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By Jamshid Mamasalaev

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I. Introduction

Due to raising awareness of economic benefits coming from inward FDI (Foreign Direct Investment) into the economy, the authorities of most countries in the world have been striving to find ways to attract more FDI mainly through liberalizing their trade and tax policies for the last decades. For instance, Liargovas and Skandalis (2011) emphasize that '*FDI inflows can assist an economy by giving opportunities for ameliorating the level of service sector (i.e. telecommunications, banking, and finance, transport), wholesale and retail trade, business and legal services*' (p.323). However, it is often stressed that being landlocked limits the country's economic integration with other countries. As a result, to attract a substantial amount of FDI into the economy, those countries that do not have direct access to the sea usually should challenge comparatively more than other countries that are not surrounded by land (World Bank-United Nations, A Ten-Year Review on Landlocked Countries, 2014). There are many empirical studies conducted on FDI determinants. However, most of those studies have come to different conclusions in terms of its determinants.

As we look at FDI-related numbers in Asian LLCs shown below, it can be seen that even selected countries own similar geographical characteristics, the shares of net FDI inflows vary across those countries.

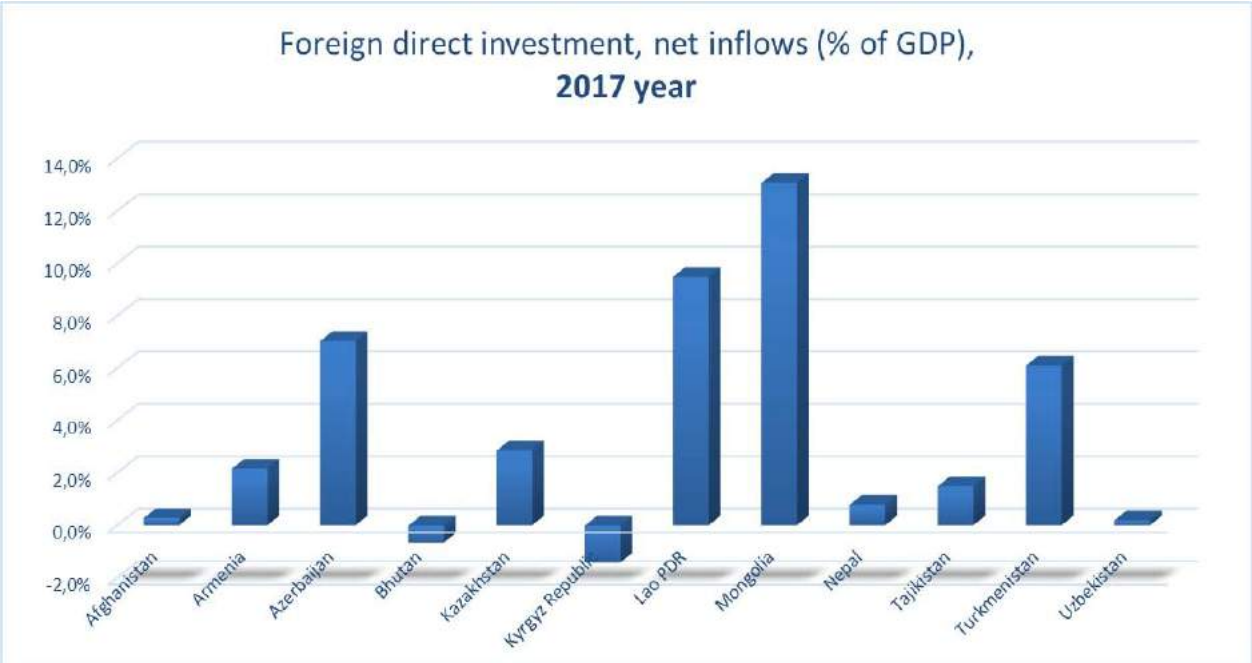

Figure 1

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Also, although there are some existing empirical studies conducted on finding FDI determinants in a group of landlocked countries, none of them included Asian LLCs. Due to the facts above, the underlying research aims to comparatively define FDI determinants in Asian LLCs to provide helpful insights on most significant explanatory factors of FDI inflow to Asian LLCs and make precise policy recommendations.

