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Economic Freedom and its Impact on Foreign Direct Investment: Global Overview

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Abstract: The purpose of this research is to examine the economic freedom (EF) along with its macroeconomic determinants impact on Foreign Direct Investment (FDI) inflow in South Asia, East Asia, Latin America, Middle East, and North Africa, Northern Europe, Southern Europe, Western Europe, Eastern Europe and Sub Saharan Africa. We use Heritage Foundation economic freedom index data over the period of 1999 to 2018 and employ the stepwise multi regression on variables of business freedom, government spending, tax burden, government integrity, property rights, investment freedom, trade freedom and monetary freedom. The results show that EF has a significant positive impact in South Asia, Latin America, East Asia, North Europe and West Europe. However, for the Middle East and North Africa, East European and South European economies EF has an insignificant influence on FDI inflow.

Keywords: Foreign Direct Investments, Economic Freedom, Economic Growth, Macroeconomic Factors

JEL Classification: F43, F4, P33

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Introduction

Economic freedom (EF) considered as symbolic criteria for a business-friendly environment. However, the characteristic of significant EF changes according to the regions. To attract foreign direct investment (FDI) EF is an important key priority. Countries' EF ranking rises and declines due to a single country's economic efforts (Heritage Foundation, 2018). According to Tiwari (2011) majority of empirical literature presenting the relation between economic growth, EF and FDI inflow.

According to the Heritage Foundation EF is defined as the fundamental rights of every human to control his or her labour and property. The ideals of EF are strongly associated with democracy, greater per capita wealth, healthier societies, human development, cleaner environments, and poverty elimination. Further, it can be classified as govern-

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ment size (fiscal health, government spending, and tax burden), Rule and law (judicial effectiveness, property rights and government integrity), Open markets (trade, investment and financial policy) and Regulatory efficiency (labour, monetary and business) are four broad category measures for economic freedom. Every component is equally important in achieving the positive benefits of economic freedom.

This research focuses on the EF and its impact on FDI with the help of macroeconomic determinants in South Asia, Latin America, Sub Saharan Africa, East Asia, Northern Europe, Southern Europe, Western Europe, Eastern Europe and the Middle East and North Africa. Previous literature has extensively examined the relation between EF and FDI significant relation in different economies Sayari, Sari and Hammoudeh (2018) examine the long-run relation between FDI, economic freedom index (EFI) and GDP in thirty European countries from four regions Central Europe, Eastern Europe, Western European. Imtiaz and Bashir (2017) investigate the relation between EF's macroeconomic factors and FDI in South Asian economies. Quazi (2007) studied the impact of EFI in East Asian economies to attract FDI with the help of macroeconomic determinant defined in Heritage Foundation from 1995 to 2000 period and Tiwari, (2011) analyses the impact of EF, FDI and foreign aid in Asian economies. Economou (2019) analysis the EF and FDI and its determinant to attract the inflow of FDI in Southern European economies. Subasat and Bellos (2011) presented the impact of EF on FDI inflow in Latin American countries. Fofana (2014) examines the effectiveness of economic freedom institution, regulatory framework to attract the FDI inflow and outflow in Sub Saharan African countries and Western European countries. Moussa, Çaha and Karagöz (2016) investigate the EF and its macroeconomic component to attract the FDI inflow at the regional and global levels. Dkhili and Dhiab (2018) present the importance of EF to attract the FDI inflow and thusly achieving economic growth. Similarly, Taran, Mironiuc, and Huian (2016) examined the determinants of FDI inflow at the multi-regional level, The study took the 75 countries' research utilized the data from the Heritage Foundation. They presented in European regions, EFI does not have any significant impact. However, the overall EFI for other regions leads to the increment in FDI and the EF consist of macroeconomic determinants such as monetary freedom, business freedom, trade freedom and investment freedom. Saini and Singhania, (2018) examine the overall impact of EFI and its institutional factors to attract the FDI in 9 developing and 11 developed countries from 2004 to 2013 and results show the statically insignificant but positive relation between EFI institutional factors and FDI inflow in developing countries and a significant relation between EF and FDI in developed countries.

The aim of this study is to examine the macroeconomic factors of EF to attract the FDI inflow in South Asia, Latin America, Sub Saharan Africa, East Asia, Northern Europe, Southern Europe, Western Europe, Eastern Europe and the Middle East and North Africa. Analysis the 20 years period from 2000 to 2019 from Heritage Foundation database which is representing the period 1999 to 2018 and utilizing the stepwise multi regression where FDI as a dependent variable and investment freedom, trade freedom, monetary freedom, business freedom, government spending, tax burden, government integrity and property rights are independent variables.

