Implication of the Ease of Doing Business for Foreign Direct Investment: A Panel Data Analysis of Asian Countries

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Implication of the Ease of Doing Business for Foreign Direct Investment: A Panel Data Analysis of Asian Countries

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I Farzana Shaheen D/o Muhammad Aslam Awan hereby declare that the thesis titled "**Implication of the ease of doing business for foreign direct investment: A panel data analysis of Asian countries**" submitted at National University of Modern Language for the award of degree of Master of philosophy (M.Phil) in Economics is the result of research work carried out by me under the supervision of Mr. Muhammad Sohail, and Ms. Azra Nasir, department of management science, National University of Modern Language, Islamabad, Pakistan. I further declare that the results presented in this thesis have not been submitted for the award of any other degree or fellowship. I am aware of the terms, copyright and plagiarism and I shall be responsible for any copyright violation found in this work.

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"In the Name of Allah, the most Beneficent, the most Merciful"

DEDICATION

I DEDICATE THIS HUMBLE EFFORT TO MY PARENTS, MR. MUHAMMAD AKRAM, AND MR. MUHAMMAD HASSAN.

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I actually humbly thank Allah the Merciful and Beneficent who bestowed His many blessings after mankind, certainly one of which is knowledge a new distinction for mankind. I actually offer my gratitude to be able to the **Holy Prophet Muhammad** ﷺ who preached us to be able to seek knowledge for your enhancement of mankind specifically in addition to other creatures in basic.

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ABSTRACT

The study observe the overall business behavior in forty-five (45) Asian countries enlisted on the World Bank's doing business index over the period from 2004 to 2019. The ten areas of doing business index are served as the explanatory variable in the study. The focus variables uses in study are GDPPC, inflation, population, and interest rate. The data of the variables extracted from the world development indicator and world doing business index. The study found the empirical association among doing business index indicators and foreign direct investment. This study strive to answer the question of why Asian nations entitled the highest FDI recipient countries over the world. Further, study found which business index indicators captured the greater attraction of foreign investors. For estimation purpose, the study uses fixed effect, random effect and two step instrumental variable technique. Doing business index indicators including starting a business, getting connection of electricity, getting construction permits, and registering the property when transferred, show statistically significant positive implication for FDI. In the same way, getting credit, protecting minority investors, resolving insolvency, and contract enforcement show statistically significant positive consequences for the inflow of FDI. There are only two factors, paying tax and trade across the border, show significant negative relation with FDI inflow. In order to attract more FDI, outcomes of the study help the policy maker to enhance the business environment in terms of the factors of ease of doing business. However, study recommends that; to improve FDI inflows significantly in future, there is greater need to improve efficiency in the enforcement of contracts, fair distribution of electricity and energy, improving taxes procedures and compliance enforcement and correctly dealing with construction permits.

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CHAPTER 1
INTRODUCTION

1.1 Introduction

Asian countries have a dynamic region with respect to the highest FDI and international trade since 1967(Morris & Aziz, 2011). These countries have undergone several successive stages of economic integration. The force behind Asian countries for competitiveness and attractiveness for multinational enterprise (MNEs) is a business-friendly environment and effective entrepreneurship (Vogiatzoglou, 2016). Some business regulation related to starting and closing a business, legal registration and employing labor is followed by firms and entrepreneurs. Quality of this regulation could significantly differ as a result of the difference in the business environment (Djankov, La Porta, Lopez-de-Silanes, & Shleifer, 2002). Importance of FDI and business regulatory setup among Asian countries is growing day by day. Relevant literature mentioned in next section represents the institutional quality and regulatory business operation as an important determining factor of FDI and ease of doing business (EDB).

Foreign direct investment (FDI) is made by a foreign firm or individual by controlling ownership of business enterprises in another country(Winder, 2006). FDI is a capital movement considered by controlling proprietorship of a business enterprise in the domestic country by an entity based in a foreign country. FDI is different from overseas portfolio investment. Portfolio investment is defined as the investment in the financial security of the host country like public stocks and bonds (Goldstein & Razin, 2006). FDI is the net accumulation of long-term, short-term and equity capital for any given period by excluding investment by the purchase of a share. Extensively, FDI includes constructing new infrastructure like building, reinvesting their net profit that is earned by oversee operations and within company loans**.** Now a days Asian countries have been entitled as highest attracting FDI countries over the world (Xing & Wan, 2006).

FDI categorized into three groups that are horizontal, vertical and conglomerate. The same type of business established by an investor in the host country as in domestic country is termed as a horizontal investment. Related but different business operations launched by investors in a foreign country termed as vertical FDI. In contrast to previously described types; home country explores totally unrelated home business activities in a foreign country that is also known as conglomerate FDI. In this type, investors enter in an industry not having any

previous business experience (Aizenman & Marion, 2004). It is mostly in the form of a joint venture with those companies that already exist in the industry.

The ease of doing business index concept is explored by the simon djankove (Business, 2009). This index ranks the countries on the basis of their business performance or regulation. Higher the rank of any economy represents higher will be the business regulatory performance of that economy. Basically, ranking of the economies are determined by the individual average score of the sub-indices of the EDB. The score value range from zero (0) to hundred (100) and the economies whose score value near to hundred (100) addressed the efficient business climate. Score value is also calculated by the average value of the sub-factors by which doing business factor measured includes procedure, time and cost. The comparison among the economies on the basis of effective regulatory setup conducted through the score value of the business index in absolute term. Ease of doing business index contain ten indicators that are: starting of a business, construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across border, enforcing contract, and resolving insolvency. In recent decade, these indicators got importance especially in the Asian countries. The Asian countries that attained highest score value in term of ease of doing business index share a numerous common characteristics (Asongu, 2019). The common characteristics are the use the electronic system, online registering property procedure and tax filing system by digitization. However, all the Asian region that attained highest score value in ease of doing business index also represent the effective entrepreneurial activity (Business, 2009; Djankov, McLiesh, & Klein, 2004; Jayasuriya, 2011)

Effective business environment expedite the inflow of foreign direct investment in domestic and in the foreign country. Lower the transactional cost associated with the aforementioned areas of the business also serve as the contributing factors to attract FDI. There is the requirement of skilled knowledge regarding different economics reform that fascinate further inflow of FDI. According to the several political leaders, foreign direct investment upgrade the economic growth of the Asian countries. In recent decades, government of the Asian economies tried to set the business environment through the commercial rules and effective institutions. Apart from these business regulation, they strived to take modification in law for the purpose of encouraging reforms to fascinate the inflow of FDI (Shahadan, Sarmidi, & Faizi, 2014).

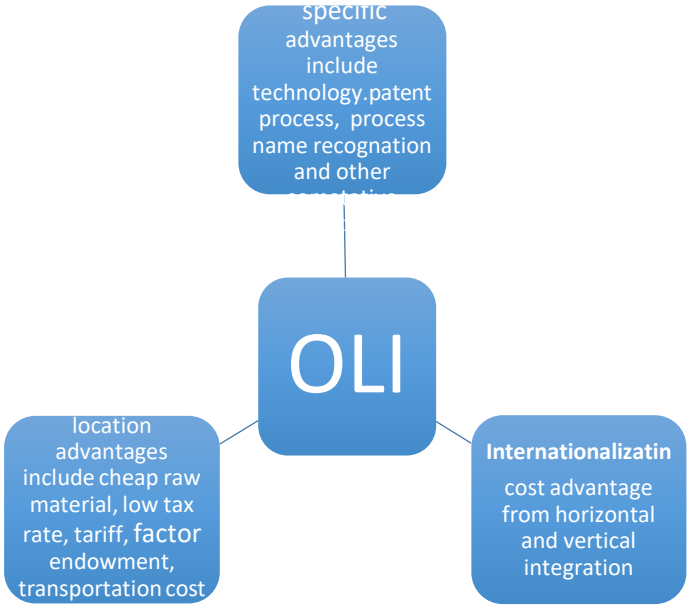
Over the world, not even a single country being developed without efficient private sector. The efficient private sector in term of business perspective make job opportunities and generate income that is reinvested within a country territory. Government of advanced countries designed efficient rules and regulations that affect small and medium-sized business so the private sector of those countries further developed (Mwilima, 2003). Effective business regulations that are designed by the government of that country enable the economies to move from the informal sector to a formal one (Luo, Xue, & Han, 2010). Thus doing business permits the managers to evaluate their business regulatory environments domestically.

The inflow of foreign direct investment increase the economic growth of the Asian economies in case of skilled human capital and excessive absorptive capacity of modern technology(Bayraktar, 2015). Foreign investment considered to be the medium of transfer technology (Zhang, 2001). Foreign direct investment through MNEs is the major source of technology transfer to developing countries. The overall development of the economy boosts up when foreign investors make an investment into new infrastructure. Destination Asian regions have been enjoyed the fruits of FDI regarding advanced technology, skilled human capital, knowledge spills over and multiple job opportunities (Borensztein, De Gregorio, & Lee, 1998).

Hymer in *1960*, considered as the father of all international business, worked a portion on FDI. Before his FDI theory, all investments were considered as capital movement across the border. This capital movement was determined by the difference in interest rate between countries. Hymer criticized macro-level theory and developed his own micro-level theory. According to his theory of FDI, multinational firms preferred over market size institution because firms efficiently regulate business activities, set prices and transfer information. He distinguished financial portfolio and foreign direct investment. Portfolio investment only based on the difference between interest rate in across countries while firm via FDI control business activities across country boundaries. According to Hymer, FDI in any country would proceed if there would be an imperfect market structure that could create advantages. Hymer explored the two determinant of the FDI. The first determinant is removal of the market competition while the second one include benefits that few business venture having in their particular activities (Denisia, 2010; Dunning & Rugman, 1985).

There is another investment theory presented by the Dunning in 1979, elaborated the advantages of MNEs by presenting electric paradigm model. In economics, electric framework is the investment theory which is also termed as OLI model (ownership, location and industrialization). The first advantage of this theory is that the Ownership defined as the certain value-added, rare, difficult to copy and resources that could allow a country to have a competitive advantage against a foreign country. Because of non-native status, foreign companies bear disadvantages (not speaking the native language and limited knowledge on host consumer demand) in host countries. So firms having some specific competitive advantages transferred abroad in order to overcome this disadvantage. Higher the competitive advantages of ownership, higher will be the production of investing firm in host countries. When any foreign firm tries to enter in the host market, it must consider the location advantages associated with their market. Location advantages are present in the form of cheap raw material, low wage rate, skilled labor force, lower tariff rate and low tax incentive. If these location advantages are present in the market then the home country must perform certain business activities in the host market. Porters Diamond model is used as an instrument to determine the location advantages in the latest research. Last advantage of OLI framework is internationalization include licensing and FDI management (Denisia, 2010). OLI framework is depicted in figure 1.1. Management wants a license to design its product independently, control over their operations and engaged into FDI. This advantage is made by the joint venture, required existing companies or by through a green field investment (Kersan-Skabic & Orlic, 2007).

Fig 1.1 Electric paradigm model



Beside Hymer and Dunning theories of FDI, there are many other theories which are bifurcated on the basis of microeconomic and macroeconomic perspective. Macro based FDI theories underline macroeconomic specific factors like national income, GDP, growth rate of the country, unemployment, inflation, trade and international economics. On the other hand, micro based FDI theories are aligned to firm's ownership, industrial economic, and market imperfection (Makoni, 2015). This study further explained the some theories in detail.

Four stage theory of production first developed by Ramond Vernon in 1966 as a result of the failure of international trade model of Heckscher-Ohlin model also termed as H-O model. This theory reveals the product and the labor affiliate with that product must come from its invention area. This theory follow the following stages including introduction, growth, maturity, decline, and surplus. At the stage of introduction, new invented good firstly introduced in the market. Producer just to increase the demand, make an advertisement to promote the product. Returned earned by producer on the sale of product at introduction level is less but also face advantage in the form of less competition in the market.

Second stage of the product life cycle theory starts, where demand of the product increase by the customer which intend to decrease the cost of production and boost the profit of the producer. Third stage reveals that product is demanded on large scale and producers face a perfect completion in the market. This phase is known as maturity phase. In this phase, inventers export the product to the high income countries and earned high amount of returns. Second last stage is the phase of saturation where volume of sale neither increase nor decrease. Diminishing phase that is the last phase reveals discontinuing the product due to high cost of production (Ayal, 1981; Denisia, 2010; Jensen & Thursby, 1986)

The theory of FDI based on currency area is developed by Aliber in 1978 which is the earliest theory that explain, FDI is based on the strength of a currency. As a general, FDI increases under the imperfection of capital market structure. Aliber shows in his theory that all the developed countries like US having ability to attract higher FDI inflow and get advantage of the difference in the capital market rate in home and host country. This theory did not provide explanation regarding investment in two countries having equal strength of currencies and that is the big loophole of this theory suggested by the study (Nayak & Choudhury, 2014). This theory could not be consistent with those developing countries which have not proper capital market structure. The capital market theory unable to justify the direct investment made by developing countries MNEs (least powered currency) in the developed countries (strengthen currencies) (Aliber, 1978). Related to this theory, Kindleberger suggest that flow of capital from host to home countries are determine by the difference of the rate of interest between countries.

Location based theory of FDI shed light on the movement of direct investment from source abundant countries to the scarce factor countries. In this perspective, some factors that are cheap raw material, labor, cost of transportation and market structure serve as the main determining factors of attracting the inflow of FDI. All those countries having abundant factor of production, natural resources and efficient market attract sufficient amount of FDI inflow. In short, Foreign direct investment deeply link with the factors of all the doing business because factors reflect the condition of business climate in the countries. when the business environment is feasible for foreign investors, create the greater opportunities of investment (Popovici & Călin, 2014).

1.2 Problem statement

Recent research on ease of doing business (EDB) index and FDI inflow has not used the latest data for empirical analysis of all the Asian countries enlisted on the World Bank's doing business index. There is a strong link between sub-component of ease of doing business index and FDI. Although, previous research works have reported that EDB index can cause the inflow of foreign direct investment (FDI). However, these research works are unable to reveal the transparent outcomes on the association between all doing business sub-component and FDI. Further, earlier research work has not use the distance to frontier score to find the relationship between ease of doing business and foreign direct investment. Moreover, earlier research works have not explained the clear reason why the Asian countries are the highest FDI recipient countries. Best to our knowledge, the relationship between EDB and FDI has not been explored yet in Pakistan.

1.3 Significance of the study

It is generally considered that only ease of doing business causes FDI which is further supported by literature mentioned in the next chapter. Over the course of time, significance of the EDB index and FDI have been raised day by day over the world. By using the latest data for an empirical analysis, this study can help the economic policy maker. The current study also provide a clue that FDI could be attracted not only by the ease of doing business indicators but by the some other factors like per capita GDP, population, real interest rate and inflation that have not been considered yet in previous studies. Recommended policy of the current study helps the government to take effective decision regarding upgrade the business/commercial institution of the country. For this, undertaken research checked the association among EDB index and inflow of foreign direct investment over the Asian countries. This study is also providing a foundation for policy implication. This study is enhancing the researcher's knowledge regarding business and investment. Ease of doing business represents any country's institutional condition, rule and regulation set up by the government of that country. The country with a Business-friendly environment would give investors the opportunities to invest in that country. Ease of doing business indicator's also have its finger on the impulse of the economy and create an association between the government sector and the private one.

1.4 Research question

The following are the three main question of the underpin study.

- What is the empirical relationship between ease of doing business indicators and FDI in Asian Countries?

1.5 Objective of the study

Objectives of the undertaken study are

- Main objective of the study is to investigate the individual impact of ease of doing business factors on inflow of foreign direct investment (FDI) to Asian countries. These factors are: starting a business, getting electricity, getting credit, trading across border, resolving insolvency, protecting investors and dealing with construction permits.
- To recommend the appropriate policy that helps the government to adopt suitable business reform which play significant role for the attraction of FDI.

1.6 Hypothesis

The hypothesis is a tentative and testable statement that enables us to decide on the basis of information either to select or reject the null hypothesis.

$\boldsymbol{H_0}: \theta = 0$ (All the indicators of the doing business index are not related to the FDI)

$\boldsymbol{H_1}: \theta \neq 0$ (All the indicators of the doing business index are linearly related to the FDI)

Where EDB indicators are; starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing the contract and resolving insolvency.

1.7 Structure of the study

The study consists of the seven (7) chapter. The chapter one (1) reveals the introduction of the study in which theories of the FDI, problem statement, significance of the study, research question and study's objective along with hypothesis discussed. Chapter (2) represents literature review that concerned with the current study theme. It precisely include the previous articles, books and review paper that are link to the FDI along with doing business index. While third (3^{rd}) section of the underpin study represents the theoretical framework and methodology. Under methodology section, study discuss all the variables with the help of the previous research work. Toward end, final econometric model is also constructed in methodology section. While, chapter four (4) comprises on data analysis and estimation techniques. It display

the variable data, source, description and the list of all the selected Asian countries together with the countries after being bifurcated into developed and developing.

Moreover, different panel data estimation techniques including pooled OLS, Housman test, instrumental variables techniques (two step GMM), fixed, and random effect discuss in chapter four (4). The most important segment of the underpin study is chapter five (5) as its title name results and interpretation. Chapter five deals with statistical description of the data, different test of multicollinearity like correlation matrix, variance inflating factors (VIF), normality test (skewness, jarque-bera & kurtosis), and breusch-pagan hetroskedasticity test. Chapter five also expose the interpretation of the results of dynamic estimation via step by step. Chapter six (6) comprises on discussion, summary conclusion and policy recommendation. Finally, chapter seven (7) comprises on the reference of the study that are arranged in ascending order via endnote X9 software.

CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

There is the massive literature present on the empirical relation among the foreign direct investment and doing business index. Different economists, businessmen and entrepreneurs have intricated the relationship between investment and EDB index according to their own perspective. In the recent decades, foreign investment has increased noticeably in different forms. Prominent forms of the inflow of oversea direct investment are economic loans (constructing or buying factory, property, plant and equipment) and portfolio investment (stock, bond and cash). Simeon Djankov and Andrei shleifer were pioneered the World Bank's EDB index report that is published in 2002. They were Bulgarian economists who served as a chief executive and administrator of economic affair at Boyko Borisov. The purpose of the study is to explore further effective corporate regulations and strategies to fascinate FDI inflow. The highest ranking (lower numerical value) of the business index show better rules and regulation for business reforms (Djankov, 2009). Every year EDB index highlights the reforms of each country. All the regulations that can directly affect a business are measured by the EDB index. However, EDB index could not measure the indirect impact that can affect a business like corruption, quality of infrastructure, inflation, market size, and crime rate.

Piwonski (2010) constructed the link between government action for which doing business indicators used as proxy variables and Foreign Direct Investment Inflows. 145 countries were selected covering the period from 2009 to 2010. Foreign direct investment has been premeditated for several years. It is commonly recognized as a progressive effect on the native market and governments have begun keenly pursuing it out. Main purposes of this study that how the government makes their decision to attract further FDI. The study used doing business index indicators as independent variables in the model. Control variables used that influence FDI were GDP per capita, school life expectancy, GDP growth rate, population growth rate and corruption. EDB indicators changed their nature over the year and country to country by different reforms. He imposed certain limits to make their research more parsimonious. He used average values and dumping model for estimation purposes. He concluded that DBI and FDI strongly correlated with each other. He claimed approval time and procedure to start a business become shorter if the government create a more business-friendly environment domestically or internationally approval.

Morris and Aziz (2011) investigated the factors that influence the business and FDI inflow to Sub-Saharan African and Asian countries. The sample selected consist of 53 countries, 36 SSA and 21 Asian, over the period 2000 to 2005. Data for these countries extracted from the world investment report. They used entire indicators of doing business as an independent variable while FDI as a dependent. Overall as well as some factors of business regulations defined by World Bank DB indicators influence the FDI inflow of SSA and Asian countries. They used the "F" test for the entire sample as well as separately SSA (36) and Asian (21) countries. They revealed only two indicators registering property and trading across borders significant positive impact on FDI. Further, they concluded three elements that are: starting a business, dealing with licenses, and paying taxes in Asian, African and combined countries are not related to FDI for a few of the year 2000 - 2005. According to them, MNEs make their investment in Asian and African countries, influenced by market size not by the doing business climate. They said that Singapore that has the highest ranking of the ease of doing business among Asian countries and subsequent of the world, received only 12 percent of FDI inflow. India and Indonesia were drawn sizable portions of FDI inflows but their rank on DB index is lowered. Nigeria, Sudan and the Democratic Republic Congo that are not top listed on the ease of doing business rank but these countries are the major recipients of FDI in SSA.

Kang and Jiang (2012) explore the feature responsible to fascinate the multinational companies of china and their attraction toward a different location to invest. They analyzed two factors that are traditional economic and institutional, that could attract multinational companies to invest in foreign countries. They used data of eight south-east Asian economies over the period 1995-2007. For estimation purpose, pooled OLS, fixed, as well as random effect method, are used. Further, variance inflating factors (VIF) and langrange multiplier test used for specification. They concluded that institutional factors and economic indicators are responsible to attract FDI. According to them, chines companies show a varied response to invest in countries and across heterogeneous regions and groups. Further, natural resources, macroeconomic factors, infrastructure, market size and ease of doing business also matters for investor's attraction.

The doing business index as a tool for deciding the investment location analyzed by Pinheiro-Alves and Zambujal-Oliveira (2012). They used 41 variable accumulated in 10 different areas to compare the business situation in different countries. They used factor analysis and Cronbach alpha technique for correlation analysis between different variable

accumulated in EDB index. Under factor analysis technique, they calculated the variance of a common factor. Variables having a larger chance to become a good representative of a particular phenomenon if their commonality value is higher. Cronbach alpha, second technique, assess the internal consistency of EDB by measuring how the set of items are closely related as a group. Variables behave independently or perfectly correlated when Cronbach alpha value lies between 0 and 1. They concluded that some variables expose statistically ineffective contribution that must require its reformulation and replacement so its reliability and consistency improves. Further, they calculate the alpha value of each indicator of EDB that show that only 40% doing business component reveal business environment.