The following part will provide the existing literature on previous studies and prior expectations on the findings of the current paper. The next section shows the empirical methodology of the paper, and it ends with the discussion of results and final remarks.

II. Literature Review

Since inward FDI is not only essential for economic growth, but also it is considered as the essential tool for bringing technological advances into the economy, there has been taken enough emphasis on the study of its determinants. In general, while some studies focused on macroeconomic determinants of FDI inflow, other empirical analyses were conducted on political factors or both. For instance, Sharma (2017) set numerous macroeconomic factors as explanatory variables into the analysis. Namely, the study applied for Fixed Effect techniques due to the use of panel data. Mainly, the study found a statistically significant positive association between FDI inflow and Gross Domestic Product (GDP), which is a proxy for market size. This finding corresponds with the results of previous studies, including Galego et al., (2004), Janicki and Wunnava (2004) and Rjoub et al., (2017). As a proxy to market size, another indicator of market size would be the population of the country. Like most economists.

Adhikary (2017) also stresses the positive association between the number of people living in the country and FDI inflow. Another finding of Sharma (2017) was a statistically insignificant relationship between trade openness, which is measured by the ratio of the amount of total trade to GDP and FDI inflow. Even though this result was similar to what Liu et al., (2014) found in their studies, Kok and Ersoy (2009) and Rjoub et al., (2017) found a statistically significant positive relationship between aforementioned variables. In addition, Sharma (2017) found an inverse relationship between inward FDI and inflation. This finding corresponds with previous studies done by Cevis and Camurdan (2007), Kok and Ersoy (2009) and Kalirajan and Singh (2010). Although several studies, including Addison and Heshmati (2003), Khadaroo and Seetanah (2009), Kok and Ersoy (2009) and Adhikary (2017) found a positive relationship between infrastructure and inward FDI, Sharma (2017) reported a negative impact of infrastructure on FDI inflow. Regardless of substantial empirical analyses done on defining the effect of human capital to FDI inflow, there is still uncertainty concerning its decisive influence. For example, Noorbaksh et., (2001) and Sharma (2017) used different proxies such as secondary school enrollment ratio or years of secondary schooling for human capital to conduct their analyses, but both found a significant positive association between the variables. However, Morisset (2000) argues that multinational corporations do not pay more attention to the availability of highly qualified labor while they are choosing their business destinations.

As an imperative in both the source and host countries, there have been extensive studies focused on the impact of tax rates on FDI inflow. However, the results are still inconclusive. Higher corporate tax rates should discourage foreign investment as argued by Damijan (2009) and Bellak et al., (2009). At the same time, the recent specific study, Rjoub (2017), which empirically investigated the determinants of FDI inflow to landlocked countries in Sub-Saharan Africa between the period of 1995 and 2013, found a statistically significant inverse relationship between corporate tax rates and FDI inflow. However, it is also argued by other economists that each country has its strategy on addressing double-taxation. Therefore, as Hartman (1985) highlights that there is no negative relationship between some forums of FDI tax rates. Hartman's noticeable insight is that since there is no way to avoid corporate taxes on doing business, FDI inflow does not necessarily rely on tax rates. Later, particularly in 2012, Hartman's finding was supported by Lehmann et al., saying that '*while taxes are an important aspect of FDI decisions among managers, they are probably not the main driver of the decision*' (p.90). Turning to the theoretical background of market potential and its impact on FDI inflow, numerous studies, including Cevis and Camurdan (2007) and Adhikary (2017) found that countries with high GDP growth attract more FDI than countries experience a relatively lower rate of GDP growth. However, many economists have found a strong positive relationship between the trends of FDI and economic growth, Ericsson and Irandoust (2001) discovered no significant association between two variables. Additionally, Li and Liu (2005) find that human capital functions as a mediator in the relationship between FDI and economic growth.

Moreover, there are some studies that focused on the analysis of ease of doing business in a host country and its influence on FDI inflow. For example, Bayraktar (2013) investigated the impact of changing the ease of doing business on the changing direction of FDI towards developing countries for the time period of 2004 and 2010. The results indicated that those countries which have better records of "doing business" tend to attract more FDI. However, Zhang (2007) argues that the lower cost of doing business should be the first-order priority not only to ease of documentation or timing to start a business.