Hence, the contribution of the paper is to contribute the literature that examines the impact of EF on FDI from the geographically grouped countries that display a similar economy attribute. Which will drive the valuable conclusion for policymakers. As men-

tioned, most studies usually examine groups of countries in numerous researches. This analysis combines the economies which are geographical, political, social and historically close to each other and present in a single research.

The paper is structured further as follows the first section gives an overview of the most relevant literature and followed by the empirical analysis second presenting the methodology, sampling and tested empirical model, third shows result and discussion with descriptive statistics and multi regression results and fourth depict conclusion part and overall nectar of this research.

Literature

In recent years researchers have illuminated the relation between EF and FDI inflow with consideration of specific geographically grouped economies. Namely, Quazi (2007) took the five-year data from the Heritage Foundation which was focused on the East Asia region and the model was estimated by the panel data. Subasat (2011) analysed the 31 European, FDI source countries and fifteen Latin American sink countries through the panel gravity model. Moussa, Çaha, and Karagöz (2016) analyse the influence of EF on FDI from the world's 156 economies including the conflict countries and research included the variables viz. growth, export, import, trade, inflation rate, interest rate and EF index. Haydaroglu, Haydaroglu, and Ceyhun (2016) investigated the EF on BRICS nations and utilized the panel regression methodology, and it includes the variables like government freedom, property rights, monetary freedom, trade freedom, business freedom and infrastructure. Dkhili and Dhiab (2018) examine the relationship between FDI, EF and economic growth in Gulf Cooperation Council countries. Sayari, Sari and Hammoudeh, (2018) examine the 36 European countries including Eastern, South Eastern and Western Europe.

Oladipo (2010) presented macroeconomic variables like developed infrastructure, market size, and human capital are an important determinant of FDI inflow in a small open economy such as Nigeria. Moussa, Çaha, and Karagöz (2016) examine the impact of EF on FDI inflows in regional and globally. They include the ignored regions such as Sub Saharan, Post-Soviet and conflict-affected countries and utilized the panel data analysis. Results show FDI is largely affected by domestic and external (import and export) trades as well as EF macroeconomic variables in different regions with the fixed-effects model. The European region obtains the largest magnitude of EF. After the European regions, the EF influence is obtained by other regions such as Asian countries, Post-Soviet states as one of the often-neglected regions record the largest EFI impact. Variables such as political stability, corruption level of the country, institutional rights, financial market and employment regulations, along with the country's credit rates, to account for more than 80-90% of variations in FDI. The aggregate effect of the EF and FDI are having a positive and significant effect on economic growth, and distinct factors might affect the countries differently; some, factors have significant in one country compare to the other.

Imtiaz and Bashir (2017) examine the macroeconomic variables to find out the determinants of attracting FDI inflow in South Asian countries Pakistan, Nepal, India, Sri Lanka, and Bangladesh and applied the panel regression over the period of 1995 to 2014. They presented that trade freedom, quality of infrastructure market size, human capital

and EF have a positive and statistically significant influence on FDI. However, the macroeconomic component of EF government spending, property rights, corruption, financial, investment, monetary, labour and business freedom have an insignificant impact while fiscal freedom has a significant positive impact on FDI inflow in South Asia.

Quazi (2007) investigates the seven east Asian countries Thailand, Philippines, Malaysia, Singapore, Korea, Indonesia and China through random and fixed panel regression analysis. He utilized the data throughout 1995-2000 from Heritage Foundation and analyses the macroeconomic variables investment return, political instability, quality of infrastructure, market size and human capital. The result shows that EF increases the FDI inflow in East Asian economies and EF is the proxy for market size, return on investment and open domestic market. According to Zhang (2001) deregulated business policy for FDI and gigantic market size lure foreign investors in China. Hayrdaroglu (2016) investigated the synergy within the economic growth, FDI and EF into BRICS countries through panel data analysis. The research utilized the GDP as the main growth variable and property rights, monetary, government size, business trade and FDI as the exploratory variables. The article depicts that FDI and EF have a significant and positive association with economic growth in the BRICS nation. Ho and Rashid, (2011) analyses the relation between macroeconomic determinants of Asian economies and FDI for the period 1975 to 2009, the countries they examine was Singapore, Philippines, Malaysia, Indonesia, and Thailand. The result shows in Thailand, Singapore and the Philippines degree of openness is statically significant to attract the FDI inflow.