Olival (2012) investigate the difference in attracting FDI over the world by study the institutional indicators of ease of doing business indicators. The difference in the performance of the institution among countries, depending on EDB indicators, reveals the differences in FDI between the countries. The empirical analysis of this study is based on 177 countries, which 33 are developed and the remaining 144 developing countries over the period 2004-2009. They used doing business index as an independent while FDI as a dependent variable. Data of all the variables used in this study are extracted from UNCTAD, doing business database and world development indicators. For estimation purpose, this study used pooled OLS, fixed effect, and random effect technique. Housman test is used to choose the technique which is appropriate with this data. To tackle the problem of endogeneity, the generalized method of moment technique is used. They concluded that countries having an efficient business performance rate accelerates the inward flow of FDI. This study further concluded that ease of doing business indicators matters only when the decision of investment made for just developing countries. Moreover, the procedure of some doing business indicators including starting a business, registering property, trading across border, closing a business and paying taxes significantly contribute to attracting FDI. Finally, the outcome of their study showed that starting a business, registering property and trading across the border was significant for the time interval under study.

In 41 Sub-Saharan African countries 권혁주 (2013) investigated the association between ease of doing business and FDI. The study used data collected from doing business, united nation conference on trade and development and the World Bank databases over the period 2005-2011. Independent variable used in the study includes time and cost of starting a business, registering property, import and export while FDI used as regressand. Random effect technique is used to explore the relationship among doing business indicators and FDI.

Findings of the study are different for the different region because each region has its business regulatory setup. Author of the study found that cost to start a business, time to register property and time of import, export shows an insignificant impact on FDI. Diversely, the cost of registering property revealed a significant positive impact on FDI.

Bayraktar (2013) investigated the link between ease of doing business and FDI from initial and after the crisis period that is 2004-2010. Data of this study collected from world's doing business database. This study compared the developed and developing countries around the world and answered the question of how the value of each doing business index parameter change after the crisis period 2008. This study also investigated the FDI trend around the world and analyzed the link between macroeconomic variables with FDI. The main focus of the study is to check the impact of changing the value of the ease of doing business index parameter after the crisis period and their influence on FDI inflow. According to him, just level (rank) of doing business is not significant because some countries have lower ranks but show a dominant contribution to the share of attracting FDI. The study concluded that, upgrade the selected doing business indicators increase the FDI inflow of developing countries and decreased in the developed countries. Further, the study revealed that change in FDI inflow from developed countries to developing countries is just due to the difference in the growth rate of the countries.

Shahadan et al. (2014) analyzed the impact of doing business index on net inflow of foreign direct investment. They selected six Asian economies including Afghanistan, Bangladesh, India, Iran, Pakistan and Sri Lanka for the period 2004 to 2013. Data attained from UNESCAP, UNCTAD, World Investment Report and world doing business. Except for resolving insolvency, they were used all DBI nine indicators as explanatory variable and FDI as explained. These indicators could represent the quality of institutions in the business field. In this study, it is tested that good business environment attracts more FDI. Some control variables they were used as market size, market growth and education level of the domestic workforce were the major determinants of FDI. Pooled OLS method fixed and random effect were used for econometric analysis. According to them Institutions strongly effect inflow of FDI in short as well as in the long term. They were determined except getting credit, registering property and trading across the border all doing business index indicators negatively or less significantly correlated with FDI. They generally concluded that government that well regulated in one sector of the economy like business sector also create better regulatory environment in any other sectors such as foreign investment.

Singh (2015) investigated the relationship between ease of doing business and FDI in India by extracting data from the World Bank website. The study used six independent variables that are: starting a business, dealing with constructions permits, getting electricity, registering property, enforcing contract and paying taxes. In order to determine the long-term relationship among EDB and FDI, he used Johansen's co-integration and Granger causality as well as vector autoregressive (VAR) to test interrelated time series. He concluded that in short term EDB and FDI not correlated while there exists a long term relation between independent variables and FDI. He also claimed the government that is well performing in one sector also perform efficiently in another sector of the economy.

Corcoran and Gillanders (2015) studied foreign direct investment and the ease of doing business relationship over the period of 2004-2009. They extracted data from the World Bank and Bureau of economic analysis (BEA). EDB indicators including Starting a business, construction permits, getting credit, registering property, paying taxes, protecting inverter, enforcing contract, DB without trade, surrounding DB, trading across borders and surrounding trade were used as explanatory variables. Control variables included: gross domestic product, population, area, market potential and import/export. They used a distance weighted method for capturing competition on EDB indicators among countries. Ease of trading across Borders (TR) component represents the overall significance of doing business index. They showed that TR relation with FDI is significant for middle-income countries. Poorest regions of World like Sub- Saharan Africa or OECD countries TR have an insignificant impact on the inflow of FDI. They found that weighted doing business measuring the regional competition had no effect in the full sample. After excluding OECD and Sub-Saharan countries (poorest countries) weighted doing business had a significant impact on FDI. They further concluded that bad trade regulatory conditions in neighborhood countries reduced FDI in home countries. Policy given by them revealed that FDI is predominantly desired in all poorest section of the world where desirable healthier business environments are not linked with greater levels of FDI.

Vogiatzoglou (2016) conducted an analysis on ease of doing business and foreign direct investment in Asian countries. Data covering the period 2003-2013 and all variables used in this empirical study was extracted from doing business database WORLD BANK as well as heritage foundation. He used EDB as independent variables in his empirical work. He selected eight Asian countries including the Philippines, Malaysia, Thailand, Singapore, Cambodia, Vietnam, Laos and Indonesia. He ignored the least correlated EDB variables that are getting

electricity, getting credit and protecting minority investor. Controlled variables he used; macroeconomic stability, market size, availability of natural resources, labor cost, human capital, infrastructure, education and export orientation; have important determinants of FDI. He constructed two model first one intra-ASIAN FDI and the second extra-ASIAN FDI. He used Kaiser-Meyer-Olkin (KMO) criteria for highly correlated common factor extraction. Wooldridge test and Housman test as well as fixed, random effects were used for estimation purpose. He concluded that highly correlated explanatory variables with FDI were: starting a business, dealing with construction permits, registering property, paying taxes, trading across border, enforcing contract and resolving insolvency. He also found that host country labor market, business-friendly environment and other regulations associated with business attract more FDI.

A review paper is written by Kaur (2016) on the problems regarding the ease of doing business indicators faced by investors in BRICS countries for 2015-2016. This paper interrogates the bundle of challenges that investors have to face in doing business. This study revealed India's comparisons with BRICS countries (Brazil Russia India china south Asia. Comparison among India and other BRICS countries are based upon the rank and score of the doing business index (procedure, time and cost). Besides the business reforms each year conducted by the government of India, India behinds the successful business phases of the BRICS countries yet. The procedure, time is taken and cost of each doing business indicators are high, that retard the FDI attractiveness in India. This study concluded that India's government need higher attention toward scoring good rank and should follow all those countries which entitle high rank in doing business indicators.

E MogesEbero and M Begum (2016) investigated the relationship between doing business and FDI. They selected Ethiopia country over the period 2010-2014. They examined, how the business environment affects FDI in Ethiopia. They used independent variables; starting a business, dealing with construction permits, registering property, getting credit, paying taxes, getting electricity, enforcing contract, resolving insolvency, trading across the border and protecting investors while FDI as a dependent. They simply used analysis of variance (ANOVA) and correlation test for determining the relation of variables via graphically. They concluded that out of the independent variables protecting minority investor, paying taxes and enforcing contract had positively correlated with FDI while reaming negatively correlated with FDI.

Mahuni and Bonga (2017) explored the relationship between doing business indicators and foreign direct investment for Zimbabwe. They used time series analysis covering the period 2009-2016 and estimate the beta coefficient value of doing business indicators that are used as an independent variable while FDI as regressand. They applied the OLS method on secondary data obtained from the World Bank. They analyzed how the EDB indicators affect the Zimbabwe FDI. They used augmented ducky fuller test to check the stationarity of the data. They also used Trend stationary process to generate a new series of variables. This approach eliminates trend after taking differencing. They concluded that doing business indicators are enforcing contracts, paying taxes, getting electricity is significant negative while the factor dealing with construction permits positive impact on FDI. They praise that; there is a greater requirement to expand efficacy in the enforcement of contracts, fair distribution of electricity and energy in order to improve the FDI inflows meaningfully in the future.

In the east African community, Muli and Aduda (2017) investigated the mediating role of the ease of doing business between economic integration and FDI over the period 2001-2015. Data of this study is extracted from the tradingeconomic.com, EAC statistical portal, UNCTAD, WORLD BANK, and Transparency international record. According to them, through regional economic integration, FDI attractiveness toward member countries improve. This study follows some explanatory research design and that research design is different for each country of the East African community. This study follows some diagnostic test including multicollinearity, unit root, heteroscedasticity, autocorrelation and normality test. For estimation purpose, path analysis casual procedure is used. This study concluded that an efficient business environment among east African community stimulates the higher amount of FDI toward each country of the EAC. The null hypothesis of this study is rejected on the ground of doing business significantly mediate the contact between economic integration and FDI in the East African community. This study suggested that it is necessary to improve the business environment, investment climate, and modernization of regional economic integration.

Jovanovic and Jovanovic (2018) investigated the connection between the ease of doing business and foreign direct investment in ex-socialist countries. They analyzed 27 ex-socialist countries covering the period 2004-2011. Astonishingly, they used 56 explanatory variables in their model including sub-indices of EDB indicators and worldwide governance indicators (WGI) as well as other variables. They used lagged values of explanatory variables as an instrument of the endogenous variable. They used classical and Bayesian econometric

technique for regression analysis. The first classical technique, generalized method of moments (GMM), is used to tackle the problem of endogeneity in the regression. Instrumental Variable Bayesian Model Averaging (IV-BMA) technique is also used to resolve similar problems as mentioned above. They found that if both methods have similar findings the nexuses between FDI and DBI is robust.

This study concluded that business indicator; the cost of opening a business is most significant. From the Construction permits indicators, the number of procedures required for obtaining a permit is significant. From the registering property indicators, for a second time, the number of procedures is significant. They stated further, getting credit (GC) had no significant impact on FDI. One of the protecting investor index director liabilities is significant. Turning to the paying taxes indicators, the only significant indicator is the number of payments. From trading across border document to import is significant. Finally, they concluded that enforcing contract, resolving solvency variable cost and the recovery rate are significant.

Nangpiire *et al* (2018) explored the bond between Ease of doing business and foreign direct investment inflow among 44 Sub-Sahara African countries. Structure and the pattern of the underlying study were based on time series analysis. For regression analysis, they used ordinary least square method to find the beta coefficient values. EDB ten sub-indicators were employed as independent variables: starting a business, construction permits, getting electricity, getting credit, registering property, paying taxes, protecting minority investors, trading across borders, enforcing contracts, and resolving insolvency. According to them dealing with licenses, starting a business, enforcing contracts, and registering property are affected by the time, cost and number of procedures. The values of ease of DBI rapidly changed in developed countries as compared to developing one. Regulatory setup of the economy that satisfies the business operations among different countries of the world was mainly measured by ease of doing business ranking.

Hassan and Basit (2018) studied the impact of ease of doing business on foreign direct investment. They selected 177 countries from 190 listed in World Bank over the period 2011-2015 across the world. Secondary data was used in order to quantify the nexus between the dependent variables and independent variables. Required data was extracted from the World Bank's published reports of ease of doing business. Starting a business, getting credits, paying taxes, registering property, enforcing contract were used as independent variables in regression analysis. They used OLS regression method for the purpose of estimation by undertaking the

FDI as the dependent variable. They concluded that starting a business and enforcing contract had an insignificant positive impact on FDI. Getting credit and paying taxes had a negative significant and insignificant impact on inward FDI respectively. Finally registering property had a positive significant impact on FDI. Other controlled variables like corruption, market size and institutional condition attract more FDI.

A review paper is written by Malik and Jyoti (2018) to unlock the link between ease of doing business index indicators and FDI. They overviewed studies from 2007 to 2017 on the nexus between ease of doing business index and FDI. According to them, to stimulate the foreign investors, the government of over the world introduced reforms like tax reforms, banking reforms, trade reforms and legislative reforms which assist the economy to grow. They concluded that institutional and business regulatory reforms of developing or middle-income countries attracted a superlative inward flow of FDI.

Table 2.1 Summary of literature

Sr.no	Year	Author's name	Title of article	Data and time period	Variables	Estimation technique	Conclusion
1	2010	Piwonski	Does the ease of doing business in a country influence its foreign direct investment inflow	countries 145 from 2009-2010	IV: doing business index indicators DV: FDI	World Doing business index methodology	The business-friendly environment created by the government attract more FDI
2	2011	Morris and Aziz	Ease of doing business and FDI inflow sub-Saharan and Asian countries	53 Countries 2000-2005	IV: doing business indication DV: FDI	F. test to check the overall significance	Among entire DB index indicators registering property and trading across boarder have positive impact on FDI
3	2012	Kang and Jiang	FDI location choices of chines multinational over southest and east Asian: economic factors and institutional perspective	East and southest Asian countries 1995-2007	IV: institutional factors Dv: FDI	OLS fixed and random effect method, VIF, langrange multiplier test	Ease of doing business matter for the attractiveness of FDI. Further, natural resources, market size, macroeconomic factors, infrastructure also play significant role in FDI attractiveness.
4	2012	Pinheiro-Alves and Zambujal- Oliveira	Ease of doing business index ass a tool for investment location decision		IV: indicators of doing business index DV:FDI	Factors analysis technique and Cronbach alpha technique	Result of this study showed the, forty percent of all the factors of doing business matter for investment taking decision
5	2012	Olival	Influence of doing business, institutional variable in foreign direct investment	177 countries 2004-2019	IV:institutional factors of doing business index DV: FDI	OLS, fixed effect, random effect hausman test and instrumental variable technique	starting a business, registering property and trading across shows significant positive implication for FDI

6	2013	Kasongo (권혁주, 2013)	Relationship between ease of doing business index and FDI	41 sub-Saharan African countries	IV: starting a business and registering property, time of import and export DV:FDI	Random effect technique, correlation matrix analysis	The cost to start a business, time to register property and time of import, export shows an insignificant impact on FDI inflow. The cost of registering property revealed a significant positive impact on FDI.
7	2013	Bayraktar	Foreign direct investment and investment climate	Comparison of developed and developing countries over the world 2004-2010	IV: indicators of doing business index DV:FDI	Correlation between EDB,s index indicators find graphically	FDI inflow encouraged by improving the staring and closing a business as well as protecting investors, developing countries attract higher amount of FDI. Factors of doing business not change in DCs
8	2014	Singh Gurmeet	Impact of doing business index on FDI inflow	India country	IV: six doing business indicators DV: FDI	Johansen's co-integration, Granger causality and VAR	In short term EDB index indicator, SBC, DCP, GE, RP, PT, EC, not correlated with FDI while in long-run there is strong association between explanatory variable and FDI.
9	2014	Shahadan et al	Relationship of doing business index and the net inflow of FDI	Six Asian countries from 2004-2013	IV: except resolving insolvency all DBI indicators DV: FDI	Pooled OLS fixed and random effect, unit root test, correlation matrix	Trading across border, registering property, getting credit showed significant positive while protecting investor, starting a business, paying tax, construction permits enforcing contract shown negative significant
10	2015	Corcoran and Gillanders	Foreign direct investment and ease of doing business	2004-2009	IV: ease of trading across the border (TR) used as overall DBI index DV: FDI	Weighted distance method	For sub-Saharan and OECD countries trading across border showed insignificant impact on FDI. Ease of trading across border showed significant relation with FDI in middle-income countries.

11	2016	Vogiatzoglou	Ease of doing business and FDI inflow in Asian countries	Eight Asian countries period 2003-2013	IV: ease of doing business indicators DV: FDI	Wooldridge Housman fixed and Random effects	Ease of doing business indicators significantly affect FDI inflow.
12	2016	Kaur	Ease of doing business in India: A big unease for make in India program	Comparison of India with other economies regarding factors of doing business 2015-2016	IV : procedure time and Cost of all doing business indicators DV: FDI	On the basis of rank of doing business comparison India with different economies conducted	For the purpose of attracting FDI, business friendly environment is necessary. Government of India's follow the practices of the whose parameters of doing business scoring good rank
13	2016	MogesEbero & Begum	The desirability of doing business and foreign direct investment	Ethiopia 2010-2014	IV: ease of doing business indicators DV: FDI	ANOVA & correlation for graphical analysis	Protecting minority investors, paying taxes and enforcing contract are least positively correlated with FDI while remaining all negative.
14	2017	Mahuni et al	Nexus between doing business indicators and FDI for Zimbabwe	2009-2016	IV: doing business indicators DV: FDI	trend stationary process, differencing method, dicky fuller test, OLS	Dealing with construction permits DCP positively correlated with FDI while enforcing contract, Getting electricity, paying taxes negatively.
15	2017	Muli and Aduda	Mediating influence of doing business on the relationship between economic integration and FDI in the east African community	East African community 2001-2015	IV: doing business index ass a mediating factors DV: FDI	OLS, multicollinearity test, hetroscedasticity, unit root, ADF autocorrelation and normality test	Partially mediating role is played by the ease of doing business between the economic integration and inflow of FDI. Economic integration is an important factor for inflow of FDI, they further found that good business regulatory set up encourage the inflow of FDI.

16	2018	Jovanovic et al	Ease of doing business and FDI in EX- socialist countries	27 countries from 2004-2011	IV: procedure, the time cost of each DBI indicators and another variable. DV: FDI	GMM technique is applied that is the explanatory variable used as an instrumental proxy	Cost of opening new business enforcing, contracts resolving insolvency and procedures of construction permits, registering property, import document of trading across border and protecting investor liability are a significant impact on FDI.
17	2018	Nangpiire et al	Ease of doing business and FDI among sub-Saharan African countries	44 sub-Saharan African countries	IV: doing business indicators DV: FDI	Descriptive statistics	Protecting minority investors, trading across borders and resolving insolvency showed statistically significant influence on FDI, while remaining other area of doing business revealed overall significance impact on inflow of FDI.
18	2018	Hossain et al.	Ease of doing business and its impact on inward FDI	177 countries 2011-2015	IV: doing business indicators DV: FDI	Least square method via e-views	Starting a business, enforcing contract and registering property have a positive impact on FDI while getting credit and paying taxes have a negative impact on FDI
19	2018	Malik and jyoti	Ease of doing business and foreign direct investment : a review paper	Overview of doing business report from 2007 to 2017	IV: doing business indicators DV: FDI	Theoretical and conceptual framework, descriptive type study	They concluded that institutional and business regulatory reforms of developing or middle income countries could attracted superlative inward flow of FDI.

2.2 Concluding Remarks

According to aforementioned literature, there are just a scanty material present on the empirical association among easiness of doing business index indicators and FDI over the world. Earlier research work reveal that only few Asian region become focus point in term of convenience to do business. As previously explained, the study by (Vogiatzoglou, 2016) used eight Asian countries over the period 2003 to 2013 and analyze the each factor like procedure, time and cost that are determined by the EDB index. In the same way, research by (Shahadan et al, 2014) used six Asian countries 2004 to 2013 while the study by (sing 2014) used just one Asian country that is India. However, before this study, there is not a large number of research exist on relationship between EDB index and FDI for the entire Asian countries that are listed on World Bank's business index. This study has taken all Asian countries for analyzing the empirical relationship of main doing business index along and their sub-indices with inflow FDI. Previous research work just expose the impact of EDB index and its ten area of business on FDI separately. Motive of underpin research work has been checked the joint impact of EDB index along with their ten area of business on the inflow of FDI toward selected Asian countries by using latest data updated by World Bank doing business index. Asian countries since 1967 have undergone several successive steps of economic integration as well as entitled the highest FDI attractive region (Vogiatzoglou, 2016). Hence, the key EDB index and its ten business areas on FDI attractiveness towards nominated Asian states need to be shed light collectively.

CHAPTER 3
THEORETICAL FRAMEWORK AND METHODOLOGY

3.1 Theoretical framework

This study explores the association among EDB and FDI in developed and under developing countries. The undertaken study has used EDB indicators and FDI as independent and dependent variable respectively. EDB indicators affect FDI through the different channel as procedure, time and cost. Various economic factors could affect FDI because FDI is extensively studied in recent decades. The theoretical framework of undertaken study originate from **A** that is an efficiency parameter of standard Cobb-Douglas production function given below.

$$\boldsymbol{Y = A\, L^{\alpha}\, K^{\beta}}$$

$$\boldsymbol{A = f(EDB, FDI} \ldots\ldots)$$

Knowledge or efficiency parameter (A) is the function of EDB. Higher the EDB and FDI higher will the efficiency of that economy. $\boldsymbol{L^{\alpha}\, K^{\beta}}$ Denote share of labor and capital in the production of **Y**. Some countries have higher capital and labor ratio but still remain underdeveloped due to least efficiency's parameter **A** (Koutsoyiannis, 1975). It is necessary to explore new areas of research that would enhance the efficiency of economics.

3.2 Methodology

Ease to do business is the important determinant of FDI inflow. Various researchers conducted their research to investigate the EDB index impact on FDI inflow. The direction of the EDB impact on FDI might be positive, negative and ambiguous. Current study has empirically analyzed the association among FDI and EDB index with support of previous literature. This research is a non-experimental research based on secondary data. Therefore, econometrics issues associated with underpin study are less complicated and least harmful. Under this chapter, variable is described in detail through different regression equation, along with methodology.

There are many empirical models built in economic literature to identify the main determinants of FDI. The recent literature has highlighted that good institutional quality is an important variable for determining the FDI inflow. Specifically, econometric models developed from the end of the

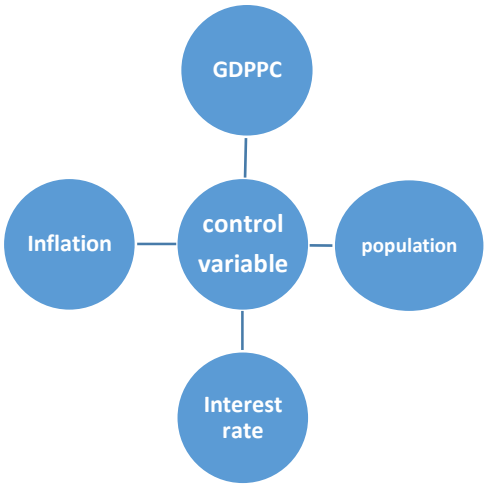
1940s to the start of the 1950s, explains the statistical relationship that exist between dependent and independent variables. Econometrics model consists of two parts deterministic and stochastic or probabilistic. Initially, econometric model expressed the idea of Keynesian economics into a form of a mathematical theoretical model and tried to estimate its parameters based on statistical data (Granato, 1991) . The study has constructed econometric model step by step.

