Linking Global Competitiveness, Higher Education, and Foreign Direct Investment Inflows

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I. Introduction

1.1 Background of the Study

Foreign Direct Investments (FDI) has contributed to the accumulation of capital and the improvement of the economy's productive capacity through the incorporation of new inputs and modern technologies in the production process. Neoclassical and endogenous growth models have been widely used to empirically test the benefits of FDI (Almfraji & Almsafir, 2014). However, results of testing theoretical benefits are varying from regions, countries, and industries. Conflicting relationships and impacts range from significant to non-significant, positive to negative impacts, directly or indirectly. Despite that, FDI inflows have still been recognized to influence employment and wages, infrastructure development, human capital development, technology transfer, and promotion of trade which could have a short and long-term effect on economic of growth of a country. Recognizing the impact of FDI on the development of an economy, many researchers tried to elucidate the factors that encourage foreign countries to invest in a specific economy.

For decades, scholars have been interested in exploring the main factors that determine a country's level of FDI attractiveness. Traditionally, scholars focused on economic factors such as market size, labor costs, exchange rates, infrastructure, and institutional quality which include political stability, investment policies and regulations, as well as governance and others as the key explanatory factors in determining a host country's ability to attract or deter FDI. Reviewed literature also looked into the influence that human capital development offers to induce FDI inflows. Among the human capital elements are enrollment in primary and secondary education, government expenditures in education, as well as the quality of labor measured by the monthly wages. However, few studies dealt with the importance of higher education/tertiary education. Among those few is the correlational study of Usman (2014) examining the relationship of FDI, higher education, and infrastructure using the World Economic Forum Global Competitiveness Index, which revealed that FDI inflows in selected countries have a significant correlation with higher education and infrastructure. Results of Usman's (2014) study are in conformity with the results of Tien (2010) who found that higher education is a better predictor in attracting FDI. It is also in accordance with the results obtained by Sjöholm (2010) with which he determined the factors that affect the multinational corporations' locational decision. He found out that higher education is one of the factors corporations consider, aside from better institutions and liberal trade policies. Salehizadeh (2005) also found that multinational companies are significantly attracted to states with highly educated employees and managers. Hence, attracting FDI inflows

for economic development can be achieved if the government (Pakistan) will give more attention to developing higher education (Usman, 2014).

Acknowledging the importance of FDI in enhancing growth of a country and the role that the host country's competitiveness plays in attracting FDIs, this study tried to ascertain which among the pillars of global competitiveness index significantly influence the attractiveness of the host country for FDI inflows with more focused on the human capital factor, quality of higher education/tertiary education, in particular.

1.2 Statement of the problem:

Generally, this study aimed to answer the question, which among the Global Competitiveness Indices drives the FDI inflows? Specifically, it sought to give answer to the following questions:

1. What is the extent of relationship among the Global Competitiveness Indices and FDI Inflows?

2. What is the degree of impact of Global Competitiveness Indices in attracting FDI inflows?

3. What is the extent of influence of Higher Education and Training Indices in attracting FDI Inflows?

1.3 Significance of the Study:

Results of this study will be beneficial to the host country, government, higher academic institutions, and future researchers. The host country will have an idea on the pillars of competitiveness that they need to enhance to be at par with fast economies. The government of the host country, as well as their partner stakeholders (domestic companies), will be enlightened on the factors that attract FDI to sustain economic development. Higher academic institutions, being the source and developer of the capital, may get inputs on how to strengthen their plans to produce better quality labor force who will be at the forefront of reaping the benefits of FDI in terms of absorbing technology transfer and knowledge transfer. Higher education institutions may also look into its role in enhancing R&D capacities leading to innovation, thereby, climbing the ladder of competitiveness. And given the scarcity in studies relating to education's role in improving competitiveness of the country and attracting FDI inflows, this study contributes to new knowledge, which future researchers may look into as a basis for future researches on FDI, economic development, competitiveness, and higher education.

1.4 Scope and Limitation of the Study

This study employed a causal-explanatory research design to explain the influence of Global Competitiveness Indices as independent variables on the dependent variable which is FDI Inflows. Secondary data, which are available online in the World Economic Forum and World Bank Report for 2016, were used in the analysis.

2. Review of Related Literature and Studies

Review of related literature and studies give an overview of the role of foreign direct investment in the development of a country as well as the factors that attract foreign direct investment.

2.1 Role of FDI in the development of a country

2.1.1 Provision of Employment

FDI inflows play an important role in the local market of the host country. The theory of FDI postulates that it has a positive impact on unemployment vis-a-vis employment. Investments increase jobs, thus, declining unemployment. Researches have explored this accepted claim, however, results vary. Green field investment possesses positive impact of FDI inflows, unlike in the case of privatization where there is a negative impact of FDI on employment (Brincikova & Darmo, 2014). But different aspects of FDI's effects on the host countries have always been considered.