Bengoa and Sanchez-Robles, (2003) illustrated the relationship between EFI, FDI and economic growth in 18 Latin American countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela) for the period of 1970 to 1999 and explain that these countries already have minimum level of social capacity although these countries are still developing. They presented that EF has a significant and positive impact on FDI in Latin America. Subasat and Bellos, (2011) also examine the relation between EF and FDI in 24 target countries from Latin America (Costa Rica, El Salvador, Guatemala, Argentina, Bahamas, Bolivia, Brazil, Chile, Colombia, Dominican Republic, Ecuador, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad & Tobago, Uruguay, Venezuela) and 31 FDI source countries from Europe (Australia, Austria, Belgium, Canada, China, Czech Rep, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, South Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, UK, US) through panel gravity model approach. They observe that EF has a positive impact on FDI, but its influence cannot be generalized everywhere. For source countries, factors like trade freedom, investment freedom and fiscal freedom have no significance. Monetary freedom discourages FDI. However, financial freedom, business freedom and government spending encourage outward FDI. The overall effect of EF's on FDI is significantly positive in Latin America.

Sayari, Sari and Hammoudeh, (2018) investigate the influence between FDI and the value-added components of GDP on EF in 30 European countries Western Europe and Central and Eastern Europe. The result shows a positive long-run relation between EF and FDI in Western, Central, Eastern European countries. While they separately analyse

the subgroup of Eastern and Western European countries, FDI becomes insignificant for Central European countries and negatively significant for Western European countries.

Taran, Mironiuc and Huian (2016) examine the impact of EF's factors on FDI inflow. The authors analyse the 10 EF variables; property freedom, business freedom, fiscal freedom, government spending, financial freedom, trade freedom, monetary freedom, investment freedom, freedom from corruption and labour freedom. The result shows the insignificant relation between EF and FDI inflow in 31 European countries. Fofana (2014) compares the influence of EF on FDI in Sub Saharan Africa and Western Europe. The result shows in Western Europe the size of government, monetary freedom, labour market and trade freedom are significantly boost the FDI while the market size, legal system and law are insignificant.

Caetano and Caleiro (2009) investigate EFI, and its variables' impact on FDI in the Middle East and North Africa and the European region through cluster analysis. They concluded that EF and inward FDI inflow are positively associated in the cluster belongs to the higher EF. Mohamed and Sidiropoulos (2010) investigate the FDI and its determinant in 12 the Middle East and North African countries (Egypt, Jordan, Lebanon, Syria, Algeria, Tunisia, Morocco, Yamen, Kuwait, UAE, Oman Saudi Arabia). The authors find that institutional variables, natural resources, government size and host economy are the key factors to determine the FDI inflow along with government efforts such as reduction of corruption, build a strong institution, remove all trade barriers and develop a strong financial institution. Chan and Gemayel (2004) demonstrated that the economic, financial and political risks associated with each other and instability in economies are directly associated with critical determinants of FDI inflow into the Middle East and North Africa. Onyeiwu (2004) illustrated the macroeconomic determinants of FDI in the Middle Eastern countries; he examines the institutional and macroeconomic factors; the results depict some of the important macroeconomic determinants in emerging countries are not statistically significant to FDI inflow, these include economic growth, infrastructure, inflation and investment returns. On the other hand, trade freedom, corruption, and bureaucratic red tape are significant in the Middle East.

Ayal and Karras (1998) analysed the EF component from 58 countries from Africa, Asia, and Europe throughout 1975 to 1990. They analysed the variables such as foreign investment transaction, trade size, exchange rate, trade taxation, negative interest rate, government enterprise variability in inflation, and money growth. The result shows the positive relation between EF and economic growth and the overall EFI is directly linked with the economic growth and to achieve this growth FDI contributed a significant role. Azman-Saini, Baharumshah and Law, (2010) examine the linkage between FDI, economic growth and EF in the sample of mixed 85 countries from Latin America, Europe, Asia and Africa throughout 1975 to 2004, period. The EF components property rights, business freedom and labour freedom, boost the FDI inflow in host countries. They depicted that EF is important for long period growth and FDI has a positive association with economic factors. So, the studies based on obsolete data also bestowed that EF is the influencing factor for FDI.