3.2.1 Independent variable or focused variable

In undertaken research, EDB index use as an explanatory variable in the econometric model. Indicators of EDB index including Starting a business (SB), dealing with construction permits (DCP), registering property (RP), getting electricity (GE), getting credit (GC), protecting investor (PI), paying taxes (PT), trading across border (TAB), enforcing contract (EC) and resolving insolvency (RI).

3.2.2 Control variable

Control variables are remains constant and unaffected during the path of investigation or research. In regression analysis, control variables are entered as independent variables but have a different interpretation. Control variables are not the primary interest of researchers. Current study uses some important control variables that are reflected in the figure given below. Main interactive terms are depicted in figure 3.1.



General form of econometric model

$$Y = \beta_O + \beta_1 X + \mu$$

In the case of above mentioned equation, β_O and β_1 represent intercept and slop coefficient or MPC respectively. All the variables that have an impact on FDI but not explicitly introduced into the model as a n explanatory variable is denoted by disturbance term μ_i. There is a one-to-one or linear association between output (Y) and input (X).

A specific econometric model is as following:

$$FDI_{it} = f(EDB_{it})$$

This is the more general and parsimonious model of this study. Gradually, above mentioned model modified by adding EDB indicators step by step, unobservable characteristics and disturbance term.

3.3 Ease of doing business index impact on FDI

Business index compares the economy of different countries on the bases of their business regulatory environment in absolute term. Doing Business index provides information regarding the reforms conducted by the each government in their respective state every years to improve business environment regulation that fascinate the inflow of FDI (Djankov, Freund, & Pham, 2010). EDB index is considered a basic reason for FDI flow in countries while some researchers reported that EDB is a sufficient not a necessary condition of FDI attractiveness. The study by (Morris & Aziz, 2011) reported that FDI is not fascinated by good regulations of business whereas EDB indicators can significantly influence the FDI inflow. Similarly, (Mahuni & Bonga, 2017) argued that there is the positive link between EDB and FDI. There are a number of literature that sheds light on EDB and FDI relation. Further, the study by (Singh, 2015) revealed that some EDB indicators are not correlated in the short run while having a strongly interrelated with FDI in the long run.

$$FDI_{it} = \beta_o + \beta_1 EDB_{it} + X'\theta + \mu_{it} \quad (3.1)$$

i=1.2.3……N, t=1.2.3……

3.4 Individual EDB indicators impact on FDI

This study has examined the effect of each indicator of business index on FDI inflow gradually.

3.4.1 Starting a business impact over FDI

Starting a business or new entry of firms into existing firms is influenced by the procedure, time along with cost of capital necessary to business startup. Different nations have diverse procedures, time and cost patterns of the business environment (Djankov et al., 2010). Minimum procedure of documentation process, time in term of minimum days and cost to setup new business or new entry into the existing firms are the main factors of determining the inflow of FDI. Now by adding SB in the equation (3.1) as an explanatory variable that creates variations in explained variable. In the below equation, the coefficient β_1 measure the elasticity of FDI with respect to SB. There is a optimistic association between SB and FDI. According to the studies (Hassan & Basit, 2018; Nangpiire, Rodrigues, & Adam, 2018; Vogiatzoglou, 2016) in which it is reported that, FDI is decisively linked with SB. Similarly (Singh, 2015) elaborated in his study that FDI is positively correlated with FDI. In contrast to, the study by (Shahadan et al., 2014) in which it is determined that there is a strongly undesirable connection among FDI and SB. Although, $X'\theta$ in regression equation (3.2) represents unobservable characteristics across countries. The unobservable characteristics of countries in dynamic panel data model are culture, norms, value, political condition and many other factors.

$$FDI_{it} = \beta_o + \beta_1 SB_{it} + X'\theta + \mu_{it} \quad (3.2)$$

i=1.2.3…….N, t= 1.2.3……T

3.4.2 DCP effect on FDI

Dealing with construction permits is another indicator of EDB as well as a safety measure for the public. Constructions Companies in developing countries tend to construct buildings without permits because of complicated and costly procedures for grant of permission (Cattaneo, Engman, Saez, & Stern, 2010). In under- developed economies, 60-80 percent of the building projects are undertaken without proper construction permits and approvals (doing business report 2019). It is necessary to guarantee the safety standard of the public by ensuring well-organized and transparent permit procedures. FDI is more attracted in those countries where construction

permits are more effective, less costly and minimum time taking for the paper completion. Current research integrates DCP predictor of EDB in the regression equation as an explanatory variable (3.2). FDI is positively correlated with DCP. DCP coefficient (β_2) calculates the FDI shift produced by DCP change of one unit. (Jovanovic & Jovanovic, 2018), (Nangpiire et al., 2018). (Mahuni & Bonga, 2017) reported that FDI is positively influenced by DCP. Similarly, (Vogiatzoglou, 2016) and (Shahadan et al., 2014) argued that FDI is positively correlated with DCP. In equation 3.3(β_2) is measuring the coefficient of DCP and $X'\theta$ denotes country specific characteristics.

$$FDI_{it} = \beta_o + \beta_1 SB_{it} + \beta_2 DCP_{it} + X'\theta + \mu_{it} \quad (3.3)$$

i=1.2.3…….N t= 1.2.3……T

3.4.3 Paying tax impact on FDI

Paying tax is the contribution paid by the worker as a security that is paid back in the form of pension funds and worker's insurance funds (doing business report 2019). Paying tax is not be affected by FDI as well as a domestic level investment but it might be affected by outward FDI location (Devereux & Freeman, 1995). Mostly used forms of paying taxes are corporate income tax, sale tax or value added and labor tax. Different researchers have contradictory views regarding paying tax impact on FDI. Some revealed that there is a conclusive bounding among FDI and tax payment but on the other hand, some investigated negative relation. (Jovanovic & Jovanovic, 2018), (Nangpiire et al., 2018), (Vogiatzoglou, 2016) revealed that tax payment has a encouraging effect on FDI. On the contrary, (Mahuni & Bonga, 2017) and (Shahadan et al., 2014) reported that PT has a damaging effect on FDI. (Singh, 2015) also revealed a deep-rooted nexus among PT and FDI. In order to examine the individual's paying tax impact on FDI by further expanding the regression equation (3.3) in which paying tax is used an independent variable.

$$FDI_{it} = \beta_O + \beta_1 SB_{it} + \beta_2 DCP_{it} + \beta_3 PT_{it} + X'\theta + \mu_{it} \quad (3.4)$$

i=1.2.3……..N t=1.2.3……..T

3.4.4 Impact of trading across the border on FDI

Now by moving forward, trading across the border the dominant element of EDB index indicators. Domestic trader experts usually deal with three sets of the procedure associated with time and cost: domestic transport border compliance, documentary compliance among the overall exporting and importing shipment of goods and services. TAB mostly measured by the gravity model which directly related to the economic size and inversely linked to distance (Hillberry & Zhang, 2015). (Jovanovic & Jovanovic, 2018) revealed that FDI is highly correlated with TAB in a positive sense. Moreover, (Nangpiire et al., 2018) and (Shahadan et al., 2014) revealed a positive link among FDI and TAB. In contrast, (Vogiatzoglou, 2016) and (Mahuni & Bonga, 2017) revealed a negative nexus among FDI and TAB. Here, FDI is further explained by TAB explanatory variable. By adding TAB as an independent variable in equation (3.4) and got equation (3.5). This regression panel equation (3.5) shows that TAB having influence on FDI across countries and over time. β_4 Is the coefficient of TAB that measure variation in FDI caused by TAB. $X\,'\,\theta$ represents individual specific characteristic across countries.

$$FDI_{it} = \beta_o + \beta_1 SB_{it} + \beta_2 CP_{it} + \beta_3 PT_{it} + \beta_4 TAB_{it} + X\,'\theta + \mu_{it} \qquad (3.5)$$

Where, i=1.2.3……..N t=1.2.3……..T

3.4.5 Impact of getting credit on FDI

Getting credit is also an indicator of EDB index. GC is the most prominent commercial regulatory factor among all EDB sub-indicators. It is commonly considered that FDI will be more attractive in those countries where financial institutions are highly regulated. Foreign investors usually select those countries where financial institutions provide loans at a low-interest rate and financial intermediaries are also required for that purpose. Researchers argue that there might be a positive or negative correlation among FDI and GC. The study by (Shahadan et al., 2014) in which it is showed that the GC's effect on FDI has strongly favorable. In the same way, (Morris & Aziz, 2011), (Nangpiire et al., 2018) displayed a constructive impression on FDI. While (Jovanovic & Jovanovic, 2018) showed a harmful influence on FDI. Similarly, (Piwonski, 2010) showed a destructive effect of GC over FDI. Here, this study has enlarged the regression panel equation (3.5)

by adding GC indicators for the purpose of checking their impact on FDI. In (3.6) Regression panel equation β_5 is the measuring coefficient of GC over the time and across diversified region.

$$FDI_{it} = \beta_o + \beta_1 SB_{it} + \beta_2 CP_{it} + \beta_3 PT_{it} + \beta_4 TAB_{it} + \beta_5 GC_{it} + X' \theta + \mu_{it} \quad (3.6)$$

i=1.2.3……..N t=1.2.3……..T

3.4.6 The protecting minority investor and FDI

Protecting minority investors is another important factor that affects FDI. Investors will prefer to invest in those countries where economic stability, least terrorism, and financial institutions are well settled. There are numerous contradictory views presented by researchers in their earlier literature. The study by (Jovanovic & Jovanovic, 2018),(Vogiatzoglou, 2016), (Shahadan et al., 2014) in which it is reported that PI revealed progressive effect on FDI. In contrast, (Hassan & Basit, 2018) indicated a negative correlation. In order to find the strength or degree of linear association undertaken study will incorporate PI as an explanatory variable in panel equation (3.6) and attain equation (3.7)

$$FDI_{it} = \beta_o + \beta_1 SB_{it} + \beta_2 CP_{it} + \beta_3 PT_{it} + \beta_4 TAB_{it} + \beta_5 GC_{it} + \beta_6 PI_{it} + X' \theta + \mu_{it} \quad (3.7)$$

Where

i=1, 2, 3……N, t=1, 2, 3 …..T

3.4.7 Getting electricity impact on FDI

Getting electricity is the prominent aspects of EDB index. Electricity is not sufficient but a necessary condition for economic growth in developing countries. Access to electricity is the most important for human development. Procedure, time and cost of getting electricity connection are more complicated in developing countries. Most developing countries face an energy crisis

therefore, investors do not select those countries where the procedure is so complicated. Multiple studies conducted on this subject have shown that GC revealed a significant constructive or destructive impact on FDI. (Nangpiire et al., 2018) and (Vogiatzoglou, 2016) showed that GC has a significant positive effect on FDI. While (Shahadan et al., 2014) explored the negative relationship between FDI and EDB. To extend the panel equation (3.7), the study further increase the independent variable in the model by including GE in equation (3.8).

$$FDI_{it} = \beta_o + \beta_1 SB_{it} + \beta_2 CP_{it} + \beta_3 PT_{it} + \beta_4 TAB_{it} + \beta_5 GC_{it} + \beta_6 PI_{it} + \beta_7 GE_{it} + X' \theta + \mu_{it} \quad (3.8)$$

i=1.2.3……..N t=1.2.3……...T

3.4.8 The enforcing contract and FD

Government of host countries fulfills all requirements of multinational firms especially when they depend on foreign capital. Enforcing contract is measured by time and cost. Commercial disputes are solved by the quality of judicial procedures index, efficiency in the court system and local first-instance. Every economy has tried to adopt a series of efficient practices to promote the quality of commercial institutions. Least time and cost of enforcing contracts are necessary to maximize the productivity benefits. (Hassan & Basit, 2018) and (Jovanovic & Jovanovic, 2018) showed that EC is confidently allied with FDI. Similarly, (Mahuni & Bonga, 2017), (Nangpiire et al., 2018) had shown a affirmative effect on FDI. On the other hand, (E MogesEbero & M Begum, 2016) concluded that the cost of enforcing contract is not correlated with FDI. The current study add enforcing contract as an explanatory variable in regression equation (3.8) and obtained an equation that is given below. In this equation, coefficient β_8 measures the variations in dependent variables caused by independent one while $X' \theta$ represents individual specific factors across the countries and over time.

$$FDI_{it} = \beta_o + \beta_1 SB_{it} + \beta_2 CP_{it} + \beta_3 PT_{it} + \beta_4 TAB_{it} + \beta_5 GC_{it} + \beta_6 PI_{it} + \beta_7 GE_{it} + \beta_8 EC_{it} + X' \theta + \mu_{it} \quad (3.9)$$

i=1.2.3……..N t=1.2.3……..T

3.4.9 Effect of resolving insolvency over FDI

Insolvency creates when any organization or individual is unable to meet its financial obligations with its lender fora longer period of time. Insolvency is generated under certain conditions like poor credit or cash management, increase expenses and reduction in cash inflow. Alternatively, financial is a state in which someone does not pay his bills and total liability exceeds the entire asset. Government of DCs must present debt recovery panels to speed up the resolution of debt recovery claims larger than the threshold. According to the study (Jovanovic & Jovanovic, 2018) in which it is showed that resolving insolvency variables, cost and recovery rate unveiled a substantial effect on FDI. Similarly, the study by (Hassan & Basit, 2018) in which it is stated that RI unveiled an irrelevant optimistic influence on FDI. Similarly, (Mahuni & Bonga, 2017) reported that RI has a momentous affirmative effect on FDI. Differently, (E MogesEbero & M Begum, 2016) and (Shahadan et al., 2014) also concluded that RI showed adversely correlated with FDI. In order to analyze the relationship between FDI and RI, current study further expanded equation (3.9) through adding RI. In this equation, one unit change in RI impact on FDI is measured by the coefficient β_9.

$$FDI_{it} = \beta_o + \beta_1 SB_{it} + \beta_2 CP_{it} + \beta_3 PT_{it} + \beta_4 TAB_{it} + \beta_5 GC_{it} + \beta_6 PI_{it} + \beta_7 GE_{it} + \beta_8 EC_{it} + \beta_9 RI_{it} + X' \theta + \mu_{it} \quad (3.10)$$

Where

i= 1, 2, 3……, N t= 1, 2, 3……,T

3.4.10 Registering property effect on FDI

The last one is the registering property impact on FDI. Registering property is also affected by procedure, time and cost. Property law description led to a substantial increase in firm worth. In a country where different types of assets are more protected against competitor's activities firms can distribute resources in a better manner and consequentially grows faster. Researchers presented

that highly secured property registration causes more FDI inflow to host countries. To support the relationship among FDI and RP (Hassan & Basit, 2018) and (Shahadan et al., 2014) showed that FDI and RP are positively correlated. On the other hand, (Jovanovic & Jovanovic, 2018) explored a negative relationship among FDI and EDB. In the same way, (E MogesEbero & M Begum, 2016) found that EDB is also negatively correlated with FDI. Undertaken research incorporates RP as explanatory variable in the regression model (3.10) to attain equation (3.11). In this equation $X' \theta$ represents some specific individual characteristics of the countries while β_{10} is the coefficient of registering property that explains the unit change in RP creates unit change in FDI.

$$FDI_{it} = \beta_o + \beta_1 SB_{it} + \beta_2 CP_{it} + \beta_3 PT_{it} + \beta_4 TAB_{it} + \beta_5 GC_{it} + \beta_6 PI_{it} + \beta_7 GE_{it} + \beta_8 EC_{it} + \beta_9 RI_{it} + \beta_{10} RP_{it} + X' \theta + \mu_{it} \quad (3.11)$$

3.4.11 Control variables impact on FDI

The predictor variables whose impact on dependent variable would not the subject to the study. Change in controlled explanatory variables would create change in explained variables but that change are not the focus point to the researcher. This study expands the regression equation (3.11) by adding control or interactive terms simultaneously. $\beta_{11}, \beta_{12}, \beta_{13}, \beta_{14}$ Stands for the measuring elasticity coefficients of GDPPC, Inflation (INFA), population (POPU) and interest rate (INTE) respectively. The macroeconomic factors such as GDP per capita (constant 2010 US$), inflation (consumer price annual percentage), population (growth of population annual percentage) and real interest rate (percentage) of the host countries are the main key determining factors of FDI in developed and third world countries. The econometric model that is comprises of all the control and explanatory variable are given below.

$$FDI_{it} = \beta_o + FDI_{it-1} + \beta_1 SB_{it} + \beta_2 CP_{it} + \beta_3 PT_{it} + \beta_4 TAB_{it} + \beta_5 GC_{it} + \beta_6 PI_{it} + \beta_7 GE_{it} + EC_{it} + \beta_9 RI_{it} + \beta_{10} RP_{it} + \beta_{11} GDPPC_{it} + \beta_{12} POP_{it} + \beta_{13} INF_{it} + \beta_{13} INT_{it} + X' \theta + \mu_{it} \quad (3.12)$$

i=1.2.3……..N , t=1.2.3…….T

3.5 Final model

This is the final form of the econometric model

$$FDI_{it} = \beta_o + FDI_{it-1} + \beta_1 EDB_{it} + X'\theta + V_i + \delta_t + \mu_{it} \quad (3.13)$$

V_i Represent individual specific characteristics across countries.

δ_t Denote individual specific characteristics over time

EDB_{it} Reveals the ease of doing business index

FDI_{it-1} Exhibits the lag of foreign direct investment

$X'\theta$ Number of the interactive terms.

CHAPTER 4
DATA AND ESTIMATION TECHNIQUES

4.1 Source and data analysis

Data is collected by a massive sort of organizations and institutions, including businesses (e.g., sales data, revenue, profits and stock value), governments (e.g. crime rate, unemployment, literacy rate) and private organizations. The data is a series of pre-determined steps so as to abstract the most related information. Data might be obtained from a primary and secondary source. The data set used in this study is based on panel observations from developed and developing countries over the period 2001 to 2018.

In the undertaken study, selected economies directly influence one another in sense of politics, international trade, economic recession, development and growth. Data of the study is collected from various sources, such as World investment report, World development indicators (WDI) and business index. World Bank doing business work with intellectual experts to develop a data collection business case survey. Intellectual experts are the include prosecutors, advisors, auditors, specialist in manufacturing process, public officials and other businessmen who regularly administer foreign firms. The survey approach predicts the economic scenario and asks questions about how that economy will work in the host country (Benjamin & Theron, 2009).

Current study's focus point is to analyze the convenience to do business influence over influx of oversea direct investment in 45 Asian countries over the period from 2004 to 2019. Now we will face the question that why this study used Asian countries in order to check the empirical relationship of ease of doing business influence on FDI. The answer is that as we know Asian countries are the highest FDI recipient countries because it is most profit oriented region for the foreign investor over the world. Main purpose of using Asian countries is to expose wither EDB contribute a large share in attracting FDI or there are some other factors. Forty-five Asian countries are mentioned in table 4.1.

Table 4.1 Asian countries

List of 45 Asian countries enlisted on World's bank doing business index					
Afghanistan	China	Japan	Maldives	Russia	Turkey
Armenia	Cyprus	Jordan	Magnolia	Saudi Arabia	United Arab Emirates
Azerbaijan	Georgia	Kazakhstan	Myanmar	Singapore	Uzbekistan
Bahrain	India	Kuwait	Nepal	Sri Lanka	Vietnam
Bangladesh	Indonesia	Kyrgyzstan	Oman	Syria	Yemen
Bhutan	Iran	Lao PDR	Pakistan	Tajikistan	
Brunei	Iraq	Lebanon	Philippines	Thailand	
Cambodia	Israel	Malaysia	Qatar	Timor-lets	

Asian countries entitled on the World Bank ease of doing business index, 2019.

First, this study empirically analyzed the main EDB index and its factors implication to the inflow of FDI by using instrumental variable technique (two step GMM) for selected Asian countries. Secondly, this study bifurcates the Asian countries into developed and developing. On the basis of the business regulatory environment, study compared the developed and developing countries. As per the World Bank's countries classification, low-income countries are those with per capita GNI of $1025. The lowest middle-income countries are those with GNI per capita around $1026 and $3995, whereas the highest middle-income countries with GNI per capita between $3996 and $12375. In the same way, GNI per capita of high income economies lies between $12376 or above. These categorization of the countries on the basis on GNI per capita are made by World Bank (Bank, 2017).World Bank update these countries classification each year on 1st July [http://blogs.worldbank.org/-2019 -2020]. The developed and developing Asian countries arranged in ascending order that are given below in the table 4.2 & 4.3.

Table 4.2 Developed countries

Twenty-Six Developed Asian Countries					
Armenia	Cyprus	Jordon	Malaysia	Sri-lanka	UAE
Azerbaijan	Georgia	Japan	Maldives	Saudi Arabia	
Brunei Darussalam	Iran	Kuwait	Oman	Singapore	
Bahrain	Iraq	Kazakhstan	Qatar	Thailand	
China	Israel	Lebanon	Russian fed	turkey	

World Bank doing business index, 2019

Table 4.3 Developing countries

17 List of developing countries			
Afghanistan	Nepal	Philippines	
Bangladesh	Kyrgyz republic	Syrian Arab rep	Vietnam
Bhutan	LAO PDR	Timor-lets	Yemen
Cambodia	Myanmar	Tajikistan	
India	Pakistan	Uzbekistan	

World Bank doing business index, 2019

4.2 Variables

Variables can be defined as events, ideas, objects, feeling, time period and any other things that are measurable during the scientific experiment as well as management sciences (Greene, 2003). Mostly used variables in research work are discrete, continuous, dependent, independent, moderate, control and intervening variable (D. Gujarati, Porter, & Gunasekhar, 2007). The present study only concerned with control, dependent and independent variable.

4.2.1 Independent variables

Independent variable are standalone variable and not altered by other controlled variables during research work. Independent variables are those that cause changes in explained variables during the experiment or any sort of analysis conducting by the researcher. There are various synonym of independent variables such as predictor, controlled, manipulated, explanatory, exposure, input and variable risk factor. Current research intended to use EDB index and its indicators as an independent variables that are shown in the figure 4.1.