Furthermore, there are a growing number of empirical studies implemented on the role of institutional factors on FDI inflow. In the same line with Daude and Stein (2007) and Busse and Hefekr (2007), Kurul and Yalta (2017) followed the dynamic panel data analysis, namely GMM method to evaluate the institutional determinants of FDI inflow for 113 developing countries over the period 2002-2012. The study found the statistically significant evidence that government effectiveness, control of corruption, and the voice and accountability influence positively on FDI inflow to developing countries. Similar initial findings were found by Gangi and Abdurlrazak (2012), which evaluated the impact of governance on FDI inflow to African countries through the Random effect techniques. However, control of corruption was not significant by what Kurul and Yalta (2017) found. Another similar empirical study done on Asian countries by Ullah and Khan (2017) came with different results. In particular, it concluded that the governance index is negatively associated with FDI inflow in SAARC (South Asian Association for Regional Cooperation) countries. Likewise, Cazurra (2006) stresses that a high level of corruption creates uncertainty about the cost of operating business in the host country. At the same instant, the existence of corruption refers to an unrecognized imposed tax on business that distorts incentives to invest (Wei, 2000a). Despite the facts above, Wheeler and Mody (1992) and Henisz (2000) in their studies, found a positive association between corruption and FDI. Mainly, they see corruption as a tool, '*facilitating transactions and speeding up procedures that would otherwise occur with more difficulty*' (cited in Cazurra, 2006, p.808). They referred to China and Nigeria as examples, where corruption level has been quite high but still attracting an enormous amount of FDI into their countries. Also, Mody (1992) declared no relationship between corruption in the host country and FDI inflow. Like many economists, Schneider and Frey (1985) draw attention to the negative influence of political instability on the inflow of FDI (cited in Sharma, 2017). Similarly, there has been an extensive study of the impact of the exchange rate on FDI inflow for several years. Theoretically, the lower exchange rate implies more FDI attractiveness due to low cost of production. However, the firm generates the revenue in local currency, and then profit also is expected to be marginal. Therefore, it is mainly dependent on the orientation of FDI (Laincz and Zhu. 2008).

Turning to specific studies conducted on FDI inflow to Asian landlocked countries, namely Central Asia, Paswan (2013) points out that even though the Central Asian countries are landlocked, '*they are becoming one of the most significant FDI destinations since they present an abundance of natural resources and large population that enhances the market size*' (cited in Metaxas and Kechagia, 2016, p.68). At the same time, Brock (1998) finds that the effects of the education level of workforce and infrastructure on FDI inflow in landlocked countries are not statistically significant. According to Metaxas and Kechagia (2016), political stability in those landlocked countries is a contributing factor to FDI inflow. Moren and Serra (2009) state that a lack of social health insurance in Central Asia is an essential factor reducing the attractiveness of FDI inflow.

More differently, Alam and Shah (2013) refer to several various contributing factors, including macroeconomic and institutional of FDI inflow such as labor cost, corruption practices, corporate tax rates, exchange rate, infrastructure, inflation, political stability and the openness of the economy. Nevertheless, they found that '*determinants have shown varied evidence when checked for significance over different regions of the globe*' (p.516). Therefore, they stress that even though one factor is statistically significant for one country, it might be insignificant in another country, which is located in a different region. This is also confirmed by the study of Kok and Ersoy (2009) that argues '*there is no widely accepted set of explanatory variables that can be regarded as the "true" determinants of FDI*' (p.106). Thus, they also highlight that a certain determinant of FDI might affect positively and negatively at the same time.

Overall, the sign and significance of FDI inflow determinants is likely to vary across regions. It strengthens the reasonableness of this study.