Empirical literature presented over a period of time analyses the linkage between FDI and macroeconomic environment of the host country and degree of freedom to do the businesses (Bénassy-Quéré, Coupet, and Mayer 2007; Borensztein, De Gregorio, and

Lee 1995; Bosworth and Collins 1999; Dunning 2008; Fry 1993; Lipsey 2000; De Mello 1999). The research explored by Fodé (2014) measures the influence of EF on FDI in 25 Western European and 26, Sub Saharan countries on period 2001-2009, the shows the aggregate index of EFI is not a significant variable of FDI in the African region. Imtiaz et al. (2017) analysed the EFI component viz. business and financial condition level of international trade, governance transparency with the addition of other macroeconomic variables for attracting FDI; they applied the panel data techniques in South Asia covering 20 years' time span from 1995 to 2014. The result depicts that overall EF is an important determinant of FDI. However, the disaggregated EF analysis suggested that only fiscal and trade freedom has a statistically significant influence on FDI. Large-sized market like South Asian countries represents greater domestic demand, so it is an attractive factor for investors who seek higher demand for their products. According to Voyer and Beamish (2004) and Mauro (2008) the long-established economic theories suggest that macroeconomic determinant of EF create the economic conditions to attract the FDI inflows in host countries as it reduces the decisive effect and uncertainties. Therefore, some literature depicts the role of business transparency and open economy while others highlight the significance and persistent macroeconomic environment to attract the FDI inflow.

The empirical literature posed the hypothesis as:

H: Investment freedom, trade freedom, monetary freedom, business freedom, government spending, tax burden, government integrity, and property rights have a significant impact on FDI.

The conclusion of the literature review follows: The impact of EF on FDI is significantly positive, and the openness of the economy is the most significant factor for FDI. We successfully presented the empirical literature for Latin America, South Asia, East Asia, Middle East and North Africa, Sub Saharan Africa, Eastern Europe, Southern Europe, Western Europe and Northern Europe. This research employs the stepwise multi regression analysis to explore the influence of EF and its macroeconomic determinants on FDI inflow globally.

Methodology

The data collected from annually published Economic Freedom Index (EFI) from Heritage foundation over the period 2000-2019 which represents the year 1999 to 2018 performance. According to heritage foundation 2019, EFI is defined by the 12 qualitative and quantitative factors which divided into four categories: i) regulatory efficiency (monetary freedom labour freedom and business freedom) ii) government size (fiscal health, government spending and tax burden) iii) rule and law (government integrity, judicial effectiveness and property rights) iv) market openness (financial freedom, investment freedom and trade freedom). We are using the eight variables namely investment freedom, trade freedom, monetary freedom, business freedom, government spending, tax burden, government integrity and property rights. We analyse the South Asian, Latin American, Sub Saharan Africa, the Middle East and North Africa, East Asia, Northern Europe, Southern Europe, Western Europe and Eastern European countries separately.

Table 1. Presenting empirical literature and bifurcation of economies

Region	Study	Sample bifurcations
South Asia	(Imtiaz, Bashir 2017)	Bangladesh, India, Nepal, Pakistan, Sri Lanka
Latin America	(Bengoa, Sanchez-Robles 2003; Subasat, Bellos 2011)	Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay
Sub Saharan Africa	(Ajide, Eregha 2015; Fofana 2014)	Botswana, Ethiopia, Gabon, Ghana, Guinea, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Namibia, Senegal, South Africa, Uganda
East Asia	(Quazi, 2007)	China, Japan, Malaysia, Philippines, Singapore, South Korea, Thailand, Vietnam
Northern Europe	(Sayari, Sari, Hammoudeh 2018)	Denmark, Finland, Ireland, Norway, Sweden, United Kingdom
Southern Europe	(Economou 2019)	Greece, Italy, Portugal, Slovenia, Spain, Greece, Italy, Portugal, Slovenia, Spain
Western Europe	(Fofana 2014; Sayari, Sari, Hammoudeh 2018)	Austria, Belgium, France, Germany, Netherlands
Eastern Europe	(Sayari, Sari, Hammoudeh 2018)	Czech Republic, Hungary, Poland, Romania, Ukraine, Czech Republic
The Middle East and North Africa	(Caetano, Caleiro 2009; Moussa, Çaha, Karagöz 2016b)	Bahrain, Iran, Israel, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Tunisia

Source: Author.

Table 1 presents the empirical literature for a sample building. Therefore, table 1 shows the number of countries included in the analysis and recent empirical literature in 9 selected regions. We dropped the economies like the USA, Canada, Russia and Eurasian economies due to the overlapping the bifurcation and limitation of relevant literature.