Fig 4.1 Independent variables

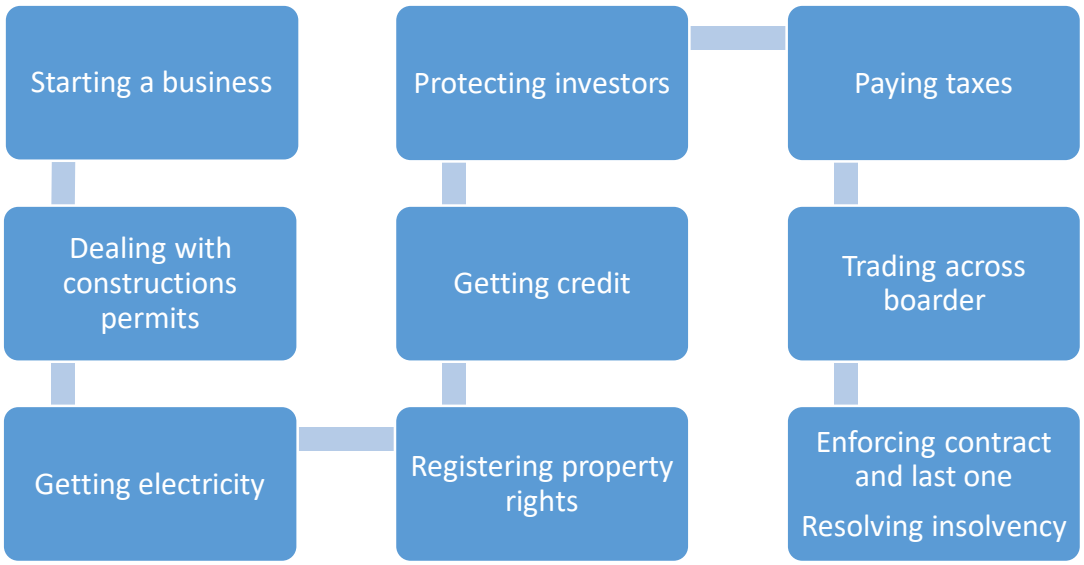


Table 4.4 Description of the variables and its data source

SR. no	Variables	Explanation of the variables	source
		Independent variables	
1	starting a business	Starting a business involves many activities related to organizing the organization. The process includes generating of an idea for the enterprise (called concept development), researching the idea's potential for success, and writing a business plan. Someone who is starting a new business is called an entrepreneur	World bank doing business index
2	Dealing with construction permits	This variable tracks the procedures, time and cost to build a warehouse including obtaining the necessary licenses and permits, submitting all required notifications, requesting and receiving all necessary inspections and obtaining utility connections.	World bank doing business index
3	Getting electricity	The getting electricity indicators measure the procedures, time and cost required for a business to obtain a permanent electricity connection for a newly constructed warehouse.	World bank doing business index
4	Registering property	This variable examines the steps, time, and cost involved in registering a property. In addition, the variable measures the quality of the land administration system in each economy.	World bank doing business index
5	Getting credit	The legal rights of borrowers and lenders with respect to secured transactions. The strength of credit reporting systems and the effectiveness of collateral and bankruptcy laws in facilitating lending is observed under the getting credit variable.	World bank doing business index
6	Protecting investor	Corporations are the instruments of entrepreneurship and growth. They can also abused for personal gain. Doing Business measures the strength of minority shareholder protections against directors' misuse of corporate assets for personal gain.	World bank doing business index
7	Paying taxes	This variable measure the total tax and contribution rate. The time needed to comply with the major taxes (profit taxes, labour taxes) and the number of tax payments.	World bank doing business index
8	Trading across border	The trading across borders indicator set records the time and cost associated with the logistical process of exporting and importing goods every year.	World bank doing business index

9	Enforcing contracts	To enforce means to mandatory compliance with a contract. Parties mutually approve the agreement and sign a contract, are obliged to adhere to the rules contract law, by performing as promised.	World bank doing business index
10	Resolving insolvency	Insolvency is a state of financial distress in which someone is unable to pay their bills. In recovery of debt insolvency, recovery rate is calculate based on time, cost and outcome of insolvency proceeding in each economy.	World bank doing business index
10	FDI	A foreign direct investment (FDI) is an investment in the form of a controlling ownership in a business in one country by an entity based in another country.	WDI
11	GDPPC	GDP per capita is a measure of a country's economic output that accounts for its number of people. It divides the country's gross domestic product by its total population	WDI
12	population	Whole number of people and inhabitants in the country.	WDI
13	Inflation	Persistent rise in general price level of all the goods and services in an economy over the period of time.	WDI
14	Interest rate	A real interest rate is an interest rate that has been adjusted to remove the effects of inflation to reflect the real cost of funds to the borrower and the real yield to the lender or to an investor.	WDI

4.3 Estimation techniques

Panel data is the statistical term that is incorporates the characteristics of cross-sectional component (countries, groups, etc.) and time series (days, week, month and years). In the panel section, this study analyses the different characteristics of the cross-sectional component over time. Panel approach gives the opportunity to compare different societies, industries, firms and different economic situation. When all individuals or groups are observed over the time periods equally are called balance panel data. Unbalanced panel data, when individual or groups or at least one member of the panel are not equally observed over the entire time period (Arellano, 2003; Yaffee, 2003). Examples of panel data are "effect of social media on education across countries over time, the effect of income on saving and consumption across countries and time period, the effect of terrorism on political stability across countries and over time etc.

4.4 Types of panel data

There are the two forms of panel-based data that are data from short panel time and data from long panel.

4.4.1 Short period panel (N>T)

This type includes many individual units and little time duration (student in a class). This type also shows that properties of cross sections are denser than time series. In this situation we choice cross-section direction not time series.

4.4.2 Long period panel (T>N)

This type of panel data defined as when there is the time series properties are heavier than cross section properties. This one includes a few individuals or cross sectional unit and many time periods. In this type, individuals select time series for their analysis.

4.5 Benefits of panel data

Following are the foremost benefits of panel data elaborated by the (Hsiao, 2007)

- Panel data solve several problems that are confronted to the researcher during their research.
- Degree of freedom not lost in panel data because panel data add regressors without any restrictions.
- Panel data remove the time series and cross-sectional problems like heteroscedasticity, multicollinearity, autocorrelations and model specifications.
- Individual specific variations in cross sections units are captured by the heterogeneity allowed by panel data.
- Panel data has an excessive capability to forming the complication of human performance.
- Work on Panel data are more insightful than cross-section, reflect dynamics and Granger causality across variables. Panels are preferred over time-series aggregates because it allow tracing specific past event or action (Costantini & Kunst, 2011).

A considerable section of econometrics deal with forecasting and empirical description. Another purpose of econometrics technique is to quantify the structural or causal relationship. Structural relations is required for the purpose of policy evaluation and testing. Comparing the developed and developing Asian economies cross-sectional and over the time is the most remarkable work in current time period. Here this study empirically analyzes the business regulatory environment of EDB index that influence the inflow of FDI. Earlier literature over this topic showed that researcher use panel data. Through learning by doing, in order to determine the empirical relationship between EDB and FDI, study has also used panel data.

4.6 Classifications of panel data

Panel data model consist of two broad sections that are (1) static based model and (2) dynamics based model. Dynamic based model relies on an autoregressive distributed lag that is used as an explanatory variable on the right hand side of the regression equations. Over time period change is captured under the dynamic based model. Currently undertaking research is based on a dynamic panel model not on a static panel model. The current study is focused on dynamic panel based model. Manuel studied static panel based model and said that there are two motivational forces behind the selection of panel-based model by the econometrician. These are

1) In the cross-sectional model, need to manipulate panel data to control time invariant heterogeneity.
2) Use of the panel data to extricates mechanism of variance, probabilities and more usually to study the dynamics of cross-sectional populations (Arellano, 2003).

4.6.1 Dynamic based panel model

In this model, time variant and invariant explanatory variables are correlated with unobservable individual specific characteristics. For estimation purpose, static panel model is further classified into two approaches, the first is fixed effect and second one random effect model (Arellano, 2003). Current research is based on a dynamic panel model.

4.6.1.1 Pooled OLS (Ordinary Least Square)

The estimation technique, OLS, applicable to the panel data set also known as pooled OLS. Simple OLS is applicable to the regression model because time effect and country unambiguous features goes to the residuals. In pooled section, the study depend on assumption, individual particular attributes within the cross-sectional and time effects are not considered.

$$FDI_{it} = \beta_o + \beta_1 EDB_{it} + X'\theta + \mu_{it} \quad (4.1)$$

Where

i= 1, 2, 3…….N t=1, 2, 3……...T

In above regression equation, FDI is served as dependent variable while right side of the equation, ease of doing business (EDB) served as explanatory variable.

4.6.1.2 Fixed effect model

This approach is discussed in detail through step by step below.

All countries have the same intercept that is not practically possible. Intercept is the differences among cross sections units but not changed over time. If regressors could not affect FDI_{it} and only effect β_o then β_o represents the average value of all individual characteristic among the cross-sectional unit.

4.6.1.3 Heterogeneity

A time series problem, heterogeneity, generate when explanatory variables are correlated with the residual in the model. All the Omitted variable problems that are confronted during model specification also repeat in this section of the panel model. So by making the assumption that intercept and slope coefficients are remains constant over the time-series and across the cross-sectional section. When N and T are large, Chow in 1960 proposed a test of poolability (Arellano, 2003; Yaffee, 2003), use the poolability tests.

4.6.1.4 Constant slope coefficient and varying intercept

Here, to better understand the concept of constant slope coefficient and varying intercept are used the following simple panel regression equation.

$$FDI_{it} = \beta_{i0} + \beta_1 EDB_{it} + \mu_{it} \qquad (4.2)$$

This equation shows that intercept is varying across countries but remain constant over time. Intercept denote all unobservable individual specific characteristics across the cross-sectional. Time-invariant unobservable characteristics that are traditions, norms, values, culture, law, geography, area, and institutions. Fixed effect model that allows unobservable characteristics are correlated with errors term. Heterogeneity is allowed in the model by using the least square dummy variable (LSDV) approach. Degree of freedom is lost when too much dummy added into the fixed effect model.

There are two methods used to avoid the degree of freedom loss.

1. Within mean transformation (de-meaned transformation)

   Find the cross-sectional mean value of all the individual countries.

   Find a deviation form of the mean value of among cross-section individual countries.

2. Between estimators mean

   The mean value of individual countries specific characteristic are used not include too much dummy to avoid a degree of loss (Sayrs, 1989)

This study incorporates some possibilities of a fixed effect model. Intercept is different over time but remains constant across time. Slope coefficient is different over time and among cross-section

unit. The last one is intercept and slop coefficient change over time and across the cross-sectional unit.

4.6.1.5 Random effect model

Random effect model, in which parameters behave randomly. This is also known as a variance component because this allows individual effect. Random effect model based on assumptions that the individual specific characteristics are not correlated with the explanatory variables. This is the special case of the model of fixed effect (Yaffee, 2003). This model is effective than fixed effect if and only if their assumptions hold otherwise inconsistent if their assumptions do not hold. The time-invariant component is removed by taking the first difference.

$$FDI_{it} = \beta_{oi} + \beta_1 EDB_{it} + X_{i'}\theta + \mu_{it} \quad (4.3)$$

In composite form

$$FDI_{it} = \beta_1 + \beta_2 EDB_{it} + \mu_{it}$$

Where

$$\beta_1 = \beta_{oi} + X'\theta$$

Here(X_i) in the above equation represent random characteristics across countries

4.7 Hausman test

The Housman approach refer to the analysis of endogenous regressors, also known as augmented or Durban-Wu-Housman test named after James Durbin, Di-Min-Wu and Jerry A. Hausman. During panel data analysis, Hausman test helps the researcher to choice fixed effect or random effect. Hausman test detect endogenous explanatory variable that related with other model's variable. Endogenous explanatory variable are those variable whose values in the model are determine by some other explanatory variable. The correlation of the predictor variables with error term in the designed framework lead to violate the OLS assumption. The best regression model is achieved with the aid of the Hausman test only when endogenous explanatory variables are present throughout the model also associated with residual. When there is endogenous

explanatory variable existing in the model, OLS is not appropriate, another technique named as instrumental variable (GMM) is used.

Null hypothesis **:** Random effect model is suitable for the data

Alternative hypothesis **:** Fixed effect model is suitable for the data

Fixed effect model is used when p-value is less than 0.05 otherwise random effect model used.

4.8 Instrumental variable technique

The correlation of the explanatory variables with disturbance term, generate the problem of endogeneity. This technique is used when unexpected behavior is observed between the variables. To resolve problem of endogeneity, some instrumental or proxy variables are identified which strongly correlated to endogenous regressors but not correlated to the error term. There are many instrumental variables techniques used like generalized method of movement, two-step least square 2SLS and three-step least square. The two-step least square 2SLS is used, when the regression equation is over identified. Here, the study use the generalized movement method (GMM) for estimation purposes. The GMM method developed by Lars Peter Hansen in 1982. Later, Karl Pearson introduced it in 1894. This model is only applicable, when focused parameters are finite in dimensions. GMM is preferred over 3SLS due to some properties i.e and Taylor (1981).GMM estimators for the general model include strictly exogenous, time invariant and predetermined variables that are uncorrelated with effect (Ogaki, 1993).

CHAPTER 5
RESULTS AND DISCUSSION

5.1 Introduction

The study discusses the result of the estimation technique and derive some implication related to topic of the study. There are many researchers who explored the link between EDB index and its ten area of convenience to do business impact on FDI. Some researchers have shown a positive link between EDB and FDI while some explored the negative relation among them. Under this section, underpin study will present empirical results of the estimation technique and develop scenario of the relationship among dependent as well as focus variable gradually There are several econometric tests which are applied on the data to test the problems in the data like collinearity, correlation, heteroskedasticity. Econometric analysis is carried out through different step progressively. In this section, after interpretation of the pooled, fixed, random and gmm estimation results, this study provides appropriate policy which help the policy makers to adopt a such sort of business strategies that encouraged the further inflow of FDI.

Table 5.1 Descriptive Statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
Foreign direct investment	644	4.744	10.396	-43.463	198.074
Ease of doing business	374	60.731	11.289	32.94	91.71
Starting a business	573	74.692	17.038	11.55	97.84
Dealing construction permits	507	62.735	15.453	17.33	87.58
Getting electricity	371	70.53	15.632	16.61	99.92
Registering property	532	67.878	17.408	0	99.95
Getting credit	531	44.461	22.6	5	100
Protecting investor	514	52.315	16.916	10	93.33
Paying taxes	514	71.227	18.401	20.61	100
Trading across border	504	60.851	24.11	0	96.84
Enforcing contract	575	54.969	15.519	2.08	93.36
Resolving insolvency	498	39.97	17.939	2.01	96.56
Population	675	1.966	2.315	-9.081	17.511
Gross domestic product	659	8.481	1.389	5.809	11.152
Inflation	533	24.571	2.036	19.83	29.02
Real Interest	515	5.327	9.8	-20.129	78.917

Discussion and interpretation of data begin from the early phase of descriptive analysis. Before entangled into any regression investigation, its essential to know what the sample of the

current study conveys the information regarding data. Through descriptive analysis, outlier and normality of the sample data are identified. Descriptive statistical analysis has ensured that the data used for regression analysis is normally distributed. The standard deviation of the above table indicates how much data of control and focus variable is away from its mean value or average values, in short represent the dispersion of the data. Central tendencies of the data are usually measured by the statistical term namely, mean median and mod. The standard deviation, minimum and maximum value have shown in above table represent the different degree of variation among the sample of population. Arithmetic mean of the ease of doing business index is 60.731 along with standard deviation 11.289. Standard deviation value of the EDB does not show large dispersion or variability in the data. Low variability in the data will reveals a high degree of its reliability regarding explaining variation in FDI. Minimum and maximum value provides information regarding outlier in the data set. The minimum and maximum value of the doing business index is recorded over the study period that is 32.94 and 91.71 respectively. Value of standard deviation of the interactive terms not shows a large dispersion or degree of variability in the set of data. Mean of the explained variable of the undertaken study is 4.744 with a standard deviation 10.396 which indicate a small variation in data of FDI over the study period. The minimum and maximum value of FDI are -43.463, 198.074 respectively that is recorded over the study period.

5.2 Multicollinearity test

Analysis of the set of data for the presence of Multicollinearity would be executed as an earlier step of the regression analysis. The statisticians and research scholars that conduct regression analysis should be aware of the inimical effects of multicollinearity. Under this test, researchers confront problems that include large standard error, insignificant t-ratio, and wider confidence interval, as well as high R^2. Multicollinearity is the problem of data in which explanatory variables correlated with each other. Due to the problem of multicollinearity in the data, we are unable to get the desire outcome of the study. Therefor it's necessary to detect it and remove from the data. The motive of regression examination is to segregate the affiliation of regressand and explanatory variable but when explanatory variables are correlated then it is difficult to determine the change of one variable by keeping other constant (Mansfield & Helms, 1982). Here, this study has test the Multicollinearity through a matrix of correlation and variance inflating factors (VIF).

Table 5.2 Matrix of correlations

Variables	EDB	SB	DCP	GE	RP	GC	PI	PT	TAB	EC	RI
EDB	1.000										
SB	0.488	1.000									
DCP	0.591	0.270	1.000								
GE	0.671	0.089	0.342	1.000							
RP	0.581	0.284	0.383	0.324	1.000						
GC	0.612	0.310	0.167	0.198	0.305	1.000					
PI	0.666	0.298	0.258	0.238	0.274	0.560	1.000				
PT	0.537	0.099	0.273	0.527	0.277	0.084	0.126	1.000			
TAB	0.653	0.009	0.475	0.626	0.179	0.263	0.326	0.417	1.000		
EC	0.711	0.526	0.352	0.390	0.604	0.390	0.480	0.234	0.180	1.000	
RI	0.631	0.343	0.261	0.371	0.063	0.361	0.500	0.206	0.360	0.401	1.000

Dependence of multiple variables at the same time is determined by the Matrix of correlation. On the assumption that, if Pearson correlation value is beyond 0.7 than it would be indicated the existence of multicollenarity (Farrar & Glauber, 1967). Matrix of correlation or Pearson-type correlation in above table show the brief summary of correlation among the explanatory variables use in current study namely: business startup, dealing with building permits, registering property, receiving electricity, minority investors protection, tax payment, contract enforcement, getting credit, across the border trade and fixing insolvency (Benjamin & Theron, 2009). There is no correlation among explanatory variable because study is grounded on cross-section and time-series which erase the multicollinarity problem and many other problems (Baltagi, 2008).

In table 5.2, element on the diagonal (upper leftward to the lower rightward) provide correlation of one variable with itself that is always equal to 1. On the other side, elements of the correlation matrix off the diagonal represent the pair-wise correlation between explanatory variables used in current study. Correlation of ease of doing business with itself is denoted by number 1 in the upper left corner of the correlation matrix. The value 0.488 shows that there is no correlation between EDB and SB because this value is less than o.7 and so on. Besides the correlation of one variable with itself, entries off the diagonal matrix reveal that there are not high pair-wise correlation among the explanatory variables. Pairwise correlation might be sufficient but not a necessary condition for the presence of multicolleanirty (D. N. Gujarati, 2009).

Table 5.3 Multicollinearity By Variance Inflating Factor

Variables	VIF
EDB INDEX	1.79
GDPPC	1.93
POPU	1.37
INF	1.18
INST	1.10
Mean VIF	**1.47**

Aside matrix correlation, variance inflation factor (VIF) is another detecting factor of multicollinarity and variance among the data as demonstrated in above table 5.3. The velocity with which variance and covariance are increased which is seen with the help of the assistance of VIF. When the multicollinearity increase, VIF will also increase means that variance is much more deviate from the threshold value. When coefficient of correlation approach 0 then VIF equal to 1. Rule of thumb is that problem of multicollinearity would be existed among the regressors, when value of VIF greater than ten (10) (D. N. Gujarati, 2009). In above table, this study could not find the multicollinaerity problem among regressors because VIF value of each explanatory variable is less than 10 even overall mean value is also less than 10.

Table 5.4 Breusch-Pagan Hetroskedasticity Test

Chi-Square	P-value
204.99	0.0000

Breusch pagan test is also known as chi-square test of hetroskedasticity which is first developed in 1979 by the Trever breusch and Adrian pagan. Hetroskedasticiy generates under the situation where v(y/x) is not constant. When variance of the disturbance term has relied over the value of explanatory variable then their perameter of the regression analysis remain unbiased but the efficiency property is lost. When $P<0.05$ then null hypothesis of homoscedasticity is rejected and accept the alternative hypothesis which points out the existence of hetoskedasticity (Breusch & Pagan, 1979). Variance of the current study is not constant as shown in above table, because $0.0000<0.05$ at 5% level of significance. Panel data eliminates the problems of cross-sectional and time-series (Koenker, 1981).

Table 5.5 Normality test

(skewness)	(kurtosis)	Jarque-bera
P-Value	P-Value	P-Value
0.0002	0.0000	0.0000

We conduct some normality test which provide evidence that the selected data for empirical analysis is normally distributed or not. Jarque-bera test is the name after carlos jarque and anil kbera which revealed that if outcomes of the test is away from zero, support the non-normally distribution of the data. This test measure the goodness of fit that ensured the skewness and kurtosis follow the normal distribution. Degree of direction is manually measured by the skewness. In current context, p-value< 0.05 at a 5% level of significance, so null hypothesis is rejected, data is normally distributed but study is continue with it because data is large sufficient to bear the variability.