III. Data and Methodology

The purpose of this paper is to fill a gap in the present-day debate on the contributing factors of inward FDI in landlocked Asian countries through an empirical analysis. Following the research objective, the data is gathered on the following 12 Asian LLCs as illustrated by Table 2 (see Appendix) for 21 years, namely between 1996 and 2016.

a) Dependent Variable

Since this paper aims to determine the factors of FDI inflow, Foreign direct investment, net inflows (BoP, current US$) is constructed as a dependent variable. The data is available at International Monetary Fund database supplemented by data from the United Nations Conference on Trade and Development and official national sources.

b) Independent variables

The construction and explanation of independent variables in this study are as follows:

Table 1

Variable Name	Definition/Proxy	Data Source	Expected Sign
GDP per capita	GDP per capita (current US$)	The World Development Indicators	+
Population	Population, total	United Nations Population Division	+
Trade openness	the sum of exports and imports of goods and services measured as a share of gross domestic product	World Bank national accounts data, and OECD National Accounts data files	+
GDP growth	GDP growth (annual %)	The World Development Indicators	+
Corporate Profit Tax	Taxes on income, profits and capital gains (% of revenue)	International Monetary Fund, Government Finance Statistics Yearbook and data files	-
Human capital	School enrollment, secondary (% gross)	The World Development Indicators	+
Days	Time required to start a business (days)	World Bank's Doing Business Database.	-
Government effectiveness	Percentile Rank	Worldwide Governance Indicators (WGI)	+
Control of Corruption	Percentile Rank	Worldwide Governance Indicators (WGI)	+
Inflation	Inflation, GDP deflator (annual %)	The World Development Indicators	-
Infrastructure	Logistics performance index: Quality of trade and transport-related infrastructure (1=low to 5=high)	World Bank and Turku School of Economics, Logistic Performance Index Surveys	+

IV. Empirical Methodology

To evaluate the determinants of FDI inflow to landlocked Asian countries the current research aims to conduct its analysis by using panel data. By Kurul and Talta (2017) and Rjoub et al. (2017), the panel data approach is a powerful technique because that it provides priority over time-series and cross-sectional data in terms of time-varying and multicollinearity between regress and and regressors. Therefore, the following study refers to two selected models; the one is Random effect model as found by Hausman test, the other is GLS *(Generalized Least Squares)* as suggested many studies, including William H. Greene (2011) in favor of more accurate estimates by allowing regression in the presence of heteroskedasticity and serial correlation.

Specifically, GLS allows us to minimize a weighted sum of residual squares

$$\sum w_i u_i^2 = \sum w_i (Y_i - \beta_1 X_{0i} - \beta_2 X_{1i})^2$$

with $w_i = 1/\sigma^2$ acting as the weights.

This study is not the only one that applies GLS to analyze the determinants of FDI. For instance, Culem (1988) comparatively used OLS and GLS to investigate determinants of FDI in 6 European countries between 1969-1982. The variables taken into account were the FDI, the annual rate of GDP growth, tariff barriers, labor costs and the nominal interest rate differential. Further, Fung et al (2003) and Mina (2007) also used GLS to study FDI determinants in panel data approach.

By following the methodology of previous studies, our standard empirical model is constructed as follows:

$$Y_{it} = \beta_0 + \beta_1 * X_{1_{it}} + \beta_2 * X_{2_{it}} + \ldots + \beta_{11} * X_{11_{it}} + \mu_{it}$$

Where i=1,2, … n refers landlocked countries

t=1996,1997, … 2015, 2016 years

- Y: the natural logarithm of FDI inflow
- X1: the natural logarithm of GDP per capita in constant 2010 USD;
- X2: the natural logarithm of population of each country;
- X3: inflation rate
- X4: trade openness as Trade (% of GDP)
- X5: annual GDP growth
- X6: human capital
- X7: control of corruption perception index
- X8: government effectiveness rank
- X9: the time required to start a business in days
- X10: profit tax rates
- X11: infrastructure index
- μ: error term (disturbance)

V. Empirical Findings and Conclusion

Before turning to the discussion of results, it is essential to note that some variables have been deliberately dropped to avoid deriving bias results due to high multicollinearity among variables as discussed

above. It is also important to highlight some general features of the constructed models. The model seems to be reasonable, since it explains around 95% variation in FDI inflow to Asian LLCs.

The results show that, the market size is positively associated with FDI inflows to Asian LLCs in both RE and GLS models. Namely, GDP per capita has a significant positive influence on FDI inflows to Asian LLCs, indicating the 1% significance level. While assuming all factors constant 1% increase in GDP per capita leads to roughly 0.3% rise in average FDI inflow to Asian LLCs. Another proxy for market size, the population and FDI theoretically flow should have a positive correlation as discussed in the literature part. For example, if there is a 1% rise in population, it is expected to lead to around 0.4% increase in FDI inflow. In general, our derived results correspond with hypothesized correlations and the findings of other studies, including Galego et al., (2004), Janicki and Wunnava (2004), Rjoub et al., (2017), Sharma (2017) and Adhikary (2017), who found the quantity of country population as a significant explanatory variable of FDI inflow.