The empirical literature shows that to examine the relationship between economic freedom and FDI inflow, researchers generally use two method panel regression or multiple regression analyses. Taran, Mironiuc and Huian (2016) used the multiple regression analysis to analyses the relationship between EF's macroeconomic factors (property freedom, population, GDP per capita, unemployment rate, government spending freedom, fiscal freedom, freedom from corruption, trade freedom, investment freedom, financial freedom, labour freedom and business freedom) which is determined by Heritage Foundation and FDI inflow. So similarly, in this research, we are using the stepwise multiple regression analysis. All this means stepwise multiple regression enter the variables one by one and give the best fit model at the end of the analysis.

$$FDI_i = \beta_0 + \beta 1 property\ rights\ EF_i + \beta 2\ government\ integrity\ EF_i + \beta 3\ tax\ burden\ EF_i + \beta 4\ government\ spending\ EF_i + \beta 5\ business\ freedom\ EF_i + \beta 6\ monetary\ freedom\ EF_i + \beta 7\ trade\ freedom\ EF_i + \beta 8\ investment\ freedom\ EF_i + \varepsilon i \quad (1)$$

So, with the reference of the standardized regression equation and following the (Quazi, 2007; Subasat and Bellos, 2011; Taran, Mironiuc and Huian, 2016). Equation 1 representing the final empirical model for selected regions where *i* refers regions, $\beta 0$ is a constant term $\beta 1, \beta 2, \ldots, \beta 8$ denote the coefficient parameters of the variables and ε is the disturbance term of region and EF_i along with the eight independent variables such as property rights, government integrity, tax burden, government spending, business freedom, monetary freedom, trade freedom, investment freedom representing *EF* in the region and FDI_i represent the dependent variable for geographical region.

Results and Discussion

This section will present the descriptive statics, ANOVA and stepwise multi regression analysis results for South Asia, Latin America, Sub Saharan Africa, East Asia, Northern Europe, Southern Europe, Western Europe, Eastern Europe, Middle East, and North Africa regions.

Asandului, Iacobuta, and Cautisanu (2016) analyse the relation between GDP per capita and EF using Heritage Foundation data in European Union countries. They divided the European Union countries into 4 regions Southern Europe, Western Europe, Northern Europe and Eastern Europe. In descriptive statics, he analyses all 4 regions EFI score. They presented in Southern Europe, 40% of the countries have EFI score, less the 63 while in Northern Europe 70% of countries have a score greater than 72.

Table 2 presents the descriptive statics for EFI and FDI for all nine regions South Asia, Latin America, Sub Saharan Africa, East Asia, Middle East and North Africa, Eastern Europe, Western Europe, Southern Europe, and Northern Europe. According to Heritage Foundation EFI is measured between the scale 0 to 100 and FDI represents the net inflows of investment. It is noticeable that the mean and standard deviation of FDI for western Europe is highest, while for the Northern Europe EF's macroeconomic factors mean and the standard deviation is high. It means overall EF in Denmark, Finland, Ireland, Norway, Sweden, United Kingdom is high in among the all examine regions, in addition, these countries have most favourable environment for investment if we consider the variables business freedom, government spending, tax burden, government integrity, property rights, investment freedom, trade freedom and monetary freedom. South Asia's government integrity has the least mean value 27.17 and Northern Europe property freedom has a mean value 89.70. Further, we can easily calculate average mean from table 3 therefore, the average mean for South Asia is 57.04, Latin America is 64.21, Sub Saharan Africa is 59.05, East Asia is 67.07, Northern Europe is 74.55, Southern Europe is 64.83, Western Europe is 70.20, Eastern Europe is 61.93 and for the Middle East and North Africa is 64.11. With the consideration of this research 8 independent variable, the overall EF in Northern Europe is high.

Table 2 descriptive statics

	South Asia		Latin America		Sub Saharan Africa		East Asia		Northern Europe		Southern Europe		Western Europe		Eastern Europe		The Middle East and North Africa	
Variables	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Deviation
FDI	5613.2	11764.6	7174.9	13649	897.8	1492.3	21942.3	33362.6	23294.7	42296.1	11935	15280.5	33196.3	35382	5872.5	4851.1	3176.9	5293.4
Property Freedom	37.59	10.78	42.81	18.28	42.79	12.58	54.5	26.14	89.7	2.52	62.24	10.26	85.38	6.53	52.9	17.07	48.8	17.06
Govt. Integrity	27.17	9.02	36.47	14.03	34.27	11.06	48.95	21.91	87.43	7.48	54.58	10.15	76.73	7.9	40.27	10.82	47.1	16.41
Tax burden	78.88	5.32	80.63	6.58	72.75	8.19	76.08	7.66	53.4	13.66	57.97	5.05	48.64	7.11	75.03	8.37	85.64	15.56
Govt. Spending	86.16	6.42	78.58	12.52	72.24	18.87	79.89	12.03	29.23	20.85	35.31	13.42	24.28	10.8	45.26	15.25	63.85	16.32
Business Freedom	59.97	10.82	63.97	9.35	58.82	9.3	71.72	16.75	88.49	8.17	75.97	5.52	80.09	8.22	64.78	9.46	67.74	9.49
Monetary Freedom	71.6	5.03	75.26	7.81	73.62	6.96	79.8	7.2	83.04	4.57	81.09	3.54	83.07	3.3	74.59	10.11	77.53	8.67
Trade Freedom	57.87	15.8	75.13	8.03	66.98	11.69	75.01	9.91	84.8	3.52	83.09	5.16	83.92	3.47	81.9	6.89	71.52	14.05
Investment Freedom	37.15	13.97	60.84	16.92	50.98	11.56	50.38	20.78	80.33	11.88	68.45	10.04	79.55	12.39	60.75	19.09	50.77	20.36