Table 5.6 Pooled estimation results for ease of doing business indicator's and FDI:

	MODEL (1)	MODEL (2)	MODEL (3)	MODEL (4)	MODEL (5)	MODEL (6)	MODEL (7)	MODEL (8)	MODEL (9)	MODEL (10)	MODEL (11)
VARIABLES	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**
Gross domestic pro	-0.944*	0.536	0.627*	0.865*	0.494	0.212	0.0608	0.350	0.853**	0.0202	-0.484
S.E	(0.481)	(0.359)	(0.365)	(0.475)	(0.336)	(0.360)	(0.361)	(0.481)	(0.406)	(0.332)	(0.452)
inflation	-0.728***	-0.551**	-0.419**	-0.541**	-0.511**	-0.529**	-0.576***	-0.373*	-0.368*	-0.833***	-1.496***
S.E	(0.232)	(0.228)	(0.212)	(0.248)	(0.230)	(0.209)	(0.208)	(0.217)	(0.214)	(0.207)	(0.281)
Interest rat	-0.0880*	-0.0784*	-0.0669*	-0.0808	-0.0977**	-0.0652*	-0.0835**	-0.0672*	-0.0667*	-0.0480	-0.106**
S.E	(0.0477)	(0.0422)	(0.0388)	(0.0514)	(0.0455)	(0.0381)	(0.0379)	(0.0386)	(0.0386)	(0.0373)	(0.0498)
population	0.00757	0.248	0.257	0.600**	0.277	0.0358	0.00226	0.288	0.283	0.0466	0.0627
S.E	(0.269)	(0.220)	(0.203)	(0.270)	(0.201)	(0.220)	(0.207)	(0.206)	(0.203)	(0.200)	(0.237)
Ease of business	0.311***										
S.E	(0.0542)										
Starting a business		0.0552*									
S.E		(0.0282)									
Dealing construction permits			-0.00191								
S.E			(0.0279)								
Getting electricity				-0.0116							
S.E				(0.0348)							
Registering property					0.0966***						
S.E					(0.0265)						
Getting credit						0.0620***					
S.E						(0.0187)					
Protecting investor							0.0977***				
S.E							(0.0251)				
Paying taxes								0.0245			
S.E								(0.0311)			
Trading across borde									-0.0228		
S.E									(0.0215)		
Enforcing contract										0.193***	
S.E										(0.0238)	
Resolving insolvency											0.119***
S.E											(0.0304)
Model Summary											
Constant	11.18*	10.50*	10.54*	12.36*	7.562	13.14**	13.39**	10.05*	8.766	14.42***	41.89***
	(6.082)	(5.502)	(5.508)	(6.546)	(6.258)	(5.272)	(5.243)	(5.342)	(5.545)	(5.033)	(7.462)
Countries included	44	44	44	44	44	44	44	44	44	44	44
Observations	512	512	512	512	512	512	512	512	512	512	512
R-squared	0.180	0.035	0.028	0.049	0.084	0.061	0.077	0.030	0.032	0.192	0.117

1. ***, **, * represent 1%, 5% and 10% level of significance.
2. Number in parentheses represent the standard error.
3. Number whit out parentheses represent the coefficient of the doing business indicators and FDI.
4. Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5.3 Interpretation of pooled OLS estimation results

The empirical result of pooled OLS that is presented in table 5.6 shows how the EDB index indicators could affect FDI. Pooled OLS contain the characteristics of time-series and cross-sectional as aforementioned in econometric technique. Control variables have applied in the research includes inflation, interest rate, per capita gross domestic product and population. These control variables show significant impact on FDI via diverse network. Here, the study has interpreted all the control variable's impact on FDI. In model (1), GDPC is -0.944* show a significant negative impact on FDI at a 10% level of significance. The insignificant negative impact is just due to econometric problems like autocorrelation, heterogeneity, model miss-specification generated under pooled OLS. In model (3, 4 and 9) GDPPC shows a significant positive impact on inflow of FDI at 5% and 10% level of significance respectively. When GDPPC of the countries increase, their economic growth increase leads to creates the feasible space for foreign investor. All the selected Asian countries have to be furnished with economic resources and efficient business environment that induce foreign investors to invest in the host countries. All the remaining model in which GDPPC has shown an undesirable effect on FDI. FDI affected by the negative impact of GDPPC is just due to the problems of pooled data. Pooled data having the problem of cross-sectional and time-series like collinearity, autocorrelation, heteroscedasticity, and non-stationary respectively.

By moving forward, in selected Asian countries a higher amount of inflation rate leads to discourage the FDI inflow because greater degree of inflation tends to reduce the worth of the net returns on FDI for foreign investors. The efficient market structure would attract domestic as well as extraneous investors to participate in these markets of the selected economies. Estimation results of inflation rate demonstrated in the models (1, 2, 4, 5, 6, 8, 9 and 11) have revealed a significant positive consequence for the inflow FDI at 1% and 5% level of significance correspondingly. On the other hand, the outcome in the models (3 and 7) have shown a significant negative impact on DFI at 5% and 1% level of significance cooperatively. Overall outcome of control variable is consistent by the outcome of the study (Niazi, Riaz, Naseem, & Rehman, 2011) in which it is reported that inflation discouraged the inflow of FDI. Higher the degree of inflation rate in selected Asian countries, which is according to keyns inflation is a monetary phenomenon, leads to higher will be the demand for other factors of production. Higher the demand of the factors of production

leads to the higher cost and higher will be the wages of labor which would discouraged the inflow of FDI toward Asian countries.

Now, this study further shed light on the link between the real interest rate (control variable) and FDI. Real interest rate has served as control variable that effect the FDI inflow. Beside model (4, 10), in the model (1, 2, 3, 5, 6, 7, 8, 9, 11), the outcomes of interest rate have shown a weak significant negative effect on FDI at 5% and 10% level of significance. The outcomes of this study in an interest rate perspective are reliable with the consequence of the study (BETT, 2017) who investigates the effect of interest rate on FDI. Some important factors determine FDI in developing countries including interest rate, political stability, corporate taxes, exchange rate, inflation, and infrastructure. Efficient investment layout along with least interest rate commit higher FDI inflow in Asian countries (Kiplagat, 2016). Regression result of interest rate also concurs with the theory (Anna et al., 2012). The main objective of their research had to determined effect of interest rate effect on FDI in case of Zimbabwe economy. Outcomes of their study denoted undesirable association amongst high rate of interest and invasion of FDI.

Next interactive term used in the current study is population growth (annual percentage) impact on FDI. Asian region in 2019 comprises 60% of the world's population. Among the 48 Asian countries, there are two most populated regions namely, China and India [www. World population review.com]. This shows that highly populated countries in the Asian region fascinate a large portion of FDI invasion. In table 4.6, the population coefficient value in model 4 is (0.600**) which has revealed a momentous constructive effect on FDI at a 5% level of significance. In contrast to model (4), coefficients values in all the remaining model reveal an insignificant impact on FDI. Besides model (4), the insignificant population outcomes in the remaining model occurred just due to the econometric problems emerged in panel data. Best to our knowledge, before the current study not a single study have been found that support this argument. Now the study would be shed light on each indicator of EDB index impact on FDI gradually.

5.3.1 Impact of EDB on FDI

In table 5.6, in model (1), coefficient value of the EDB index is (0.311***) which has revealed a highly significant consequences for the inward flow of FDI at a 1% value of alpha. This positive significant coefficient’s value shows that efficient business environment is a necessary

condition to fascinate the FDI flow toward selected Asian countries. This outcome is in line with the (Shahadan et al., 2014) who investigated six Asian countries and concluded that efficient business environment conducted by government of the host countries leads to attracting higher amount of inward FDI. In the same way, Singh (2015) has also supported this argument that EDB index having a long period association with FDI inflow. In this segment, study rejects the null hypothesis that there is not a bond between EDB and FDI because the coefficient value of EDB index is greater than the probability value of 0.01%. If EDB increased by 11.289 of its standard deviation which would lead to increase 33% increase in FDI inflow. The magnitude of the coefficient of EDB is not so high just due to the problems of econometrics.

5.3.2 Starting a business impact on FDI

In model two of the regression results of the pooled estimation, starting a business shows a slightly significant optimistic effect on FDI at a 10% level of significance or level of alpha. In Asian countries, minimum cost capital to starting a business, number of weeks and hiring cost are important determinants of FDI. Some studies including (Hassan & Basit, 2018), (Nangpiire et al., 2018) and (Vogiatzoglou, 2016), also support this outcome that SB has shown a significant conclusive effect on FDI inflow toward nominated Asian states. In South Asian countries, the time required to start a business is 14 days. According to the World Bank facts sheet (2019), china and Singapore are included in top 50 economies as well as rank 46 on EDB index index. The countries where business startup is more easy would be encouraged the inflow of FDI as well as motivate domestic investors to make further investment. Ease of starting a business among Asian countries with the perception of low capital requirement, minimum cost and least time would be encouraged the further inflow of FDI.

5.3.3 Dealing construction permits impact on FDI

In the third model of table 5.6, dealing construction permits shows an insignificant negative impact on the invasion of FDI toward selected Asian republics. This negative insignificant result is due to the cross-sectional and time-series problems among the data. Some of these problems are multicollinearity, autocorrelation, heteroskedasticity and model miss-specification. In the pooled regression model, differences in individual countries and time effect go to the error term. Pooled regression results are simply the OLS outcomes based on some

assumption like constant intercept and slope coefficient. Therefore, the correlation of EDB indicators with its main index, points out an insignificant impact on the inward flow of FDI. FDI is more attracted in those countries where construction permits are more effective, less costly and minimum time taking for the paperwork. In some countries, entire process of construction permits are taking by the help of electronically or by a one-stop shop.

5.3.4 Getting electricity impact on FDI

In model (4), the regression outcome of getting electricity that is one of EDB index indicator has shown insignificant influence on the arrival of FDI. This outcome is not rational with the theory because its coefficient value is statistically insignificant. Insignificant regression result is just due to the existence of the econometric problems in pooled data. In this section, current study accepts the null hypothesis that is that getting electricity area of doing business could not influence FDI. Sustainability of this area of doing business index encourages health and education through improving electricity in the selected Asian countries. Getting electricity is not necessary but a sufficient condition to improve economic growth. Low cost, least complicated procedure of getting electricity enhanced the productivity of the small-medium enterprise and other firms in the selected Asian countries. The number of the procedure, time and cost of getting electricity strongly determine the inflow of FDI.

5.3.5 Registering property impact on FDI

In the model (5), Registering property is another doing business indicators that has shown a significant positive consequences for the invasion of FDI in the particular Asian republics. The coefficient value of registering property is (0.0966***) that has exposed the strongest significant affirmative effect on the inflow of FDI at a 1% level of significance. According to the world doing business report, government of each Asian countries specifically central Asian countries have been conducted business reforms to improve the business environment of the countries enlisted in the EDB index (Business, 2009). Business reforms upgrade the business regulatory system of Asian countries. Outcomes of this study are in line with the study of the (Hassan & Basit, 2018; Shahadan et al., 2014; Singh, 2015). Earlier theories suggest that protection of the registering property right increase the interest of the foreign investor's to invest and it also increases the value of the firms. Registering property law comprises the provision of strongest property rights for foreign firms and

their creditors. Therefore better property right leads to attracting higher amount of inflow of FDI toward Asian countries. Registering property has cost-effectiveness and long term impact on the inflow of FDI.

5.3.6 Getting credit impact over FDI

In model 6, the coefficient value of getting credit is 0.0620*** that has shown the highly significant decisive effect on the arrival of FDI. Result under pooled regression is consistent with the outcomes of the study by (Hassan & Basit, 2018; Shahadan et al., 2014) in which it is reported that getting credit is one of the efficient inflowing factor of FDI. Getting credit represents the strength of credit rule, laws, and effective credit reporting system during landings and borrowing. It is evident that getting credit facilities in developing countries has strongly impacted the increase in the FDI flow. Estimated outcome of the obtaining credit is further supported by the studies (Piwonski, 2010; Shahadan et al., 2014; Singh, 2015) in which it is investigated that upgrade doing business regulation will attract higher amount of FDI inflow and encourage the domestic investors to make investment. There is another group of studies (Borensztein et al., 1998; Greenwood & Jovanovic, 1990; Levine, 1991) in which it is reported that nature of a country's financial system expose its ability to encourage saving, allocate the capital and influence the FDI inflow in a good way.

5.3.7 Protecting investors impact on FDI

Outcomes in Model (7) reveals that protection of the investors in host countries is not a necessary but a sufficient condition for FDI inflow. The coefficient value of protecting minority investor is (0.0677***) which has shown significant influence on FDI at a 1% level of significance. This significant value enables the researcher to reject the null hypothesis. The null hypothesis is that minority investor protestation has no effect on FDI. Protecting minority investor emphasizes on the equity investor and a large number of the shareholder which have the potential to change the decision of the firms by vote and having a share in loss and profit. This minority shareholder does not have the rights to control the whole company. The outcome of minority investors shareholder is in line with the studies (Hassan & Basit, 2018; Piwonski, 2010; Singh, 2015) which showed that efficient minority investor protection environment leads to attracting higher amount of FDI inflow.

5.3.8 Paying taxes and trading across border impact on FDI

Under the regression model (8 and 9), paying taxes and trading across the border have shown an insignificant positive and negative implication to the arrival of FDI respectively. The highest taxation rate in the country discourage the inflow of foreign direct investment. When there is the highest cost of trade across the border also discourage the inflow of FDI. The procedure, time and cost are the factors that determine the contribution of tax payment and trade over the border in the attractiveness of FDI. Over the border trade and tax payment have played a compelling rule to the attraction of FDI but here, these are showing the insignificant influence on the invasion of FDI just due to the problems of panel data. The institutional quality of over the country territory trade, tax payments, credit facilitation, and property registration have received great attention in the last few years. Quality of institution differ for different countries and to attract higher FDI, the government of the state over the world work on the enhancement of the quality of the institution. These outcomes are against the theory because of time-series and cross-sectional problems, present in the regression analysis of the pooled data.

5.3.9 Enforcing contract impact on FDI

In model (10), enforcing the contract has shown a significant affirmative consequences to the arrival of FDI. Coefficient value (0.193***) on which enforcing contract is significant at a 1% level of significance, described the fact that the effective law and order of the judiciary system invoked the foreign investors to make their investment in elected region. This value provides help for the rejection of the null hypothesis which shows enforcing contract could not influence the inflow of FDI in the selected Asian nations. The outcome of the contract enforcement is consistent with the study (Jovanovic & Jovanovic, 2018) which showed enforcing contract having a significant positive impact on FDI. Enforcing a contract is the part of one segment of the rule of law. The procedure of good enforcement ensured the marvelous link among business area and eliminate the uncertainty factor regarding investors that their contractual rights will be promoted by the provincial or district court. One of the most important public contract enforcement institution named as the court that is the place of last resort. The court is not a single body to solve the entire investor's dispute because there are many alternative ways like arbitration, conciliation and mediating roles played by private sectors (Ahlquist & Prakash, 2010).

5.3.1 Resolving insolvency impact on FDI

In model (11), regression outcome of resolving insolvency has shown a significant positive impact on the inflow of FDI at a 1% value of alpha. Here, this study rejects the null hypothesis that there is no association among insolvency indicator and FDI because p-value of resolving insolvency is larger than 0.01 at 1% level of significance. Bankruptcy dispute would be settled under this section. This outcome is consistent with the (Mahuni & Bonga, 2017) in which it is reported that minimum risk associated with loan payment enhanced the inflow of FDI. Business index measured the procedure, recruitment expenses and time, to resolving commercial disputes. The recovery rate of debt in insolvency is computed or determined by time, cost and outcome in each economy. It is generally considered that insolvency is an instrument of debt recovery during the period where creditors face increasing trend in court fee. (Mahuni & Bonga, 2017)

Table 5.7 Fixed effect estimation result:

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)	Model (10)	Model (11)
VARIABLES	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**
Gross domestic product	0.785	-5.115	3.301	-2.302	2.584	0.297	3.357	2.646	4.833	-3.426	-4.717
S.E	(5.941)	(3.246)	(3.565)	(6.026)	(3.758)	(3.318)	(3.606)	(3.646)	(3.597)	(3.184)	(3.866)
Inflation	-8.897*	-1.489	-7.466***	-9.757**	-8.556***	-7.076***	-8.600***	-8.518***	-8.075***	-5.845**	-7.205**
S.E	(4.581)	(2.836)	(2.514)	(4.524)	(2.626)	(2.430)	(2.453)	(2.464)	(2.428)	(2.350)	(2.876)
Interest	-0.0491	-0.0376	-0.0408	-0.0596	-0.0795**	-0.0466	-0.0360	-0.0457	-0.0412	-0.0542*	-0.0822**
S.E	(0.0449)	(0.0331)	(0.0306)	(0.0446)	(0.0377)	(0.0307)	(0.0313)	(0.0307)	(0.0302)	(0.0323)	(0.0414)
Population	-0.610	-0.283	0.520**	-0.779	0.583**	0.593**	0.538**	0.556**	0.478*	-0.486*	-0.482*
S.E	(0.540)	(0.284)	(0.256)	(0.533)	(0.260)	(0.257)	(0.256)	(0.258)	(0.254)	(0.263)	(0.278)
Ease of doing business index	0.235*										
S.E	(0.201)										
Starting a business		0.102**									
S.E		(0.0415)									
Dealing construction permits			0.0720*								
S.E			(0.0384)								
Getting electricity				0.0403							
S.E				(0.0832)							
Registering property					0.0642						
S.E					(0.0650)						
Getting credit						0.0104					
S.E						(0.0291)					
Protecting investor							0.0810				
S.E							(0.0542)				
Paying taxes								-0.0192			
S.E								(0.0423)			
Trading across border									-0.0939***		
S.E									(0.0322)		
Enforcing contract										0.137*	
S.E										(0.0714)	
Resolving insolvency											0.0490
S.E											(0.0482)
Constant	230.6**	93.56*	162.5***	261.2***	187.8***	174.1***	189.3***	190.5***	165.4***	169.2***	222.7***
	(91.53)	(50.70)	(48.17)	(88.59)	(44.74)	(44.05)	(45.45)	(46.02)	(45.83)	(40.63)	(51.60)
Summary											
Observations	512	512	512	512	512	512	512	512	512	512	512
R-squared	0.082	0.115	0.101	0.076	0.101	0.084	0.096	0.089	0.118	0.108	0.125
Number of code	44	44	44	44	44	44	44	44	44	44	44

1. ***, **, * represent 1%, 5% and 10% level of significance.
2. Number in parentheses represent the standard error.
3. Number whit out parentheses represent the coefficient of the doing business indicators and FDI.

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.

5.4 Interpretation of the fixed effect's estimation result

Each unit has its own specific intercept term in a fixed effect model. The intercept or mean is correlated with individual countries but remain constant over the time. Under fixed effect section, individual unique features are correlated with error term. In short, all parameter including constant and slope coefficient of the model are fluctuate across the individual but remain fixed over the time. These variability of parameters across the individual unit leads to generate the problem of heterogeneity (Wooldridge, 2011). Therefore the present of unobserved heterogeneity leads to ambiguous outcomes estimated from the observed variable data. Here, we will make interpretation on focused as well as control variables' effect on entry of FDI in underpin Asian republics step by step as did earlier.

5.4.1 Control variables effect over FDI inflow in FEM

First and the most important interactive term is per capita gross domestic product whose estimation results in the models (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11) have revealed insignificant impact on inflow of FDI. GDPPC is the most decisive key determining factors for inflow of investment because GDPPC exhibit the prosperity and living standard of the different countries. These results are against the theory, because FDI is strongly effected by growth rate of GDPPC in Asian economies. In some earlier research work, GDPPC served as ambiguous key factor that could affect FDI in different perspective. Some existing literature support this concept that developing countries have low level of GDPPC ratio that is why cheap labor force in host countries attract bulk of FDI inflow. While some argued that high GDPPC growth rate represent all the institutional improvement in that country's also become the source of inflow of FDI.

Next interactive term is inflation whose regression results are presented in above table. Regression result of inflation in models (3, 4, 5, 6, 7, 8, 9, and 10) have shown significant negative impact on inflow of FDI at a 1% level of significance. Result of inflation presented in models (1, 4, and 11) have also shown significant negative impact on regressand variable of underpin study. Outcomes of inflation are similar to the results of the study (Ahmad, Hayat, Luqman, & Ullah, 2012),(Li & Liu, 2005) in which it is argued that higher rate of inflation is the macroeconomic key factor responsible for discouraging FDI inflow. Inflation rate denotes the persistent rise in overall price of all the good and services produced in a country over the time within one year. A rise in

general price level would be decreases the purchasing power of the consumer because higher inflation will reduce the worth or value of currency used during transaction. It mean that small quantity of goods purchased when price increases. Increased prices of goods have been revealed the high wage rate and in a consequence production cost increase that would be discouraged the MNEs investment decisions. Negative association between FDI and inflation rate would tend to increase the cost of input like cost of raw material, wage of labor, cost of tangible capital and rent of land. These high cost of the factors of production discourage the demand for the foreign and domestic commodities. Finally, tremendous factors of production cost reduced the profit of the foreign investor which discourage the foreign investment in countries where rate of inflation is high (Li & Liu, 2005)

Regression outcomes of interest rate which demonstrated under the model (5, 11, and 10), have revealed significant negative impact on inflow of FDI at a 5% and 10% degree of significance. Interest coefficient value in models (1, 2, 3, 4, 6, 7, 8, and 9) have shown insignificant negative connotation among interest rate and FDI. Real interest rate is an effective measure of inflow of FDI after adjusted for inflation. The logic behind this sort of outcome is that foreign investor always seek out cheap funding system and want to attain higher profit on the amount of money invested in home republic. It mean that the return rate that the foreign investors earn on their investment would be higher if and only if the rate of interest at which funds borrowed in host country are relatively lowered, will fascinate FDI inflow (Singhania & Gupta, 2011). The negative association among real rate of interest and inflow of FDI in above model are in line with the outcome of the study (Mengistu & Adhikary, 2011) which show the impact of interest rate in terms of lending rate that symbolizes the high cost of assets. There is another study in which author declared that low rate of interest revealed the cost advantage for foreign firm to encourage FDI inflow (Boateng, Hua, Nisar, & Wu, 2015).

Lastly, regression result of population growth (annual %) in the model (3, 5, 6, 8, and 9) exhibited in above table has shown significant positive influence on inflow of FDI in elected Asian states at 5% and 10% level of significance respectively. The decisive result of population growth is harmonious to the conclusion of the study (Aziz & Makkawi, 2012). In contrast to these positive outcome of population growth, result demonstrated in model (1, 2, 4, 7, 10, and 11) has exposed insignificant and significant negative influence on inflow of FD. Some Asian countries having a

large population growth rate which provides the cheap labor, vast market for exports oriented investors as well as natural resources that are all key factors for determining FDI inflow.