Moving on the discussion of human capital, as confirmed insignificant corresponding p-values in the table above, there is no statistically sufficient evidence to conclude that the impact of human capital on FDI inflow is significant. It should be noted that, our results do not correspond with findings of Noorbaksh et al., (2001) and Sharma (2017) who found a significant positive relationship between variables in their studies. However, the model with the absence of government effectiveness indicates the significance of human capital for FDI inflow but with an inverse relationship. It might be explained by Morisset (2000)'s argument, which emphasizes the fact that multinational corporations do not pay attention to the availability of highly qualified labor, while they are choosing their business destinations, seems to be noteworthy.

Another determinant of FDI inflow to the economy is the extent of taxation; theoretically, the higher the tax, the lower the FDI inflow. The study finds that FDI inflows to Asian LLCs are sensitive to corporate tax rates. For example, a 1% increase in tax rates results in around 0.006% decrease in FDI inflow to Asian LLCs. Our findings highly confirm the negative relationship between corporate tax rates and FDI inflows in the same line with other studies (Damijan (2009), Bellak et al., (2009) and Rjoub et, al., (2017).

Hypothetically, as a proxy for ease of doing business in the host country, required days to start a business should be negatively associated with FDI inflow to the host country. However, in our analysis, it was statistically found that time required to start a commencing does not have a significant impact on the level of FDI inflow. Here one might be concluded that in Asian LLCs the time required to start a business in host country does not necessarily reduce the level of FDI inflow to those countries.

Turning to institutional factors involved in our analysis, government effectiveness theoretically should enhance FDI inflow to the host countries. As the table above indicates, the underlying hypothesis holds in our analyses. Specifically, a percentile rank rise in government effectiveness would attract roughly 0.01% more FDI. The other institutional variable set in the model is the control of corruption. The results depict that a percentile rank rise in corruption index only would facilitate inward FDI by 0.002, but the estimation is not significant at a 5% significance level. However, as previously discussed, there is the presence of a high correlation between government effectiveness and control of corruption indexes. Therefore, while checking its impact, it was found that the impact of control of corruption on FDI inflow is significant at 0.1% significance level though the RE model. Simultaneously, the GLS model confirms the same effect at the probability of 0.05. Here one should be taken into account that the GLS allows to estimate results in the presence of heteroskedasticity and a serial correlation. Thus, the estimates of the GLS model are more reliable. In short, the results regarding the sings and significance of institutional variables highly confirm what other studies such as Daude and Stein (2007), Busse and Hefekr (2007) and Kurul and Yalta (2017) detected. Insignificant finding on control of corruption in this study is the same line with Kurul and Yalta (2017) that found no significant relationship between control of corruption and the level of FDI inflow to the host country. Therefore, the study still concludes that the institutional variables keep their importance for Asian LLCs.

When an economy becomes more and more open to international trade, it facilitates to attract more inward FDI into the host country. Therefore, theoretically, trade openness should be positively associated with FDI inflow. The results indicate a positive significant coefficient of trade openness. It statistically means that one percent increase in trade openness is expected to facilitate the attraction of FDI inflow by roughly 0.005%, while keeping all other factors constant.

Another explanatory variable in the model, infrastructure is hypothesized to have a positive coefficient. The aforementioned hypothesis does not hold for Asian LLCs, meaning that there is no evidence to conclude that the effect of infrastructure is significant at a 5% significance level.

Moving on to the next theoretical determinant of FDI inflow, a proxy for market potential, GDP growth has a hypothetically inconclusive association with FDI inflow as discussed in the literature part. Turning to the results, it is clear from the tables that selected RE, and GLS models report the same insignificant results. This is not a result only this current study found. There are other studies, namely Ericsson and Irandoust (2001) and

Serin and Caliskan (2010) discovered an insignificant association between GDP growth and inward FDI.