Source: own calculation

Table 3. Combined summary of regression outputs and ANOVA

	Regression			ANOVA	
Economies	R	R Square	Adjusted R Square	F	Durbin Watson
South Asia	0.764[a]	0.58	0.57	33.27 ***	1.99
Latin America	0.636[b]	0.404	0.395	42.63***	1.9
Sub Saharan Africa	0.327[c]	0.107	0.097	11.02 ***	2.07
East Asia	0.39[d]	0.16	0.15	14.491 ***	2.5
Northern Europe	0.296[e]	0.088	0.08	11.36 ***	1.91
Southern Europe	0.65[f]	0.42	0.4	22.83***	1.81
Western Europe	0.282[g]	0.079	0.06	4.179***	1.9
Eastern Europe	0.268[h]	0.072	0.062	7.55***	2.173
Middle East and North Africa	0.39[i]	0.16	0.14	7.9***	1.92

*a:, Govt Spending, Business, Trade, Integrity, b: Tax, Property, Integrity, Govt Spending, Monetary c: Business, Trade, Property, d: Tax, Monetary, e: Government Integrity, f:Investment, Govt Spending, Tax, g: Govt Spending, Tax, h: Trade Burden, i:Trade, Monetary, Business, Integrity, Tax, dependent variable FDI inflow, $p \leq 0.001$ ***.*

Table 3 presenting the statics of R, R square, adjusted R square, F ratio, Durbin Watson, and the significance. The model for all nine regions South Asia, Latin America, Sub Saharan Africa, East Asia, Middle East and North Africa, Eastern Europe, Western Europe, Southern Europe and Northern Europe and we will try to explain all the terms one by one through (Field 2013).

In table 3, R square value shows how much is the variability in outcome is explored by the predictors business freedom, government spending, tax burden, government integrity, property rights, investment freedom, trade freedom, and monetary freedom independent variable with the dependent variable FDI inflow. The South Asia model shows the highest 58% variation in inward FDI, which means govt spending, business, trade and integrity all together show 58% variability in FDI inflow. Northern Europe model has the lowest variability; therefore, government integrity has the 8.8% variability in FDI inflow in Northern Europe. While the model for Western Europe and Eastern Europe presenting the 7.9% and 7.2% variability with the dependent variable. The other region Southern Europe and Latin America shows 42% and 40.4% variability.

The adjusted R squares illustrate how good our model is generalizing; therefore, if the adjusted R square value closely near to the R square value, then our model is well generalizing. The difference of R square and adjusted R for South Asia, Latin America, Sub Saharan Africa, East Asia, Northern Europe, Southern Europe, Western Europe, Eastern Europe and the Middle East and North Africa is 0.01, 0.009, 0.01, 0.01, 0.008, 0.02, 0.019, 0.01 and 0.02 respectively. The shrinkage means for South Asia is 1%, Latin America is 0.9%, Sub Saharan Africa is 1%, East Asia is 1%, Northern Europe is 0.8%, Southern Europe is 2%, Western Europe is 1.9%, Eastern Europe is 1%, and for the middle East and North Africa, it is 2%. Northern Europe and Latin America have a most fitted and generalized model with less R square and adjusted R square difference with the shrinkage mean 0.8% and 0.9% respectively. So, if the models were derived from

the population rather than a sample, it would account for approximately 0.8% and 0.9% less variance in the outcome. Therefore, we can say that our models for all nine regions fair and sample are adequately satisfying. Durbin Watson value for all nine regions model significantly close to the value 2, it means the lack of autocorrelation problems in models and all models premise for independent errors are plausible. Next the F value for South Asia is 33.27, Latin America is 42.63, Sub Saharan Africa is 11.02, East Asia is 14.491, Northern Europe is 11.36, Southern Europe is 22.83, Western Europe is 4.179, Eastern Europe is 7.55 and the Middle East and North Africa is 7.9 for all nine regions it is highly significant with ($p \leq 0.001$).