5.4.2 Interpretation of independent variable impact on FDI inflow

Let's turn to the interpretation of explanatory variables influence over inflow of FDI. Under model (1), the first and most prominent explanatory variable is EDB index which shown slightly significant influence on inflow of FDI at 10% level of significance in the selective Asian countries. Purpose behind analyzing impact of doing busi0ness index on inflow of FDI is to check potential of the business institutional framework in Asian countries and find out the extent at which business institution would be play a key role for attracting FDI. This result might be vary from country to country because not all countries have homogeneous business framework and economies of scale but still be applicable to majority of the economy. This outcome is similar with previous findings (Hassan & Basit, 2018; Piwonski, 2010; Shahadan et al., 2014).

In model 2, explanatory variable is starting a business which has shown statistically significant impact on inflow of FDI at a 5% level of significance. Business startup, indicator of the EDB index measure the procedure, cost and days (time) required to the small-medium company to launch a new firm. Earlier research work indicate that when there is decreasing trend found in all the indicator of starting a business (procedure, time, cost) simultaneously would encourage the inward inflow of FDI (Bayraktar, 2015; Singh, 2015). Outcome of this estimation result is consistent with the previous study (Hassan & Basit, 2018; Nangpiire et al., 2018). Higher amount of FDI in an economy generate if that economy have an easiest arrangement to start up new business. Indeed, such results might be vary from a country to country but previous study found similar results in countries including India, Iran, Pakistan, Sri Lanka, Afghanistan and Bangladesh (Shahadan et al., 2014).

In model 3, the focus variable is dealing with construction permits. This variable has shown slightly significant impact on inflow of FDI at 10% significance level. FDI is more attracted in those economies where construction permits are less costly, more effective and minimum time require for completion of paperwork. Outcome of the construction permits is resembled to the study (Jovanovic & Jovanovic, 2018; Mahuni & Bonga, 2017; Nangpiire et al., 2018; Shahadan et al., 2014) in which it is reported that FDI is positively influenced by construction permits

indicators. As aforementioned, under the interpretation of pooled estimation result, some important factors that determine the efficacy of building permits are procedure, time and cost. Business improver Asian countries on the bedrock of the doing business in 2017-2018 include Russian federation with score (77.37), turkey with ease of doing business score (74.33) and china attains score (73.64) that are calculated through ten area of doing business index (Business, 2019b).

In model (4 and 5), getting electricity and registering property have shown decisive insignificant impact on inflow of FDI toward all Asian countries. These insignificant outcomes are just due to existence of heterogeneity among the cross countries individual specific characteristics of the undertaken countries. Under fixed effect, country specific characteristics are correlated with explanatory variable but remain invariant over the time (Wooldridge, 2010). This area of business measure the procedure, cost and time in term of days associated with registering property and getting credit. These factors effect only when assumption of the administrator who desire to purchase a land that is already register and containing dispute free title hold. Therefore, in Asian countries, inflow of FDI has been accelerated by implementing the limits on some procedure, digitize all the process of the business and reduced fee on transferring the property.

Regression results of getting credit and protecting minority investors demonstrated in model (6 and 7) have shown insignificant impact on flow of FDI in Asian countries. These undesirable outcomes are just due to presence of heterogeneity and correlation that are allowed under fixed effect model. Getting credit measure the effectiveness of collaterals, strengthen of the credit and bankruptcy laws in facilitating lending. Protecting minority investor's indicator measure the protection of minority shareholder against the company director's misuse of asset for personal gain. This area of business is further composed of three dimension of protecting investors including clarity in part dealing (disclosure index), shareholder capability to sue directors for misuse of corporate asset (shareholder suit index) and the last one is director liability index. These index discourage the inflow of FDI if there are found increasing trend among them (Shahadan et al., 2014). In short, doing business is an instrument that analyze the business rule and regulation which encouraged the freedom to do business.

Result of paying taxes demonstrated under model (8) has shown statistically insignificant impact on inflow of FDI. Fixed effect estimation result of trading across border, presented in model (9), has shown significant optimistic effect on inflow of FDI in elected Asian regions. At 1% level

of significance, positive outcome of trading across border is supported by the theory of the study (Shahadan et al., 2014) in which author reported that FDI inflow encouraged by bring improvement in trade index. Trade indicator of doing business measure the compliance cost and time of importing as well as exporting. One of the doing business indicator of paying tax applicable to the medium size company manually measures the total tax, contribution rate, number of payment, time and efficiency of the filing process. The study reported that there is not any association found among paying tax and FDI (Shahadan et al., 2014). Largest improvements in business regulatory system with the passage of time are recorded in the Europe and central Asia (Business, 2019b). Therefore, improvements in the entire area of doing business specifically in Asian region would accelerated the inflow of FDI.

Under model (10), fixed effect estimation results of enforcing contract has revealed that the inflow of foreign capital would be encouraged by appropriate judicial rules and laws. Rank of countries on bedrock of this component of doing business is determine by computing the score of three indicators that are number of days to settle the dispute by local court, cost (% of claim value) of court and good practices that enhance the quality of court (Business, 2009). Commercial disputes do not always resolved by court. Some court alternative dispute settlement bodies include mediation, arbitration and conciliation which play a key role in resolving problems. This positive result are in line with the study (Hassan & Basit, 2018; Jovanovic & Jovanovic, 2018) which reported that inflow of FDI encouraged through contract enforcement. Reported result of the last element of doing business that is resolving insolvency in model (11) has displayed progressive insignificant impact on inward inflow of FDI. This insignificant impact resulted from the presence of correlation and heterogeneity problems that emerged under fixed effect model. Theory behind this indicators will be discuss in detail in the upcoming interpretation of GMM.

5.8 Random effect estimation result:

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)	Model (10)	Model (11)
VARIABLES	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**
Gross domestic product	-0.645	0.169	0.793	0.507	0.0802	0.231	0.299	0.626	1.107	-0.468	-0.393
S.E	(0.670)	(0.650)	(0.651)	(0.733)	(0.621)	(0.617)	(0.612)	(0.748)	(0.692)	(0.578)	(0.755)
Inflation	-0.766**	-0.666	-0.954**	-0.679*	-1.001**	-0.900**	-0.862**	-0.913**	-0.710*	-1.101***	-1.773***
S.E	(0.321)	(0.410)	(0.382)	(0.384)	(0.399)	(0.375)	(0.369)	(0.388)	(0.388)	(0.348)	(0.509)
Interest	-0.0953**	-0.0474	-0.0611**	-0.0897**	-0.109***	-0.0697**	-0.0725**	-0.0701**	-0.0665**	-0.0715**	-0.113***
S.E	(0.0423)	(0.0333)	(0.0300)	(0.0416)	(0.0371)	(0.0302)	(0.0305)	(0.0300)	(0.0297)	(0.0319)	(0.0411)
Population	0.218	-0.322	0.343	-0.439	-0.365	-0.378	0.321	-0.312	-0.315	-0.271	0.397
S.E	(0.326)	(0.249)	(0.225)	(0.346)	(0.230)	(0.230)	(0.226)	(0.229)	(0.225)	(0.234)	(0.256)
Ease of doing business	0.218***										
S.E	(0.0738)										
Starting a business		0.0874***									
S.E		(0.0311)									
Dealing construction per			-0.0770**								
S.E			(0.0311)								
Getting electricity				0.00106							
S.E				(0.0473)							
Registering property					0.0663						
S.E					(0.0409)						
Getting credit						0.0120					
S.E						(0.0234)					
Protecting investor							0.0150				
S.E							(0.0369)				
Paying taxes								-0.0259			
S.E								(0.0366)			
Trading across border									-0.0706***		
S.E									(0.0265)		
Enforcing contract										0.169***	
S.E										(0.0394)	
Resolving insolvency											0.0334
S.E											(0.0402)
Constant	15.76*	26.92***	26.72***	17.48*	25.30**	25.09***	23.17**	24.15**	17.65*	27.01***	52.18***
	(8.315)	(9.958)	(9.725)	(10.00)	(10.41)	(9.433)	(9.248)	(9.736)	(10.02)	(8.608)	(13.36)
Observations	512	512	512	512	512	512	512	512	512	512	512
R-squared	33	33	33	33	32	33	33	33	33	33	29
Number of code	44	44	44	44	44	44	44	44	44	44	44

1. ***, **,* represent 1%, 5% and 10% level of significance.
2. Number in parenthesis represent standard error.
3. Numerical value without parenthesis represent the coefficient value of EDB index indicators and FDI.

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5.5 Interpretation of random effect model

Random effect model (REM) overcome the problem of unobserved hetrogeniety which is generated under FEM. REM also known as variance component model that is depend on supposition that specific characteristics are uncorrelated with explanatory variable. Random effect based on the assumption that individual specific effects are not correlated with explanatory variable. Indeed, REM resolve the problem of heterogeneity but generate another problem termed as endogeneity. Endogeneity problem occur, in different situation, when explanatory variables are correlated with residuals, error of measurement and dependent variable found to be simultaneously in the multiple equation system. Under the problem of endogeneity, assumption of classical linear regression system violated which ensure that estimator not hold the property of BLUE (best linear unbiased estimator) (Qian & Su, 2014; Semykina & Wooldridge, 2010). We would interpret the random effect estimation result demonstrated in above table in the same ways as did in fixed effect and under pooled OLS.

5.5.1 Interpretation of control variables impact on inflow of FDI under REM

First and the most effective key determining factor of FDI is the GDPPC which measure the prosperity and living standard of the economy. Result of this interactive term presented in the model (2, 3, 4, 5, 6, 7, 8 and 9) has shown statistically decisive insignificant impression on inflow of FDI toward Asian countries. In contrast to, random effect estimation result of per capita GDP in the model (1, 10, and 11) has revealed insignificant negative effect on arrival of FDI. Overall, insignificant outcomes of per capita GDP under random effect model, are just due to the existence of endogeneity problem in model. There are number of studies that explored the relationship between GDPPC, macroeconomic factor, and FDI. Some earlier studies support the argument that FDI attracted by GDPPC (Hakizimana, 2015) in which it is reported that there is optimistic association among FDI and GDPPC in Rwanda. On the other hand, some argue that developing countries have been lower the level of GDPPC that is the key factor to attract FDI inflow. All those Asian region having a sustainable economic growth rate will be receive greater FDI inflow than volatile economies (Sahoo, 2006).

Estimation result of, second macroeconomic interactive variable, inflation presented in the model (10 and 11) has shown significant negative implication for inward FDI at a 1% level of significance. Outcome of inflation (consumer price annual %) demonstrated in models (1, 3, 4, 5,

6, 7, 8 and 9) have revealed significant negative impact on inflow of FDI at 5% and 10% level of significance. Outcome of inflation in model (2) has exhibited insignificant negative impact on explained variable that is FDI. Negative coefficient sign of inflation have shown that inflow of FDI would be adversely discouraged by increasing the level of inflation rate in Asian region. These negative estimation result of inflation are supported by the study (Boateng, Hua, Nisar, & Wu, 2015; Li & Liu, 2005) in which reported that macroeconomic factor, inflation, negatively influenced the FDI. Inflation is the outcome of the excess money supply and increasing their level decrease the value of money. However, inflation have a potential to effect FDI in a positive or negative ways. Instead of hyperinflation, Sustainable inflation rate attract higher amount of FDI but recent past work indicate that in Asian countries inflation rate increasing day by day (Shaikh, Shaikh, & Mirza, 2019). Economic instability is measured by the inflation rate, which might be reduce the FDI inflow (Bank, 2012)

Interest rate (real interest rate %) which is third control variable used in underpin study is key macroeconomic factor that determine the inflow of FDI. Results of interest rate demonstrated in model (1, 3, 4, 6, 7, 8, 9 and 10) has unveiled significant negatively affect the inflow of FDI at a 5% level of significance in Asian countries. While result presented under the column (5 and11) has disclosed the highly significant negative influence inward FDI at 1% level of significance. Interest rate presented under the model (2) has shown insignificant negatively affect FDI inflow. The overall outcome of this interactive term is compatible with the study (Sharifi-Renani & Mirfatah, 2012) in which reported that grated interest rate in targeted economy deter inflow of FDI. Real interest rate is, the lending rate, adjusted for inflation has been low in Asian countries which would be discourage the return on investment of the foreign investors in that region. Highest value of interest rate is found in Iraq which is 53.54 and in such region foreign investors get higher profit on their investment. Lowest value observed in one of the Asian region is Nepal and that value is -6.21. Low level of real interest rate discourage the inflow of FDI. Result shown in above table give a clue that FDI in Asian region discouraged by low rate of interest rate because MNEs make their investment project from low interest rate countries to higher one which ensure higher return on investment (Business, 2019a; Gete, 2014; Jacobsson, 2019).

Last macroeconomic interactive term is population growth. Regression outcome of population growth (annual %) presented in (1, 3, 7 and 11) has shown insignificant positive impression on influx of FDI. Regression result of population growth in model (2, 4, 5, 6, 8, 9 and 10) has shown insignificant negative influence on inflow of FDI in Asian states nominated in World Bank's doing business index. Overall, these insignificant shock on arrival of FDI resulted by endogeneity problem under random effect model. The endogeneity problem is resolved by using instrumental variable technique (GMM) that would show in next section of study. Population growth in mostly Asian countries like china, India have revealed the expanded market structure, cheap labor that are key factors to attract FDI. There are very small number of studies in recent past that explore the links between population growth impacts on inflow of FDI. Mostly recent studies investigate the relationship between population growth's impacts on economic growth.

5.5.2 Explanatory variable impact on inflow of FDI under REM

The study already made a numerous discussion on focus variables of the study. Beta coefficient value of EDB index in model (1) has shown highly significant decisive impact on influx of FDI in elected Asian regions. Coefficient value of EDB index is (0.218***) which reflect the fact that Asian countries have an efficient business environment. Efficient business environment is due to the institutional reforms of business conducted by the government each year. Effective business environment among Asian countries in terms of low cost skilled labor, cheap raw material, low rented land and abundant of natural resources encouraged greater FDI invasion. Outcome of this area of business is consistent with the final conclusion of the study (Shahadan et al., 2014). Public administration of the Asian region should attempt to set up such an effective business regulatory environment that could attract large number of MNEs to launch a new companies.

Now current study has founded connection among EDB index indicators and inflow of FD in Asian region enrolled on World Bank's business indices. The business startup estimation result in model (2) has shown significant conclusive effect on influx of FDI at 1% level of significance. Regression outcome of the explanatory variable starting a business is similar with the result of the study (Hassan & Basit, 2018) in which it is reported that starting a business or entry into the any new established firm is positive aligned with FDI. In some countries, there are few number of procedure, time and days are required to inter into business or establish limited liability Company.

Some countries adopt new technology system like tax offices in Pakistan linked electronically. In recent past, a week were required by entrepreneur in Karachi to take a tax registration number, but now just in few hours tax registrations process is accomplish. Low cost of documentation process and taking number registration via electronically encourage the oversea investors to make further investment (Business, 2009).

Another effective area of doing business is constructions permits. Regression outcome of construction permits in model (3) has unveiled moderately significant optimistic effect on inflow of FDI in Asian region. Regression outcome is consistent with the study (Nangpiire et al., 2018) in which it is explained that FDI would be discouraged by highly complicated process of taking construction permits in the municipal construction office by paying high cost of that permits. In Asian countries, 60-80% building construction projects are taken without construction permits because approval process is much complicated. Business companies confronted with corruption where it is difficult to handle with building permits. In Asian countries, where dealing with building permits are more difficult including, India, china, Tajikistan, Russian federation whose ranked on dealing with construction permits are 175, 180, 177 and 182 respectively, discourage the influx of FDI. In contrast to this ranking, in Asian countries where dealing with construction permits are easiest include, Hong Kong, china, Singapore, Georgia and Maldives as their ranking are 1, 2, 7 and 9 respectively. Such rankings of the economy are based on the procedure, time and cost associated with the construction of a warehouse (Business, 2009).

Random effect estimation result of getting electricity and registering property demonstrated in model (4 and 5) have revealed insignificant positive for FDI from random effect model. Insignificant consequences manually due to the problem of endogeneity which ensure that explanatory variables are interrelated with disturbance term of the model. Business measure receiving electricity on the basis of the number of procedures, time in days, and expenditure on the percentage of per capita income is required to access electricity connection. In some Asian countries as like UAE, electricity connection process is completed in eighteen days. In the same way, cost beard by foreign investors to take electricity connection in UAE and china is zero (0%) (Jayasuriya, 2011). Easy, quick and cheap property registration process facilitate entrepreneur to focus on their profit oriented business investment project. Doing business report process required for a business to purchase property from another enterprise and pass the ownership in term of title

to the name of the purchaser so that purchaser can legitimately use it to expand or cell it to another business (Business, 2009). There are nine countries in Eastern Europe and central Asia in which property registration process is easy through the continuing effort of reforms in the past (Business, 2009).

Random effect regression result of getting credit exposed in the model (6) has disclosed the insignificant positive implication for inflow of FDI toward Asian economies enlisted on World Bank's doing business index. These insignificant outcome might be due to the problem of endogeneity, error of measurement and model miss-specification. Doing business evaluate the borrower and lender legal rights and credit information system. First, this area of business simply describe how well the loans are facilitated by the collateral and bankruptcy laws. Second, getting credit which is the sub-indices of doing business index determine the range, reliability, and availability of credit information through government and private registers. Third, access to credit and registered asset information used as securities tends to help creditors which evaluate the credit worthiness of future possible client. The Asian countries where getting credit is easy include china, Israel and Singapore as their rank are 6, 7, and 9 respectively. Ranking of this area of doing business are depend on the power of legal right and credit information index (Business, 2009).

Random effect regression result of protecting minority investors in model (7) has revealed statistically insignificant positive consequences for inflow of FDI toward Asian countries entitled on the world's bank doing business index. As earlier explained, these insignificant outcomes are just due to the problem of endogeneity and caused by many other problems emerged in random effect model. Protection measure for minority investors are specifically focused on equity investors and more generally on minority shareholder who have a significant interest to allow them to vote on major discussion, share in losses and in gain. Minority shareholder not have a potential to run the company by standing alone. Minority investors generally demand consistency in business dealing, responsibility for inappropriate corporate practices and the ability to participate in the company's major decision. There are three number of indexes that measure the protecting minority investors including index of shareholder right, control and corporate transparency index. These three indices combine to form an index of governance. Governance index measure the shareholder's right under three dimension. The first dimension is the minority shareholder right to make sure their rights in corporate decision while second include governance protection shielding

investors from undue influence and restructuring. Third dimension of governance index is corporate transparency on ownership interest, compensation, audit and financial perspective (Business, 2009).

Random effect regression outcome of paying taxes in model (8) has revealed insignificant negative implication for FDI inflow toward Asian region. EDB index calculate the tax burden on a small to medium-sized enterprise and the amount of expenditures and the time spent dealing with tax law. The negative effect of tax rate on country's ability to fascinate FDI has been the subject to extensive research over the recent past. This area of doing business calculate the tax bear by small to medium sized firms, number of tax payments and time spent on the tax laws. Time is recorded every year in hours. This indicator measure the time required to prepare document and the time associated with payment of three main form of taxes such as value added, corporate and labor tax. Higher the corporate tax bear by foreign investors will tends to discourage further FDI inflow (Lawless, 2013). The Asian countries which makes it easy to pay tax on the basis of number of payment (each year) include Maldives, Qatar, china, Singapore and Timor lets. In the same way, Asian countries that encourage the payment of time-based taxes (hours / year) include Maldives, the United Arab Emirates, Bahrain, Qatar and Oman. The Asian countries in which total paying tax rate is lower include Timor-lets, Maldives, Qatar, UAE, Saudi Arabia, Bahrain and Georgia (Business, 2009). If there is complicated tax payment system high chargeable fee and longtime duration, which would be discouraged the inflow of FDI such as negative sign of paying taxes has shown here.

Regression result of trading across border under fixed effect model (9) has shown significant negative implication for inflow of FDI at a 1% level of significance. Outcome of trading across the border is consistent with the study (Jovanovic & Jovanovic, 2018) in which it is reported that trade showed significant implication for inflow of FDI. Expenditure and time needed for the preparation, submission of import and export document are calculated by this area of operation. Where the business climate is more attractive in term of least time and cost, companies are able to take advantage of new trade opportunities and create new jobs as the global economies grow (Business, 2019b). Some non-economic factors such as geography, infrastructure, road capacity, location of warehouse could not be directly decided by trade reforms and policies manually affected by time and cost in the targeted countries.

The Asian countries where trading process is easiest in term of minimum cost and time include Singapore, china, UAE, and their rank are 1, 2, and 5 respectively. in contrast to this, the countries in which trading across border is more difficult include Uzbekistan, Burundi, Azerbaijan, Tajikistan, Iraq, Kazakhstan, and Afghanistan as their ranks are 174, 175, 177, 179, 182, 183 respectively (Business, 2009). Middle and lower middle income regions do not have a favorable trade climate which discouraged foreign investors to investing in these countries.

Regression result of second last control variable presented in model (10) has displayed significant positive implication for inflow of FDI toward Asian economies enlisted on the world's bank doing business index. Outcome of this area of doing business is supported by the study (Mahuni & Bonga, 2017). Doing business through this area of business record the time in four phase which are filing, services, trial judgment and enforcement. Time and cost measured by doing business to resolve the commercial dispute by the court and other dispute settlement bodies. Cost of court, attorney and enforcement is recorded in term of percentage of claim value. Efficiency of court practices change from country to country. Some countries establish separate commercial court system to resolve disputes among buyer and seller. The Asian countries which make enforcing contract easiest in term of procedure, time and cost include Singapore, china, Uzbekistan, Bhutan, Azerbaijan and Kyrgyz republic (Business, 2019b).

Random effect estimation result of resolving insolvency in model (11) has shown insignificant positive implication for FDI inflow in Asian countries. Basically insolvency is the condition in which loan owned by investors are unable to payback. Insolvency have three form that are the cash flow, balance sheet and technical insolvency. In each economy, recovery of debt under insolvency is determined by time, cost and proceeding result of insolvency. Insolvency strength index relied on some additional indexes including asset management, reorganization, contribution and starts index. Strength of insolvency index measure the performance of insolvency laws which regulate the relationship between lender, borrower and court. However, these index are depends upon certain assumption that are, company suffer in liability problem, no role play by foreign entity, domestically citizen entities involved and business management try to preserve job of their employ (Business, 2009).

5.6 Result of Hausman test

In order to check whether FEM or REM is acceptable for the data, the hausman test is carried out. Basic reason to apply the hausman test is to choice the appropriate model for the data.If explanatory variables are correlated with the disturbance term in the model would generate the problem of endogeneity. As aforementioned, housman or Durban-wu-hausman test has been uses to detect those variables in the model that are endogenous in nature.

