsiraroj, S. & Doucouliagos, H. (2015). Does growth attract FDI? *Economics*, 9(1), 1-36.
- Ishnazarov, D. & Cevik, N. (2017) Foreign AID effectiveness in OIC member countries: beyond economic indicators. *International journal of economics management and accounting*, 25(2), 315-336.

- Jehangir M., Lee, S. & Park, S. (2020). Effect of Foreign Direct Investment on economic growth of Pakistan: the ARDL approach. *Global business and finance review*, 25(2), 19-36.
- Jimborean, R. & Kelber, A. (2017). Foreign Direct Investment drivers and growth in central and eastern Europe in the aftermath of the 2007 global financial crisis. *Comparative economic studies*, 59(1), 23-54.
- Jude, C. & Silaghi, M. (2016). Employment effects of Foreign Direct Investment: new evidence from Central and Eastern European countries. *International economics*. 145(1), 32-49.
- Jun, S. (2015). The nexus between FDI and growth in the SAARC member countries. *Journal of east Asian economic integration*, 19(1), 39-70.
- Katz, Bg. & Owen, J. (2006). Should governments compete for Foreign Direct Investment? *Journal of economic behavior and organization*, 59(2), 230-248.
- Kaulihowa, T. & Adjasi, C. (2019). Non-linearity of FDI and human capital development in Africa. *Transnational corporations review*, 11(2), 133-142.
- Khalilov L. & Yi, C. (2020). Is Foreign Direct Investment a real driving force of economic growth? A panel data analysis. *Central European journal of economic modelling and econometrics*, 12(3), 273-299.
- Khan, I. & Nawaz, Z. (2019). Trade, FDI and Income Inequality: empirical evidence from CIS. *International journal of development issues*, 18(1), 88-108.
- Kheng, V., Sun, S. & Anwar, S. (2017). Foreign Direct Investment and human capital in developing countries: a panel data approach. *Economic change and restructuring*, 50(4), 341-365.
- Kolawole, B. & Odubunmi, S. (2015). Government capital expenditure, Foreign Direct Investment, and economic growth relationship in Nigeria. *Mediterranean journal of social sciences*, 6(4), 444-453.
- Kottaridi, C. & Stengos, T. (2010). Foreign Direct Investment, human capital and non-linearities in economic growth. *Journal of macroeconomics*, 32(3), 858-871.
- Kumar, A. (2019). Why so serious about foreign capital? *International journal of financial studies*, 7(3), 1-15.
- Kumari R. & Sharma Sk. (2017). Determinants of Foreign Direct Investment in developing countries: a panel data study. *International journal of emerging markets*, 12(4), 658-682.

- Lan, J., Kakinaka, M. & Huang, X. (2012). Foreign Direct Investment, human capital and environmental pollution in China. *Environmental and resource economics*, 51(2), 255-275.
- Li, C. & Tanna, S. (2019). The impact of Foreign Direct Investment on productivity: new evidence for developing countries. *Economic modelling*, 80(1), 453-466.
- Li, X. & Liu, X. (2005). Foreign Direct Investment and economic growth: an increasingly endogenous relationship. *World development*, 33(3), 393-407.
- Liu, W. (2016). Intellectual property rights, FDI, R&D and economic growth: a cross-country empirical analysis. *World economy*, 39(7), 983-1004.
- Liu, X. Luo, Y., Qiu, Z. & Zhang, R. (2014). FDI and Economic Development: evidence from Chinas regional growth. *Emerging markets finance and trade*, 50(1), 87-106.
- Majeed, Mt. (2017). Inequality, FDI and Economic Development: evidence from developing countries. *Singapore economic review*, 62(5), 1039-1057.
- Metaxas, T. & Kechagia, P. (2016). FDI in Central Asia: the case of Uzbekistan. *Applied econometrics and international development*, 16(1), 63-76.
- Miniesy, R., & Adams, J. (2016). Local Employment additionality impacts of Chinese overseas Foreign Direct Investment in selected African Economies. *Local economy*, 31(6), 665-689.
- Miningou, E., & Tapsoba, S. (2020). Education systems and Foreign Direct Investment: Does External Efficiency matter? *Journal of applied economics*, 23(1), 583-599.
- Mohanasundaram, T. & Karthikeyan, P. (2015). Foreign Direct Investment and economic growth: empirical evidence from India. *Afro-Asian journal of finance and accounting*, 5(4), 344-355.
- Mondolo, J. (2019). How do informal institutions influence inward FDI? a Systematic review. *Economía política*, 36(1), 167-204.
- Moosa, Ia. (2015). Theories of Foreign Direct Investment: diversity and implications for empirical testing. *Transnational corporations review*, 7(3), 297-315.
- Morita, T. & Sugawara, K. (2015). Human capital and FDI: development process of the developing country in an overlapping generation model. *Journal of international trade & economic development*, 24(7), 922-946.
- Nguyen H. (2020). Impact of Foreign Direct Investment and international trade on economic growth: empirical study in Vietnam. *Journal of Asian finance, economics and business*, 7(3), 323-331.