In Heritage Foundation index value of all 8 variables measured on the same scale. This research using the β value to explain the relation between FDI inflow and independent variables like investment freedom, trade freedom, monetary freedom, business freedom, government spending, tax burden, government integrity, and property rights. The positive value of β in table 4 presents a positive relation between EF variables and inflow of FDI, whereas the negative coefficient shows a negative relationship between EF and inflow of FDI. Moreover, it also explains what degree of predicators influence the inflow of FDI if the effects of all other predictors held constant.

Table 4 South Asian EF has a significant and positive impact on FDI inflow countries like Pakistan, India, Nepal, Bangladesh, and Sri Lanka government integrity. According to the Heritage Foundation, government integrity in EFI is defined as the informal benefits or corruption in government. In South Asia, government integrity and trade, freedom has a positive influence on FDI inflow, while government spending and business freedom have a negative influence. Trade regulation adversely affects foreign investors' interest and hinders the free flow of commerce. Diminishing the tariff plus non-tariff barriers that affect the goods and services has a significantly positive effect in South Asia (Imtiaz, Bashir 2017). Government spending alternatively causes higher taxation and loss of opportunity cost. Therefore, foreign investors in South Asia didn't prefer any association with the government's funding.

In Latin America, EF has a significantly positive impact on FDI inflow. This result is supported by the (Bengoa, Sanchez-Robles, 2003; Subasat, Bellos, 2011). Property rights and monetary freedom are positively significant in Latin America. Heritage Foundation, (2019) property rights directly impact the capital flow for production and investment which directly affect the FDI inflow. Another variables government spending, tax burden and government integrity are negatively significant to attract the FDI inflow in Latin America.

Sub Saharan Africa property rights are negatively significant. So, the Government intervention and availability of secure land increase the FDI inflow in Sub Saharan Africa. Asongu (2017) shows the property rights and independence have the inverse relation in Sub Saharan Africa. Economic freedom variables business freedom and trade freedom in Sub Saharan Africa has a positive impact on FDI inflow. If other factors are constant, then every single unit increment of business freedom and trade freedom increases the FDI inflow 47.04 and 21.45 times respectively. Fofana (2014) presented monetary stability and international trade freedom are statically significant factors to attract the FDI.

Table 4 Models significance

	SA	LA	SSA	EA	NE	SE	WE	EE	MENA
Constant	73263.55***	80391.85***	-2550.88***	201380.94***	169709.25***	-17181.24	61740.45**	-9544.15	109.75
Std. error	15250.34	8950.8	686.42	35193.92	43605.2	18292.91	23986.34	5628.36	4407.81
Property Rights		470.24***	-17.64*						
Std. error		55.25	7.63						
Government Integrity	357.97***	-494.77***			-1674.63***				-68.13**
Std. error	130.11	70.88			496.94				25.91
Tax burden		-775.88***		-1457.08***		-653.68**	-1073.11*		-52.82*
Std. error		97.72		320.15		241.11	538.01		22.78
Government Spending	-581.42***	-366.38***				345.06***	973.96**		
Std. error	168.21	53.68				91.05	354.11		
Business Freedom	-606.82***		47.04***						133.85***
Std. error	82.52		10.41						38.71
Monetary Freedom		213.21**		-859.434**					-99.33*
Std. error		86.88		340.945					42.46
Trade Freedom	172.99***		21.45**					188.25**	131.89***
Std. error	59.37		7.33					68.49	27.03
Investment Freedom					800.94***				
Std. error					121.28				

*SA=South Asia, LA=Latin America, Sub Saharan Africa= SSA, East Asia, NE= North Europe, SE, Southern Europe, WE=Western Europe, EE=Eastern Europe, MENA= Middle East and North Africa, significance at p ≤ 0.05 *, p ≤ 0.01 **, p ≤ 0.001 ***. dependent variable IFDI*

Collectively in Northern Europe (Denmark, Finland, Ireland, Norway, Sweden and the United Kingdom), government integrity is negatively significant; Heritage foundation, (2016) government integrity is explained as the small informal benefits outside the business. So, in our results, it is negatively significant for FDI inflow. Therefore, an

increase in corruption adversely affects the FDI inflow in Northern Europe. In Southern Europe, the tax burden is negatively insignificant and investment freedom is positively significant. Therefore, the increase in tax reduced the FDI inflow however improvement in tax policy increases the FDI inflow in Southern Europe. Our result investment freedom in Southern Europe is the continuation of (Pinheiro, Jos and Paulo, 2013).