H0: REM is more appropriate

H1: FEM is more appropriate

Table: 5.9 Hausman Test

Test Summary	Chi-sq. statistic	df	Prob.
Cross section random	13.52	5	0.0190

Here, study reject the null hypothesis that REM is applicable to the model because p-value in undertaken study is less than 0.05 which is significant. Through the result demonstrated in above table, this study used fixed effect which showing that individual specific characteristic across cross-sectional unit are correlated with other independent variable but remained fixed in the model.

5.7 Summary of fixed effect and random effect

In the overhead exploration, study observed and ascribed the main EDB index and its sub-component of doing business with the support of individual FEM and REM. Current study also identify that the coefficient value of the main index and its factors show a significant influence on the arrival of FDI but some have a different sign. Changed coefficient value sign of EDB sub-indices would be due to multicollinearity and model miss-specification problem. Right side of the regression equation, Per capita GDP act as endogenous variable that created the problem of endogeneity. The endogeneity problem generated by the endogenous variable would not be resolved under random and fixed effect model of the study.

It is observed that fundamental sub-indices of doing business index have unveiled a positive implication for FDI both from the fixed effect and random effect. This is because overall Asian countries made it convenience to do business. One of the sub-component of doing business index is starting a business that has shown positive implication for FDI in FEM and REM model.

Similarly, construction permits that are another doing business area also show positive consequences for the inflow of FDI under both FEM and REM. Next, doing business sub-component is getting electricity which shows positive insignificant implication for FDI in REM while positive moderately significant under FEM. In the same way, registering property and getting credit have shown a positive insignificant consequence for FDI both FEM and REM. Protecting minority investors under both FEM and REM has also revealed insignificant positive implications for FDI. Further, paying taxes under REM has shown negative while under FEM is shown positive consequences for FDI.

Trading across the border in both models has negative significant implication for FDI. Lastly, enforcing the contract has shown positive significant while resolving insolvency revealed positive insignificant implication both from fixed effect and random effect model. However, the logic behind the positive coefficient sign of all the indicators have revealed the overall effective business environment which serves as an instrument for FDI attractiveness in the Asian region. The whole interactive variables used in the current study have shown different sign according to their relevant theory. Macroeconomic variables used in current as a control variable also serve as a vital determining factor for an inflow of FDI.

Table 5.10 Dynamic GMM results

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)	Model (10)	Model (11)
VARIABLES	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**
L.FDI	0.456***	0.548***	0.545***	0.510***	0.511***	0.568***	0.520***	0.563***	0.554***	0.510***	0.569***
	(0.0138)	(0.00611)	(0.0112)	(0.0147)	(0.00766)	(0.0126)	(0.0205)	(0.00829)	(0.00534)	(0.0153)	(0.0167)
Population	0.247***	0.131***	0.152***	0.256***	0.188***	0.0925***	0.0430**	0.0666**	0.128***	0.150***	0.0134*
Standard error	(0.0198)	(0.0324)	(0.0252)	(0.0525)	(0.0273)	(0.0317)	(0.0480)	(0.0516)	(0.0338)	(0.0280)	(0.0676)
Interest rate	-0.0564***	-0.0380***	-0.0254***	-0.0626***	-0.0712***	-0.0395***	-0.0493***	-0.0286***	-0.0381***	-0.0338***	-0.0620***
S.E	(0.00574)	(0.00536)	(0.00833)	(0.00502)	(0.00478)	(0.00406)	(0.00619)	(0.00724)	(0.00561)	(0.00417)	(0.0107)
Inflation	-0.284***	-0.177**	0.00643	-0.148***	-0.193***	-0.222***	-0.426***	-0.0780	-0.0516	-0.356***	-0.441**
S.E	(0.0419)	(0.0860)	(0.105)	(0.0440)	(0.0598)	(0.0345)	(0.0902)	(0.0521)	(0.0680)	(0.0928)	(0.172)
Gross domestic product	0.351***	0.252***	0.379***	0.0521***	0.136**	0.125**	0.611***	0.341***	0.250*	0.795***	0.206**
S.E	(0.0739)	(0.0564)	(0.104)	(0.0103)	(0.0849)	(0.0520)	(0.121)	(0.0997)	(0.139)	(0.0537)	(0.199)
Ease of doing business	0.103***										
S.E	(0.0114)										
Starting a business		0.0160***									
S.E		(0.00413)									
Construction permits			0.0250***								
S.E			(0.00881)								
Getting electricity				0.0186***							
S.E				(0.00487)							
Registering property					0.0592***						
S.E					(0.00800)						
Getting credit						0.0241***					
S.E						(0.00600)					
Protecting investor							0.0355***				
S.E							(0.0133)				
Paying taxes								-0.0210*			
S.E								(0.0124)			
Trading across border									-0.0125*		
S.E									(0.00673)		
Enforcing contract										0.0650***	
S.E										(0.00905)	
Resolving insolvency											0.4219***
S.E											(0.1280)
Constant	6.521***	3.048*	0.382	4.302***	2.298*	5.317***	9.993***	2.365***	2.081*	6.929***	12.61***
	(0.462)	(1.826)	(2.284)	(1.028)	(1.250)	(0.959)	(2.503)	(0.891)	(1.125)	(2.046)	(4.669)
Observations	512	512	512	512	512	512	512	512	512	512	512
Number of countries	44	44	44	44	44	44	44	44	44	44	44

1. ***, **, * represent 1%, 5% and 10% level of significance.
2. Numerical value in parenthesis denote the standard error.
3. Numerical value without parenthesis represent the coefficient value of the ease of doing business sub-indices and FDI.

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

5.8 Interpretation of the results of dynamic GMM

To analyze the association among ease of doing business index and FD in Asian regions, instrumental variable technique applied. Estimation results of generalized method of movement are demonstrated in the table 5.10. These results are explained step by step as we do in previous. Instrumental variables techniques is used to tackle the problem of endogeneity in the regression model. Different instrument is used in place of the variables that are endogenous in nature. In practical life, it is not easy task to find the instrumental variables and might be not present at all. We could not use the data to find the variables which are used as instrument. Here, the variable GDPPC is correlated with the other variables in the model like inflation, population and interest rate. Therefore, under GMM estimation technique, we use the lag of inflation, GDPPC, population and real interest rate as an instruments to tackle the problem of endogeneity.

5.8.1 EDB index impact on FDI

Results demonstrated under table 5.10, in model (1) ease of doing business index has a significant positive implication to the inflow of FDI. Coefficient value of ease of doing business index is 0.103*** which shows the significant positive impact on the inflow of FDI. This significant value show that inflow of FDI increase in the economy when feasible business-friendly environment exist. Therefore, to encourage the inflow of FDI, it is necessary to make the business reforms in the country. Ease of doing business measure all the regulation related to business which is important for investors during making their investment decision. Effective doing business result has revealed that Asian countries are a favorable region for investors to invest. This result are consistent with theory by (Mahuni & Bonga, 2017; Shahadan et al., 2014; Singh, 2015). According to UNCTAD, the 2018 World Investment Report, FDI in Asian countries increased in 2018 by 3.9% to US$512 billion.

The areas of business are calculated by the procedure, time, and cost. Regression result of EDB demonstrated in table 5.10, has revealed that FDI is more attracted toward Asian countries if and only if the Asian countries improve their score in ten area of business. According to doing business reform 2020, twenty Asian countries have improved in ten area of business, one of them is Pakistan. Level of Pakistan improved in six area of business via different business reform. These six area including starting a business, dealing with construction permits, getting electricity, registering property, paying taxes and trading across the border. These areas of business reflect the

country's developmental reforms by launching the committee of national reform [http://www.doingbusiness.org]. Doing business index individually has been able to explain everything regarding actual level of FDI inflow in Asian countries. Therefore, along with main business index this study has taken ten indicators of doing business that represent the actual FDI inflow toward Asian economies.

5.8.2 Starting a business impact on FDI.

In table 5.10, in the model (2), regression results of starting a new business or new entry into the firm has shown significant effect on FDI influx in all the Asian regions nominated on the world doing business report. This area of business has revealed the strongest level of significance as its coefficient value is 0.0160***. Outcome of this area of doing business is supported by the study (Munemo, 2014; Nangpiire et al., 2018; Piwonski, 2010; Shahadan et al., 2014). Business startup is the frequent area of doing business index in Asian economies. Reason is that Asian countries have conducted business –start up reforms each year to attract higher amount of FDI inflow. There are some other factors that could effect this area of doing business including procedure in term of number, time in form of days and cost of capital. Therefore, starting a business show strong association with inflow of FDI. According to world doing business reform 2020, some Asian countries including Nigeria, Pakistan, Saudi Arabia, Tajikistan, Zimbabwe, India, Bangladesh, and Bahrain are listed in top twenty improved reformer in area of starting a business [http://www.doingbusiness.org]. These improved Asian reformer countries made it confide for the foreign entrepreneur to start a business in domestic countries. That is why Asian countries are the highest FDI recipient countries.

5.8.3 Dealing with construction permits impact on FDI

Results presented in model (3) show the impact of dealing construction permits on FDI. This area of doing business has unveiled significant positive implication for inflow of FDI toward Asian countries as its coefficient value 0.0250***. Results shows that p-value of construction permits is greater than 0.05 at 1% level of significance and null hypothesis is rejected that construction permits not influence the inflow of FDI. Outcome of this area of doing business are in line with the theory (Jovanovic & Jovanovic, 2018; Mahuni & Bonga, 2017; Singh, 2015). This

area of business measure the procedure, time and cost to complete the documentation process to construct the warehouses along with quality and safety measure.

The Result indicate that in Asian countries, construction permits are available at least fee and whole process is completed through online under one stop shop. Construction permits process is more transparent and less complicated juts completed in few days in Asian countries. The process of building permits is to contact with native building office and formulate permit application after it submit application at different fee. These construction permits process completes by one window operation in Asian countries like Saudi Arabia, Pakistan, and India (Gete, 2014). Fee charged for construction permits is minimum, process is transparent and less complicated that's why Asia countries contribute larger share in attracting FDI over the world.

5.8.4 Getting electricity impact on FDI

Regression results of getting electricity demonstrated in model (4) has shown decisive significant consequences for invasion of FDI at a 1% level of significance. Coefficient value of getting electricity is 0.0186*** which reveals that FDI is strongly encouraged by the proper facility of electricity. Results demonstrated in above table have shown that FDI is positively correlate with starting a business and construction permits in Asian countries. This GMM regression result is supported by the study (Singh, 2015). The most preferable objective of the foreign investor is to make sure the access of energy power, transparency of tariff and reliability of electricity supply. Unreliability of the access to electricity connection result in rotten the perishable goods, loss in production at large scale and damage the equipment that are sensitive in nature. Access to electricity connection in some economies are link with the bureaucratic because overall business regulation is related to the provision of electricity service.

Access to electricity connection has determined by the transparent procedure, time and cost. Connection process become more permeable in those Asian countries were administrative process are less difficult or least complicated. Asian countries make the entire process through digitization as well as charge less fee for new electricity connection. In some Asian countries like Pakistan, one stop shop is established where multiple services are available and customer would get all they need in just one shop (Business, 2019a). That is why Asian countries attain huge share of FDI inflow over the world.

5.8.5 Registering property impact on FDI

In model (5), regression results of ownership has unveiled a significant decisive implication to the FDI arrival in Asian countries. The Coefficient value of registering property is 0.0592*** larger than 0.01 at 1% level of significant revealed the rejection of null hypothesis. This shows that, in selected Asian economies there is adequate business regulatory system that further promote the inflows of FDI. Outcome of doing business indicators complied with the study (Jovanovic & Jovanovic, 2018; Morris & Aziz, 2011; Singh, 2015) which specifically examine the dimension of doing business index and have founded positive correlation with FDI. Nature of land administration is measured by this doing business theme. Land administration index consist of infrastructure reliability, information clarity, land clash resolution, geological analysis and equal rights approach (Business, 2019a).

When entrepreneur purchase the land or building has to face the time and cost for that property registration. Foreign businesses hub that wants to make investment in Asians countries takes in mind the process, time and cost of registering property, starting a business, getting electricity connection as well as other business related factors. Therefore, Asian countries in order to fascinate further inflow of investment, makes investment via one stop shop services, digitization and online deposition of all charges (Morris & Aziz, 2011; Vogiatzoglou, 2016).

5.8.6 Getting credit impact on FDI

Under table (5.10), in model (6), getting credit has shown significant positive potential force for FDI attractiveness towards Asian countries. Coefficient value of getting credit in dynamic GMM regression table is 0.0241*** larger than 0.01 at 1% level of significance and that value is highly correlated with FDI. Regression outcome of this area of doing business is more consistent with study by (Vogiatzoglou, 2016) in which it is reported that the rights of lender and borrower with regard to secured transaction and other credit information influence the foreign investors to make the investment. In Asian economies, legal rights for asset protection make the process more ease for lending credit and appropriate laws to avoid bankruptcy. Better credit information eliminate the asymmetric challenges between lenders and borrower. The study by (Muûls, 2015) in which it is investigated that effective credit rating and less credit constraints encouraged the import and exports of the firms. Author further elaborated that verse financial situation of the firms

make it in the host countries difficult to trade with them and their imports are effected. Through better credit information system, firms encounter with low risk regarding investment. Firms did not reduced the fixed cost associated with import and export in case of credit constraint. This particular result suggest that it is necessary for each investor to determine the secured transaction arrangement in the host countries. Now by moving forward and will shed light on another area of business.

5.8.7 Protecting minority effect over FDI

Minority investor protection is another component of doing business index that has shown statistically significant positive impact on inflow FDI under model (7). Coefficient value of protecting minority investor is, (0.0355***), is greater than 0.01 at 1% level of significance indicate the rejection of null hypothesis. Null hypothesis is that there would be no change in FDI cause by the change in the coefficient value of protecting minority investors. Conclusion of this area of business is consistent with the study (Jovanovic & Jovanovic, 2018; E MogesEbero & M Begum, 2016) in which it is showed that protecting minority investor become the reason of attracting FDI inflow. The study (Claessens, Ueda, & Yafeh, 2014) in which it is showed well define shareholder's rights decrease the cost of capital, specifically for expanding business. There is positive association between shareholders' rights and growth of the economy. Another study (Brown, Martinsson, & Petersen, 2013) in which it is examined that the object of investing in research and development is to protect the rights of minority shareholders and better approach to funding from their shareholders. This area of business deals with the power of minority shareholder protection in contrast to corruptly use of corporate assets by the director of the company as well as shareholder rights (John, Litov, & Yeung, 2008).

5.8.8 Paying taxes impact on FDI inflow

Under table 5.10, two step GMM regression result of paying tax presented in model (8) has unveiled the negative association with FDI. Coefficient value of paying taxes has, (-0.0210*), displayed statistically significant negative impact on FDI attractiveness. Result of this area of business is in line with the study (Hassan & Basit, 2018; Mahuni & Bonga, 2017) in which it is analyzed that FDI is negatively influenced by paying taxes. This component of business measure the taxes paid by small–medium Company and other tax burden bear by administration as well as

employer. Paying tax component also having different forms including the corporate income tax, labor tax paid by employer, ownership tax in form of property and dividend tax. Further, this area of business include capital gain tax, property transfer tax, financial transaction or negotiation tax, vehicle and road tax and other fee or small taxes (Devereux & Freeman, 1995). If all the Asian countries levied or collected all these taxes in high percentage, then foreign investors will not make investment project in these countries. On the basis of this logic, paying tax has shown statistically significant negative impact on FDI attractiveness.

5.8.9 Trading across border and FDI

Under the interpretation of generalized method of moment, results demonstrated in model (9) reveals that trading across the border has shown significant negative impact on inflow of FDI at a 10% level of significance. The coefficient value of the underlying business component, (-0.0125 *), shows the time and unbearable cost of exporting and importing goods that discourage FDI inflows to Asian countries. Outcome of this component of doing business index is consistent with the studies (Jovanovic & Jovanovic, 2018; Nangpiire et al., 2018; Singh, 2015). Trading across border incurred the investors high transportation cost of exporting from a warehouse in the domestic country to the warehouse in the foreign country trade partner. The trading across the border is associated with the documentary procedure, border documentation agreement during the entire process of importing and exporting. Pakistan and Uzbekistan both are among the twenty reform improver countries of doing business that improve the trading across the border system [http://www.doingbusiness.org].

5.8.10 Enforcing contracts impact on FDI

Result demonstrated in model (10) reveals that enforcing contract has unveiled the significant positive consequence for the inflow of FDI at a 1% value of alpha. The enforcing contract is, coefficient value 0.0650***, one from the ten element of doing business index has shown motivational force based on judiciary rule and order situation to accelerate the inflow of FDI. Outcome of this study is identical to the studies (Hassan & Basit, 2018; Jovanovic & Jovanovic, 2018; Malik & Jyoti, 2018; Singh, 2015) in which they found FDI is encouraged by the suitable judiciary laws for commercial sectors. There are three factors under which commercial or business enforcing contract developed. These three factors are number of procedure, time

required for the prosecutor to claim the file in the court and cost in term of percentage of the claim. Cost of enforcing contract includes court cost, attorney charges and documentation fee. For the sake of resolving commercial dispute, doing business uncover the efficiency of the judiciary system and provide suitable strategies to further upgrade the commercial judiciary system along with effective laws. All Asian countries having a proper judiciary rules and law regarding commercial sector that will strengthened the inflow of foreign investment (Ahlquist & Prakash, 2010).

5.8.11 Resolving insolvency effect over FDI inflow

Regression outcome of resolving insolvency demonstrated under model (11) has shown statistically significant positive influence on inflow of FDI in Asian countries. This area of doing business has revealed significant positive effect on FDI at a 1% level of significance. At this alpha level, this study reject the null hypothesis that is resolving insolvency would not be show impact on inflow of FDI. Outcome of this study is in line with the outcome of the study (Jovanovic & Jovanovic, 2018). Along with effective doing business regulatory system, economic growth is also the one of the reason for higher FDI inflow. There are two form of insolvency one is the cash-flow insolvency and second one is the insolvency in balance sheet. When any corporation or business man faced the situation where liabilities outweigh firm assets, insolvency problem has been created. In Asian countries, developments in these area of business index have the potential to significantly determine the inflow of FDI (Bayraktar, 2015).

5.8.12 Interpretation of the GMM results of interactive terms

Literature check out enormous interactive term that have been push forward to explain FDI inflow. Overall regression result of Lagged independent variable of FDI has shown statistically highly significant impact on inflow of FDI at a 1% level of the value of alpha. Empirical analysis of dynamic GMM estimation results has revealed that macroeconomic factors playing a vital role for attraction of FDI in selected Asian countries. FDI inflow in previous period is directly link with the economic resources of the domestic country which is one of the most essential determinant of FDI. FDI also influenced by its past value that shows consistency level in above regression model. Outcomes of the regression result of lagged value of FDI in 1 to 11 model are supported by the result of the study (Çevis & Camurdan, 2009).

Now move toward next interactive term which is population that has shown significant impact on inflow of FDI. Population coefficient value demonstrated in models (1, 2, 3, 4, 5, 6, 9 and 10) have shown statistically significant optimistic effect on inflow of FDI at 1% level of significance. Coefficient value of population regression that are presented in model (7, 8, and 11) have revealed moderately significant impact on inflow of FDI at 5% and 10% level of significance respectively. This astonishing results are aligned with the result of the study (Aziz & Makkawi, 2012) in which it is exposed that inflow of FDI encouraged by population. Recent research on determinant of FDI reflect the fact that developing countries have been making efforts to attracts foreign investors by improving macroeconomics factors like GDPPC, reducing inflation rate, appropriate monetary and fiscal policy. Overall positive statistically significant implication of FDI inflow is also supported by the study (Lawless, 2013) in which it is reported that population of domestic countries attract FDI. Despite the numerous studies on determinants that influence decisions of multinational enterprises regarding investment, so far the key role of population as a determinant of FDI has been flawed.

Population is one of the potential determinant of FDI. The top populated Asian countries including china, India, Indonesia. These countries having a largest consumer market, skilled labor force and past as well present industrial giants, would attract FDI in large proportion (Winters & Yusuf, 2007). Large population bring vast market for product and services awarded by foreign investor, therefore Asian countries attain highest FDI (Aziz & Makkawi, 2012).

Real interest rate is the next interactive term. Regression result of interest rate, from 1 to 11 model, demonstrated in above table has shown statistically highly significant undesirable effect on inflow of FDI at 1% level of significance toward Asian countries. these significant negative impact on FDI has supported by the outcome of the study (Cavallari & d'Addona, 2013) which showed that interest rate, either nominal or real generates risk of uncertainty, will deter the inflow of FDI in targeted countries. This has shown that low level of interest rate in Asian countries is one of the most important determinant of FDI. For the purpose of attracting FDI, the argument of low interest rate in native countries provide cost advantage for foreign investor (Culem, 1988).

Results of inflation under model (1, 4, 5, 6, 7 and 10) has displayed statistically adverse effect on arrival of FDI in underpin Asian countries at 1% level of significance. Outcomes of inflation demonstrated in model (2 and 11) has shown significant shock on invasion of FDI at 5%

level of significance while outcomes in remaining models have shown destructive effect on FDI. Outcome of inflation is supported by the theory (Li & Liu, 2005; Omankhanlen, 2011; Singhania & Gupta, 2011) in which it is showed that instability in inflation rate harmfully affect the inflow of FDI. Inflation rate of Asian countries represent its economic stability, internal pressure and capability of the bank and state to balance the budget of the economy. High level of inflation in the target countries would curtailed the worth of returns of investing firms in term of home currency (Buckley, Devinney, & Louviere, 2007). Low inflation rate expose the stability of the economic policies and encourage the inflow of FDI.