The last but not least determinant of FDI inflow, inflation is theoretically inversely correlated with FDI inflow as brought in the literature part. Inflation-related findings of this study refer that 1% increase inflation rate should facilitate the attraction of FDI inflow by roughly 0.009% at 5% significance level. Although the derived findings do not correspond with some studies, Cevis and Camurdan (2007), Kok and Ersoy (2009) and Kalirajan and Singh (2010) who found a significant inverse relationship between inflation and inward FDI, Kolstad, and Villanger (2008) found insignificant relationship between inflation rate and FDI inflow. In general, a positive association between FDI inflow and inflation rate might be explained by the fact that all of Asian LLCs are, in fact, developing countries, which usually have higher inflation with economic growth.

In summary, whereas the impact of market size, trade openness, institutional factors, inflation and corporate profit tax on FDI inflow are found statistically significant, infrastructure, GDP growth and the time required to start a business have no impact on the inward FDI in Asian LLCs.

VI. Policy Recommendations

After having empirical findings, it is plausible to remark some FDI-related implications to help policymakers take efficient proposed actions to facilitate FDI inflow.

As the findings report GDP per capita and the number of the population seem to the most influential factors to inward FDI. Therefore, the government authorities of those countries should mainly focus on implementing efficient macroeconomic instruments to ensure a high level of GDP per capita and keep reasonable demographic segmentation. According to the results obtained, another helpful tool to increase FDI attractiveness of economy in Asian LLCs is to concentrate on expansionary Fiscal Policy. The government can implement it by cutting tax rates by plausible amount. As the results report, institutional variables play an important role in attracting foreign investors. Thus, it is recommended for authorities of Asian LLCs to implement some policy actions to increase government effectiveness so that the economy can reap numerous benefits from FDI inflow to the country. Mainly, the authorities should pay attention to increasing the quality of public and civil services and ensure its independence from political pressure, which creates market inefficiency. These actions all together are likely to affect the investment-related decisions of foreign investors. Also, trade openness seems to be another solution for Asian LLCs to facilitate inward FDI. To expand the level of trade openness of an economy, authorities of Asian LLCs should mainly focus on free-trade policy implementations with neighboring countries. The government authorities implement it by following more deep trade liberalization, removing restrictions on the exchange of goods and services or reducing tariffs and other difficulties related to the excessive time spent on documentation while crossing the boarders. The steps above are likely to attract more FDI into a host country. Even though some other factors that found insignificant in our analysis are at least consistent with their theoretical impacts on FDI inflow. Therefore, it is plausible to focus on removing the presence of corruption and reaching a high level of GDP growth.

References Références Referencias

1. Kok, R. and Ersoy, B., (2009). Analyses of FDI determinants in developing countries. *International Journal of Social Economics*. 36, 105-123.
2. Adhikary, K., (2017). Factors influencing foreign direct investment in South Asian economies: A comparative analysis. *South Asian Journal of Business Studies*. 6, 8-37.
3. Rashid, M. et al., (2017). Political stability and FDI in the most competitive Asia Pacific countries. *Journal of Financial Economic Policy*. 9, 140-155.
4. Cuervo-Cazurra, A., (2006). Who Cares about Corruption? *Journal of International Business Studies*. 37 (6), 807-822.
5. Khan, A. and Ullah, I., (2017). Institutional quality and foreign direct investment inflows: evidence from Asian countries. *Journal of Economic Studies*. 44 (6), 1030-1050.
6. Kumari, R and Sharma, A., (2017). Determinants of foreign direct investment in developing countries: a panel data study. *International Journal of Emerging Markets*. 12 (4), 658-682.
7. Çeviş, I. and Çamurdan, B., (2007). The Economic Determinants of Foreign Direct Investment in Developing Countries andTransition Economies. *The Pakistan Development Review. Autumn*, 46 (3), 285-299.
8. Lehmann, F., (2015). Taxes and Foreign Direct Investment Attraction: A Literature Review. *In New Policy Challenges for European Multinationals*. 89-117.
9. Abdulrazak, R. and Gangi, Y., (2012). The impact of governance on FDI flows to African Countries. *World Journal of Entrepreneurship, Management and Sustainable Development*. 8 (2/3), 162-169.
10. Khadaroo, J. and Seetanah, B., (2009). The Role of Transport Infrastructure in FDI: Evidence from Africa using GMM Estimates. *Journal of Transport Economics and Policy*. 43 (3), 365-384.
11. Alam, A. and Shah, S., (2013). Determinants of foreign direct investment in OECD member countries. *Journal of Economic Studies*. 40 (4), 515-527.