Similarly, government spending has a significant and positive impact so; Southern European countries have to spend the money on infrastructure development. This result is in line with the (Economou 2019). The next factor tax burden is negatively significant with FDI inflow in Southern Europe and Western Europe; if other factors were constant, higher the tax burden on foreign investors lower the chances to select Southern Europe and Western Europe for FDI inflow. This result is the continuation of (Stoilova 2017). The excess burden of taxation distorted the investment systems which adversely affect the FDI inflow in Southern and Western Europe so an increase in tax slowdown the FDI inflow (Fofana 2014). Western European countries Austria, Belgium, France, Germany and Netherland government spending are positively significant and tax burden are negatively significant in our results. Government spending such as improve human capital provides infrastructure, and funding for research positively impacts the foreign investor interest and economic growth (Paparas, Richter, Paparas 2015).

In Eastern Europe (Czech Republic, Hungary, Poland, Romania, Ukraine, and the Czech Republic) trade freedom has a significant and positive impact on FDI. Restriction in trade policy in Eastern Europe may discourage foreign investors from limited their ability to import necessary goods and burden on transition costs. An increase in trade freedom positively influences the FDI inflow therefore, ease in trade openness increases the FDI inflow. Our result for trade openness is a continuation of (Subasat, Bellos. 2011).

East Asia countries (China, Japan, Malaysia, Philippines, Singapore, South Korea, Thailand, Vietnam) monetary freedom and trade freedom is negatively significant. According to the Heritage Foundation (2016) stable currency is an essential part of monetary freedom and suggests that reducing tax rates and currency manipulation host country can improve the EF score. The result show EF is positively significant with FDI inflow in East Asia the same as (Quazi, 2007). However, monetary freedom reduced the FDI inflow in East Asia. The reason is that FDI inflow in China over a few decades is benefitted from unfair manipulation of currency (Cardoso, Duarte, 2017). Similarly, Lily et al. (2014) presented long-run negative coefficient cointegration between FDI and currency in Singapore, Malaysia and the Philippines. The results show that by constraining monetary freedom in East Asian countries benefit the FDI inflow.

The Middle East and North Africa (Bahrain, Iran, Israel, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Tunisia) business freedom and trade freedom positively significant while the government integrity, tax burden, and monetary freedom are negatively significant. But the overall effect of EF on FDI inflow is insignificant. This result is supported by (Onyeiwu, 2004). Dkhili and Dhiab (2018) depicted foreign investors in the Middle East and North Africa region like to run the enterprises without any limitation. Imposing a multitudinous tidy obstacle for foreign investors, including regulated and red-tapism, bribery culture in government and enhanced unlawful secrete interaction adversely affects the transparency in business. Onyeiwu (2004) shows the

Middle East and North Africa region have to maintain price stability, reduced the taxes tax and control corruption to enhances the FDI inflow.

Conclusion

This study investigated the EF along with its macroeconomic determinants and its influence on FDI inflow in South Asia, East Asia, Latin America, Middle East, and North Africa, Northern Europe, Southern Europe, Western Europe, Eastern Europe and Sub Saharan Africa over the period 1999 to 2018. The result show in South Asia, Latin America, East Asia, North Europe and West Europe, EF have a significant positive impact on FDI. While the Middle East and North Africa, Eastern Europe and Southern European economies EF is insignificant to FDI inflow. However, single variables such as government spending and investment freedom are positively significant and have a positive impact on FDI inflow in Southern Europe.

The result indicates macroeconomic factors related to the EFI boost the FDI inflow in South Asia, Latin America, East Asia, North Europe, and West European countries. The improving economic openness boosts the FDI inflow. In South Asia government integrity is positively significant; it means countries like India, Pakistan, Nepal, Bangladesh and Sri Lanka practice of unfair amount of payment benefits in government departments increase the FDI inflow. While these practices have a negative effect in Latin America, Northern Europe and the Middle East and North African countries. Government Spending is negatively significant in Latin America and South Asia. This result reflects that government interference in infrastructure and improves human capital adversely affect the foreign investors' interest but in Western Europe government spending positively influences the FDI inflow.

Interestingly the trade freedom is the only variable which positively significant in maximum economies South Asia, Sub Saharan Africa, East Europe and the Middle East and North Africa. This illuminates that investor-friendly trade openness policy and relaxes in tariff, trade quotas, and export taxes are increase FDI inflow in South Asia, Sub Saharan Africa, Eastern Europe and the Middle East and North Africa.

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