Last control variable is GDP per capita which is considered as one of the big accelerating force of attracting FDI toward Asian countries. Results presented under model (1, 2, 3, 4, 7, 8 and 10) have shown statistically encouraging influence over inflow of FDI at 1% level of significance. Similarly, regression outcome of GDPPC presented in model, (5, 6, 9, and 11), has also shown moderately significant positive influence on inflow of FDI at 5% level of significance correspondingly. These outcomes are supported by the similar result of the study (Boateng et al., 2015; Hakizimana, 2015) in which it is argued that GDPPC is considered as a potential force to fascinate FDI. Theoretically impact of GDPPC on inflow of FDI is ambiguous because GDPPC reflect the high wage and purchasing power of the consumer (Bénassy-Quéré, Coupet, & Mayer, 2007). All those countries having an efficient market framework that reflect the increased consumer demand of the product which caused greater inflow of FDI. Most growing economies in Asian region after the great depression are India, china and Singapore. These economies comprised by cheap skilled labor, digitalized infrastructure that is frequently considered as important factor for foreign investors. Therefore, higher the GDPPC ratio increased FDI's inflow to Asian countries.

Table 5.11 Developed countries GMM estimation result

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)	Model (10)	Model (11)
VARIABLES	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**
Lagged value of FDI	0.467***	0.582***	0.558***	0.526***	0.555***	0.591***	0.535***	0.565***	0.575***	0.522***	0.579***
S.E	(0.0203)	(0.0174)	(0.0283)	(0.0167)	(0.0159)	(0.0162)	(0.0140)	(0.0169)	(0.0165)	(0.0445)	(0.0219)
Population	-0.0904	-0.245***	-0.316***	-0.369***	-0.264***	-0.252***	-0.0949	-0.191**	-0.280***	-0.140*	-0.250*
S.E	(0.127)	(0.0541)	(0.0751)	(0.122)	(0.0576)	(0.0664)	(0.0706)	(0.0817)	(0.0551)	(0.0802)	(0.139)
Interest rate	-0.0624**	-0.0227**	-0.0234*	-0.0789***	-0.0403**	-0.0300**	-0.0304**	-0.0172	-0.0291**	-0.0419***	-0.0306**
S.E	(0.0286)	(0.0115)	(0.0129)	(0.0212)	(0.0159)	(0.0133)	(0.0125)	(0.0146)	(0.0122)	(0.0103)	(0.0136)
Inflation	-0.459***	-0.494***	-0.515***	-0.343*	-0.385***	-0.392***	-0.438***	-0.459***	-0.402***	-0.604*	-0.301
S.E	(0.165)	(0.104)	(0.139)	(0.202)	(0.140)	(0.0913)	(0.0869)	(0.108)	(0.0915)	(0.328)	(0.328)
Per capita GDP	-0.581	0.0432***	0.0765*	0.0773***	0.213	0.326	0.0598	0.870*	0.0607**	-0.119	0.443
S.E	(0.382)	(0.0171)	(0.0474)	(0.0354)	(0.277)	(0.279)	(0.290)	(0.521)	(0.0311)	(0.260)	(0.492)
Doing business	0.242***										
S.E	(0.0580)										
Starting business		0.0401**									
S.E		(0.0176)									
Dealing construction permits			0.0513**								
S.E			(0.0201)								
Getting electricity				0.0536***							
S.E				(0.0114)							
Registering property					0.0503*						
S.E					(0.0289)						
Getting credit						0.0689*					
S.E						0.0419					
Protecting investors							0.0652***				
S.E							(0.0171)				
Paying taxes								0.0498***			
S.E								(0.0237)			
Trading across border									-0.0362***		
S.E									(0.0162)		
Enforcing contract										0.0888	
S.E										(0.0890)	
Resolving insolvency											-0.0118
S.E											(0.0603)
Constant	9.663**	10.08***	11.54***	11.50***	8.024	8.937***	8.696***	8.694***	8.498***	13.18***	6.179
	(4.888)	(2.758)	(3.789)	(4.462)	(5.746)	(2.771)	(2.530)	(3.351)	(3.022)	(4.273)	(8.878)
SUMMARY											
Observations	344	344	344	344	344	344	344	344	344	344	344
Number of countries	26	26	26	26	26	26	26	26	26	26	26

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5.9 Interpretation of dynamic GMM result to the developed countries

Here, we give over view the inflow of FDI toward the developed Asian countries on the basis of business friendly environment. We already discussed each doing business indicators impact on inflow of FDI. FDI inflow to developed Asian countries have been increased with the passage of time by improving regulatory environment of the business. Here, this study just shed light on the inflow of FDI toward developed Asian countries whose doing business score is high relative to other developing countries. Score of doing business measure the gap of the economy on the basis of regulatory performance over the time. The score value of EDB index range from 0 to 100. The economies having the score value closer to 100 represent the best business set up which could attract FDI in bulk amount. Singapore which is one of the developed Asian country having a ease of doing business score value 84.29 which mean Singapore is 16.71 percent point away from the best business regulatory performance (Business, 2009). This score value is obtained by calculating the score of sub-indices doing business that are starting a business, building permits, access to the electricity connection, property registration, minority investors protection, trade over the border, contract enforcement and resolving commercial disputes. Mostly developed Asian countries having a doing business score values above 70 which shown favorable investment climate that would attract foreign investors (Business, 2019a).

Developed Asian countries have a proper regulatory business setup which is the main point of oversea investors in making investment decision. Besides doing business score value, high income countries manually high concentrated with inflow of FDI, although in recent past FDI has rapidly increase in developing countries. This argument is supported by the regression result demonstrated in table 5.11. Except resolving insolvency and trading across border, the main doing business index and it's all indicators show significant implication for inflow of FDI. High income economies have a comparative advantage in business regulatory environment which would attract higher amount of FDI inflow. These highly significant results of doing business has revealed the regular business reforms in developed Asian region by which score value (0-100) of all indicator increase each year. East Asian region is the highest FDI recipient region. According to UNCTAD report of 2019, FDI increase by 4% to $280 billion in East Asian region. China with $139 billion inflow of FDI has sustained the position of highest FDI recipient Asian economy yet. Southeast Asian economies including Singapore, Thailand are the second largest FDI recipient Asian countries with inflow of $149 billion (Jacobsson, 2019).

This huge inflow of FDI in East Asia reveals that china, Singapore and Indonesia is the fastest growing economies. The logic behind huge inflow of FDI are the ease to do business, export oriented market size, low cost labor firms and cheap factors of production. Market size is essential factor for foreign investors because powerful markets deliver spillover effect and large economies of scale (UNCTAD, 2006). Beside score value, trade and financial integration enhancing day by day in developed Asian economies over the last few decades. Therefore, in developed Asian economies, due to high business score value and other macroeconomic factors like population, market size and effective economy size lead to encouraged the inflow of FDI. Doing business score value of almost each developed Asian country lie above the 70 which showed that business environment is more efficient to attract foreign investors. It is frequently observed that FDI is most attracted toward developing countries over the world, but FDI inflow on the basis of EDB index mostly attracted toward developed Asian countries enlisted on World Bank's doing business index. Therefore, on the basis of ease of doing business score value, FDI much more attracted toward developed Asian countries rather than developing.

Table 5.12 Developing countries GMM result

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)	Model (10)	Model (11)
VARIABLES	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**	**FDI**
Lagged value of FDI	0.438***	0.533***	0.529***	0.472***	0.545***	0.528***	0.489***	0.530***	0.524***	0.494***	0.565***
S.E	(0.0147)	(0.0185)	(0.0259)	(0.0161)	(0.0165)	(0.0251)	(0.0106)	(0.0170)	(0.0140)	(0.0240)	(0.0145)
Population	-0.0831**	-0.0765**	-0.126***	-0.245***	-0.104***	0.0255	0.175***	0.0221	-0.0673*	-0.0211	-0.163*
S.E	(0.0343)	(0.0355)	(0.0379)	(0.0459)	(0.0293)	(0.0276)	(0.0524)	(0.0229)	(0.0381)	(0.0397)	(0.0902)
Interest rate	-0.0373***	-0.0380***	-0.0329***	-0.0433***	-0.0352***	-0.0273***	-0.0305***	-0.0269***	-0.0363***	-0.0291***	-0.0299**
S.E	(0.00712)	(0.00684)	(0.00764)	(0.0107)	(0.00777)	(0.00826)	(0.00566)	(0.00680)	(0.00865)	(0.00584)	(0.0140)
Inflation	0.0832***	0.0203***	0.0138**	0.0215	0.00787*	0.0236***	0.0464***	0.00339	0.0180***	0.00726	0.0308***
S.E	(0.0198)	(0.00659)	(0.00683)	(0.0166)	(0.00477)	(0.00605)	(0.00767)	(0.00422)	(0.00676)	(0.0107)	(0.00612)
Per capita gross domestic p	0.0837	0.129	0.305***	0.700***	0.190**	-0.0300	-0.330***	0.721***	-0.0249	-0.0300	0.406
S.E	(0.0760)	(0.120)	(0.114)	(0.123)	(0.0859)	(0.0860)	(0.1000)	(0.110)	(0.154)	(0.0994)	(0.284)
Doing business index	0.0510***										
S.E	(0.0127)										
Starting a business		0.0163***									
S.E		(0.00528)									
Construction permits			-0.0197								
S.E			(0.118)								
Getting electricity				-0.0520***							
S.E				(0.0109)							
Registering property					0.00719						
S.E					(0.00511)						
Getting credit						0.0186					
S.E						(0.00551)					
Protecting investors							0.0684***				
S.E							(0.0104)				
Paying taxes								-0.00696			
S.E								(0.01130)			
Trading across border									0.0118		
S.E									(0.00746)		
Enforcing contract										0.0473***	
S.E										(0.0134)	
Resolving insolvency											-0.0272
S.E											(0.0242)
Constant	-1.742**	-0.229	0.839	0.256	-0.0552	1.076	0.676	0.537	1.492*	-0.234	-0.284
	(0.827)	(1.220)	(0.999)	(0.563)	(0.832)	(0.677)	(0.509)	(0.562)	(0.865)	(0.803)	(1.350)
SUMMARY											
Observations	168	168	168	168	168	168	168	168	168	168	168
Number of countries	18	18	18	18	18	18	18	18	18	18	18

5.10 interpretation of dynamic GMM result to the developing countries

Under this section, study has checked implication of sub-indices of EDB index for inflow of FDI in eighteen Asian developing countries on the basis of business score value. Developing countries are mentioned in the section of data and estimate technique. Developing Asian countries captured highest amount of FDI inflow over the world. Here, study will just analyze the main EDB index and its indicators' impact on inward flow of FDI in developing Asian economies. When we analyze the developing Asian countries on the basis of doing business score value we find that attractiveness of FDI is not caused by ease of doing business. In emerging countries, score value of doing business has been hardly cross 60 score which reveals that countries are 40% away from of the efficient regulatory setup of the business. Estimation result of few EDB indicators including, in table 5.12, doing business index, starting a business, protecting minority investors and contract enforcement have shown highly significant implication for FDI attractiveness. Differently, getting electricity has shown negative significant consequences for inflow of FDI. Regression results of doing business index presented in table 5.12, has shown less significant implication for inflow of FDI in selected developing Asian countries as compared to doing business indicators exposed in table 5.11.

Explanatory variable that are dealing with construction permits, getting electricity connection, getting credit, trading across border, paying taxes and resolving insolvency have revealed insignificant implication for FDI inflow in under developed Asian countries. Logic behind these insignificant outcomes are the less doing business score value of indicators, small market size, less developed market infrastructure, ineffective quality of human resource, inappropriate trade openness strategies and instability of governance institution discouraged the inflow of FDI. In under developed countries, there is the problem of high unemployment, inflation, low per capita income, trade deficit, foreign debt which discouraged the inflow of FDI. Advanced economies within Asian region launched market-oriented reforms to enhance the economic development and create effective investment climate which motivates foreign investors to invest in these region.

Table 5.13 Doing business score value of developed and developing Asian countries

Developed countries	Score of doing business	Developing	Doing business score
Armenia	75.37	Afghanistan	44.1
Azerbaijan	78.64	Bangladesh	45.0
Brunei Darussalam	72.03	Bhutan	66.0
Bahrain	70.0	Cambodia	53.8
China	73.64	India	67.23
Cyprus	71.71	Nepal	63.2
Georgia	83.28	Kyrgyz republic	67.8
Indonesia	69.6	Kazakhstan	77.89
Israel	76.7	LAO PDR	50.8
Iran	58	Myanmar	46.8
Iraq	56.58	**Pakistan**	**55.31 and 61.0 in 2020**
Japan	75.65	Philippine	57.68
Jordan	69.0	Syrian Arab rep	41.57
Kuwait	67.4	Timor-lets	39.4
Kazakhstan	77.89	Tajikistan	57.11
Lebanon	54.3	Uzbekistan	67.4
Malaysia	81.5	Vietnam	68.36
Maldives	60.4	Yemen	31.8
Oman	70.0		
Qatar	68.7		
Russian federation	78.2		
Saudi Arabia	71.6	**Source**	World bank doing
Sri Lanka	61.5		Doing business report
Singapore	86.2		25 October,
Thailand	80.1		2019
Turkey	76.8		
UAE	80.9		

Above table represents the score value off all the Asian countries. Estimation of the study is based on score value of Asian countries. These score value is obtained from the doing business report issued in 25 October, 2019.

CHAPTER 6
CONCLUSION AND POLICY RECOMMENDATION

6.1 Discussion

The conclusion of the study supports the hypothesis that there is a connection among doing business index and its ten areas with FDI. Doing business index report is created by the Simeon Djankove and Gerhard Pohl. The index of doing business comprised by ten area of business that are: beginning a business, permits of the building construction, access to the electricity connection, freedom of getting credit, registration of the transferring property, protection of the investment by minority shareholder, paying taxes, trading across border regarding day to day regulation and enforcing contract as well as resolving insolvency to secure the business climate. The main objective of the World Bank's convenience to do business regulation is to provide business freedom to the entrepreneur. The potential business climate is based on the performance of the economy in each area of the ten areas of business regulation. Doing business evaluate the regulation which encourage the support and efficiency to do business in one hundred-ninety (190) economies solicited on the world's bank EDB index. In the recent past, doing business indicators as an FDI determinant captured a significant place in academic research.

The main principle of the panel data-based course is to explore the connection among doing business indicators and FDI in forty-four Asian economies from 190 economies enlisted on the World's bank EDB index over the period 2004-2019. Data over the sub-indices of EDB index in the underpin study collected from the World's Bank doing business indices while data on FDI attained from the world development indicators (WDI). Data on the control variables including per capita gross domestic product (constant 2010 US$), inflation (annual percentage), real interest rate (percentage) and population (annual growth percentage) has obtained from the world development indicators (WDI).According to the aforementioned literature, the affiliation among doing business index and its ten business areas on FDI is investigated on small numbers of Asian countries. The latest Stata software packaged has used for estimation purposes in the current study.

The study has analyzed the data through descriptive analysis. Descriptive statistics describes the feature in detailed over the collection of the information. In the same way, we run the test of normality to check either data is normally distributed or not. Multicollinearity among the data is checked by correlation matrix and with the help of variance inflating factors whose

threshold values range from o.7 to 10 respectively. Results of the correlation matrix and VIF do not exceed the threshold value of 0.7 and 10 respectively which has revealed that there is no collinearity problem among the data. Some other test like breausch pagan test is also run on the data to check the variance of the data. Simple OLS is run on the data set by assuming that intercept remains constant and country-specific characteristics go to the error term. Under the pooled OLS estimation model, some explanatory variables have shown significant positive while some shown insignificant implications for an inflow of FDI. Insignificant outcomes are just due to the combined complications of cross-sectional and time-series data. To avoid the problems created under pooled OLS we move toward a fixed effect estimation model. The fixed effect does not usually mean the country-specific characteristics are fixed or non-random but it means that unobserved specific characteristics are interrelated with the other explanatory variable in the model and time effect is goes to the disturbance term. However, in the fixed-effect model, some variables have shown significant positive while some shown insignificant implications for an inflow of FDI. We confronted the problem of unobserved heterogeneity under the fixed effect model because arbitrary correlation is allowed in the model.

To avoid the problem of unobserved heterogeneity, the study estimate the random effect model. Through the Housman test, we discriminate among the fixed effect and random effect and select the model which is more appropriate for the data. Under the random effect model, the estimation result of the regression coefficient of some explanatory variables have shown significant positive while some shown insignificant consequences for the inflow of FDI. Violating the correlation's assumptions of explanatory variables with disturbance term under the random-effect model generate problem of endogeneity. In a multiple linear regression model, when the endogeneity problem exists in the model, OLS estimators are remained biased and inconsistent (Wooldridge, 2011). Therefore, for estimation purposes, this study has used the instrumental variable technique (GMM) in which the problem of endogeneity is resolved by using a different instrument.

Dynamic GMM estimation results shows that FDI depends on its past value, as in China that is the highest FDI recipient region. MNEs make their investment decision in those countries where a high inflow of FDI sustainable. The highly significant lagged value of FDI as an explanatory variable has exposed that the inflow of FDI in Asian republics also depends on its past

value as a cobweb phenomenon which is applicable in the agriculture sector. According to their relevant economic theory, remaining interactive terms that are per capita GDP (constant 2010 US$), population (annual percentage growth), inflation (annual percentage of consumer prices) and real interest rate (percentage) have revealed highly significant implications for an inflow of FDI. These macroeconomic factors have a crucial role in the attraction of FDI and encouraged investment at the domestic level.

Results demonstrated in the table (5.10) have exposed the regulatory business environment which accelerates the inflow of FDI. Doing business is just an instrument that is framed to construct regulatory policies by introducing reform each year. It is essential to indicate that doing business index does not just guide the investors but it is formulated to measure the ease of business. All the Asian countries that attain the highest doing business score have common characteristics, including the extensive use of the digitization process. According to doing business report 2020, twenty best reforms improver economies have an online business process, tax payment electronically and online procedure of property transfer. The prominent objective of the doing business is to encourage the regulation of the business, drive the forces which makes doing business reforms more transparent and ensure their implementation (Bank, 2012; Business, 2019b; Djankov et al., 2004).

6.2 Conclusion

In general, first and the most important main conclusion of the current study is that all the Asian countries having a good business environment in term of ease to do business are likely to attract a larger amount of FDI. Doing business institutional factors paly a compelling role in determining the inflow of FDI. Regression results of the main EDB index presented under the table (5.10) have shown significant positive implication for the inflow of FDI. Similarly, GMM results including business startup, getting connection of electricity, construction permits, and registering the ownership when transferred have shown statistically conclusive implication to inflow of the FDI toward Asian countries. In the same way, getting credit, protecting the minority shareholder, resolving insolvency and contract enforcement have shown statistically significant positive consequences for the inflow of FDI at a 1% level of significance. In contrast, regression result of paying taxes and trading across the border have revealed the significant negative impact on inflow of FDI at a 1% level of significance. All the doing business indicators that reveals significant positive implication for the inflow of the FDI under the table 5.10 are consistent with the studies (Hassan & Basit, 2018; Jovanovic & Jovanovic, 2018; Mahuni & Bonga, 2017; Nangpiire et al., 2018; Piwonski, 2010; Shahadan et al., 2014; Singh, 2015). While the study by (Ermias MogesEbero & Mustiary Begum, 2016) and (Mahuni & Bonga, 2017) in which it is argued that paying taxes, getting electricity getting credit as well as enforcing contract showed Significant negative implication for inflow of FDI. Insignificant impact on FDI caused by trading across border and paying taxes in table (5.10) are aligned with the outcome of the study (Ermias MogesEbero & Mustiary Begum, 2016).

Generally, it is concluded that forty-five Asian economies from 190 economies enlisted on the World's bank doing business index are successful in capturing a high amount of FDI through institutional reforms in business sector. Asian countries made it easier to do business and have a large domestic market, high population growth, cheap raw material along with an abundance of natural resources which significantly contributes to capturing the bulk of FDI inflow. These general conclusions are aligned with the objective of the current study. However, insisted of doing business index and its indicators, potential investors are also concerned with many other factors such as national competition level, macroeconomic stability, market size, rule of law along with financial structure in host republics (Business, 2009).

6.3 Policy recommendation

Result of the study reflect the fact that efficient business friendly environment for the entrepreneur is a crucial determinant aspect for the arrival of FDI. Sub-indices of EDB index are business startup, dealing with building permits, receiving electricity connection and tax payment revealed the comparable quality of business institution. Similarly, getting credit, protection of minority shareholder, trade across the border, registering property, contract enforcement and resolving insolvency represent the business institutional quality among the Asian region. Quality of the regulatory business setup is a significant factors which play enzymatic role to the influx of FDI and boost domestic investment. Following are the important policies suggested by the study.

- According to the result of the model (1, 2, 3, 4, 5, 6 and 7), to attract more FDI, Government of the Asian countries should emphasizes on business reform in the field of ease of doing business, starting business, construction permits, getting electricity, registering property, getting credit, and protecting investors.
- As per result of the model (10 and 11), enforcing contracts and resolving insolvency show the encouraging impact on the inflow of FDI, therefore study recommend the government to established specialized commercial court to resolve all the business related disputes.
- According to results of the model (8 and 9), Government of the Asian countries should make all the business related activities via digitization and focus on reducing the cost associated with trade across the border.

Efficient business institution ensures the sustainability of economic growth and development. Business institution manipulate the activities of the economy as well as inflow of FDI in Asian countries. Ease of doing business have the explanatory power to influence the procedure, time and cost of production, transaction as well as transformation (Shahadan et al., 2014).

Limitation

Scope of the doing business is limited only cover the ten regulatory area of business. For the purpose of more concise and precise conclusion regarding the relationship between doing business indicators and FDI will require more refined research. There is a need of further research to see whether doing business is really matter for FDI or it is just a temporary phenomenon. This study is only limited to the doing business factors and FDI. There are many other factors which play a key role in determining the inflow of FDI. Doing business index just designed for the firms operating in the high incomes countries not for small and medium sized economies. Limitation of secondary data and measurability would be its short fall. It's believe, however, this study serve as an additional insight for a certain comprehensive long term survey and a sound for implementers and policymakers. This study limited to forty-four Asian economies because it is difficult to deal with 190 economies enlisted on the World Bank's doing business index due to the secondary data measurement problem.

World Bank doing business index does not measure all the dimensions of the business climate such as employment, corruption, price change, poverty and many other factors at macro level which really matter for foreign and domestic investors. Further, doing business index does not able to shed light on the state financial system as well as the strength and weakness of the financial system over the world. Time not permits to analyzed EDB index impact on FDI attractiveness in Pakistan as Lahore, Karachi and Multan and try to find out which region is most appropriate in term of ease to do business.

CHAPTER 7
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