- Nolintha, V. & Yee, I. (2016). Inequality in Laos and the role of FDI. *International journal of economic policy in emerging economies*, 9(3), 226-247.
- Olofin, O., Aiyegbusi, O. & Adebayo, A. (2019). Analysis of Foreign Direct Investment and economic growth in Nigeria: application of spatial econometrics and fully modified ordinary least square (FMOLS) . *Foreign trade review*, 54(3), 159-176.
- Onakoya, A., Johnson, B. & Ogundajo, G. (2019). Poverty and trade liberalization: empirical evidence from 21 african countries. *Economic research-ekonomska istrazivanja*, 32(1), 635-656.
- Owen, S. & Yawson, A. (2010). Human development and cross-border acquisitions. *Journal of empirical finance*, 17 (4), 689-701.
- Pegkas, P. (2015). The impact of FDI on economic growth in Eurozone countries. *Journal of economic asymmetries*, 12(2), 124-132.
- Perugini, C., Pompei, F. & Signorelli, M. (2008). FDI, RD and human capital in central and eastern european countries. *Post-communist economies*, 20(3), 317-345.
- Quinonez, P., Saenz, J. & Solorzano, J. (2018). Does Foreign Direct Investment reduce Poverty? the case of Latin America in the twenty-first century. *Business and economic horizons*, 14(3), 488-500.
- Quionez, P, Senz, J. & Solrzano, J. (2018). Does foreign direct investment reduce poverty? the case of Latin America in the twenty-first century. *Business and economic horizons*, 14(3), 488-500.
- Ramzan, M., Sheng, B., Fatima, S. & Jiao, Z. (2019). Impact of FDI on economic growth in developing countries: role of human capital. *Seoul journal of economics*, 32(3), 337-360.
- Reiter, S. & Steensma, H. (2010). Human development and Foreign Direct Investment in developing countries the influence of FDI policy and corruption. *World development* 38(12), 1678-1691.
- Rjoub H., Aga M., Abu Alrub A. & Bein M. (2017). Financial reforms and determinants of FDI: evidence from landlocked countries in Sub-Saharan Africa. *Economies*, 5(1), 1-16.
- Romer, P. (1990). Endogenous Technological Change. *Journal of political. Economy*, 98(1), 71-102.
- Roy, S. (2016). Foreign Direct Investment and total factor productivity growth: does distance from technology frontier matter? *Global business and economics review*, 18(2), 151-176.

- Sabir, S., Rafique, A. & Abbas K. (2019). Institutions and FDI: evidence from developed and developing countries. *Financial innovation*, 5(1), 1-20.
- Sadeghi, P., Shahrestani H., Kiani K. & Torabi T. (2020). Economic complexity, human capital, and FDI attraction: a cross country analysis. *International economics*, 164(1), 168-182.
- Sarker, B., & Khan, F. (2020). Nexus between Foreign Direct Investment and economic growth in Bangladesh: an augmented autoregressive distributed lag bounds testing approach. *Financial innovation*, 6(1), 1-18.
- Soumaré, I. (2015). Does FDI improve economic development in north african countries? *Applied economics*, 47(51), 5510-5533.
- Su, Y. & Liu, Z. (2016). The impact of Foreign Direct Investment and human capital on economic growth: evidence from chinese cities. *China economic review*, 37(1), 97-109.
- Subasat, T. & Bellos, S. (2013). Governance and Foreign Direct Investment in Latin America: a panel gravity model approach. *Latin American journal of economics*, 50(1), 107-131.
- Teixeira, A. & Loureiro A. (2019). FDI, Income Inequality and Poverty: a time series analysis of portugal, 1973-2016. *Portuguese economic journal*, 18(3), 203-249.
- Tsamadias, C., Pegkas, P., Mamatzakis, E. & Staikouras C. (2019). Does R&D, human capital and FDI matter for TFP in OECD countries? *Economics of innovation and new technology*, 28(4), 386-406.
- Tsaurai, K. & Odhiambo, N. (2012). Foreign Direct Investment and economic growth in Zimbabwe: a dynamic causality test. *International journal of economic policy in emerging economies*, 5(2), 183-196.
- Tsaurai, K. (2015). Does human capital development matter in FDI location decisions? a case for Austria. *Risk governance and control financial markets and institutions*, 5(3), 26-35.
- Tun, Yl., Azman-Saini, Wnw. & Law, Sh. (2012). International evidence on the link between Foreign Direct Investment and Institutional Quality. *Inzinerine ekonomika-engineering economics*, 23(4), 379-386.
- Uddin, M., Chowdhury, A. Zafar S., Shafique, S. & Liu, J. (2019). Institutional determinants of inward FDI: evidence from Pakistan. *International business review*, 28(2), 344-358.
- Vollmecke, D., Jindra, B. & Marek, P. (2016). FDI, human capital and income convergence evidence for european regions. *Economic systems*, 40(2), 288-307.

- Wang, M. & Wong, M. (2009). Foreign Direct Investment and economic growth: the growth accounting perspective. *Economic inquiry*, 47(4) 701-710.
- Wu, W., Yuan, I., Wang, X., Cao, X. & Zhou, S. (2020). Does FDI drive economic growth? Evidence from city data in China. *Emerging markets finance and trade*, 56(11), 2594-2607.
- Zandile, Z. & Phiri, A. (2019). FDI as a contributing factor to economic growth in Burkina Faso: how true is this? *Global economy journal*, 19(1), 1-18.
- Zhang, Y., Cheng, Z. & He, Q. (2020). Time lag analysis of FDI spillover effect evidence from the belt and road developing countries introducing China's direct investment. *International journal of emerging markets*, 15(4), 629-650.
- Zhuang, H. (2017). The effect of Foreign Direct Investment on human capital development in East Asia. *Journal of the Asia pacific economy*, 22(2), 195-211.