12. Liargovas, P. and Skandalis, K., (2012). Foreign Direct Investment and Trade Openness: The Case of Developing Economies. *Social Indicators Research*. 106 (2), 323-331.
13. Rjoub, H. et al, (2017). Financial Reforms and Determinants of FDI: Evidence from Landlocked Countries in Sub-Saharan Africa. *Economies MDPI*. 1-12.
14. Kurul, Z. and Yalta, A., (2017). Relationship between Institutional Factors and FDI Flows in Developing Countries: New Evidence from Dynamic Panel Estimation. *Economies MDPI*. 1-10.
15. Shamsuddin, A., (1994). Economic Determinants of Foreign Direct Investment in Less Developed Countries. *The Pakistan Development Review*. 33 (1), 41-51.
16. World Bank-United Nations, (2014). A Ten-Year Review. *World Bank-United Nations report in preparation for the 2nd United Nations Conference on Landlocked Developing Countries (LLDCs)*.
17. Greene, W.H., (2011). Econometric Analysis. 7th ed. London: *Pearson Education*.
18. Baltagia, B.H., and Pesaran., M.H., (2007). Heterogeneity and cross section dependence in panel data models: Theory and Applications. *Journal of Applied Econometrics*. 22, 229–232.

Appendices

Table 1: Regression Results

	I		II	
	RE	GLS	RE	GLS
GDP per capita	0.34*** (0.0546)	0.34*** (0.0553)	0.32*** (0.0563)	0.32*** (0.0519)
Population	0.38*** (0.0990)	0.38*** (0.0636)	0.36*** (0.0919)	0.36*** (0.0569)
Human capital	0.0006 (0.0007)	0.0006 (0.0001)	0.0007 (0.0007)	0.0007 (0.001)
Trade openness	0.0052** (0.0024)	0.0052*** (0.0014)	0.0047** (0.0029)	0.0047*** (0.0013)
Profit tax	-0.0059*** (0.0009)	-0.0059*** (0.0013)	-0.0061*** (0.0009)	-0.0061*** (0.0013)
Government effectiveness	0.0092** (0.0046)	0.0092** (0.0042)	0.0110*** (0.0010)	0.0110*** (0.0035)
Control of Corruption	0.0020 (0.0017)	0.0020 (0.0025)	-	-
Time required to start business	0.00001 (0.0010)	0.00001 (0.0012)	-0.0002 (0.0011)	-0.0002 (0.0012)
Infrastructure	-0.0576 (0.1990)	-0.0576 (0.0990)	-0.0575 (0.2020)	-0.0575 (0.1007)
GDP growth	0.0103 (0.0072)	0.0103 (0.0066)	0.0095 (0.0064)	0.0094 (0.0066)
Inflation	0.0040 (0.0071)	0.0040 (0.0047)	0.0045 (0.0071)	0.0045 (0.0047)
Constant	13.26*** (1.697)	13.26*** (1.222)	13.78*** (1.522)	13.78*** (0.919)
Observations	30	30	30	30
R-squared	0.95	-	0.94	-

Table 1: (Continued)

	III	
	RE	GLS
GDP per capita	0.396*** (0.0274)	0.396*** (0.0377)
Population	0.344*** (0.0363)	0.344*** (0.0710)
Human capital	-0.00076** (0.00035)	-0.00076 (0.00133)
Trade openness	0.00449***	0.00449***
Profit tax	-0.00502*** (0.00112)	-0.00502*** (0.00163)
Government effectiveness	-	-
Control of Corruption	0.00647*** (0.00135)	0.00647** (0.00256)
Time required to start business	-0.00003 (0.00066)	-0.00003 (0.00114)
Infrastructure	0.0469 (0.1190)	0.0469 (0.1200)
GDP growth	0.00914 (0.00811)	0.00914 (0.00772)
Inflation	0.00991** (0.00464)	0.00991* (0.00591)
Constant	13.47*** (0.722)	13.47*** (1.325)
Observations	44	44
R-squared	0.88	-