According to Axarloglou and Pournarakis (2007), FDI inflows shifts the labor demand, thereby influencing employment and wages (at least in the short-run). Higher employment and wages are expected at the plant level due to the establishment or expansion of foreign subsidiary (Doms, Jensen & Bradford, 1998). Economic literature has also explored the impact of FDI inflows on growth and development, particularly in the labor market. Though, impacts of FDI on the employment and wage are controversial. Most researches inferred that the impact on economic growth of the investments of foreign companies are basically in terms of wage, technology, trade, and employment (Floyd, 2003; Dicken, 2007).

The U.S. offered strong economic incentives to attract FDI inflows. This strategy was implemented with the anticipation that local economies would be stimulated by FDI. Researchers tried to assess the performance of foreign-owned subsidiaries operating in the US to evaluate the effects of FDIs on local economies (World Economy, 2007). Hownstein and Zeile's (1994) assessment, which was supported by Globerman, Ries, and Vertinsky (1994), found that higher wages are paid by foreign affiliates in the US than the domestic plants.

However, despite FDIs' impact on local economic development in the host US states, very few evaluated how local labor markets are affected by the FDI Inflows. Figlio and Blonigen (1999) evaluated the impact of manufacturing employment by foreign plants in South Carolina using country-level data. They found that country- and industry-specific wages were strongly and positively impacted by such employment. Furthermore, there is an increase in all workers' real wages due to the addition of an averaged-sized foreign subsidiary in the specific county and industry.

Hence, FDI inflows' impact on local labor markets varies, depending on the industry. As explained by Axarloglou and Pournarakis (2007), the variances in the effects of FDI on the labor market are primarily because of industry composition of the FDI inflows. Hence, policymakers should focus on attracting FDI inflows on strategic group of industries such as printing and publishing and transportation equipment (Axarloglou & Pournarakis, 2007).

Vacaflores (2011) also examined 11 countries in Latin America using 1980–2006 data on FDI and employment generation. Results revealed that effects on employment generation is positive and significant in host countries, which is driven by its effect on the male labor force. However, this is only important for less developed economies with low inflation periods. Benefits from FDI inflows are only accrued to the host countries with high level of informality and attracting low average inflows of FDI.

Moreover, employment caused by FDIs increased the country's per-capita income as found out by the Spieza (2004) study on 49 countries, though, for low-income developing countries, the effects is not significant. Vacaflores and Mogab (2012) also found that compared to other regions, the subsidiaries in Asia possess the largest additions in employment due to the increase in FDI followed by those in Americas, but, statistically, significant influence is present in the manufacturing and service sectors.

Furthermore, effects of FDI on labor productivity on host countries is through THE transfer of technology and proficiency in marketing and management. These enable technological progress and economic growth in the long term (Boghean & State, 2015).

2.1.2 Technology Transfer

Technology transfer is one of the FDI inflows' benefits accrued to the host country. Wang and Blomstrom (1992) and Gunther (2002) said that there are four main channels of technology spillovers. These spillovers flow from foreign to local firms by means of imitations, competition, skills, and linkage. Learning by watching effect is what imitation is all about. Local firms are imitating the technology of foreign companies to improve its productivity. Also, with the presence of new entrants, foreign firms, competition is created with local firms. Thus, companies in the host countries are forced to maximize the potential of existing resources and by using it more efficiently and adopting modern technologies (Wang & Blomstrom, 1992; De Mello, 1997, 1999).

The introduction or the transfer of new and modern technologies is one of the benefits that host countries can get from FDI promotion based on the empirical work studying FLGH. (Belloumi, 2014). It supports the findings of Borensztein, De Gregorio, and Lee (1998) who inferred that transfer of modern technology is channeled through FDI. However, the effectiveness of such transfer of technology depends on the host country's stock of human capital.

Also, according to (Chisăgiu, 2015), new production capacities are generated by subsidiaries of transnational companies as well as realized consumer goods. However, it also means high standard capital which made them technological leaders in the industry as well as posting significant impact at occupational level.

2.1.3. Promotion of Trade

Enhanced production capacities of host countries brought by investments of foreign companies bring ripple effect in terms of trade (local and international). More opportunities for trade are being opened. In the case of Tunisia, it needs partners that will provide them technology and other inputs of production. Hence, it needs trade partners. In addition, Tunisia can have the chance to improve its own stock of knowledge by forging linkages and inviting trade partners especially from developed countries where they can import capital equipment and intermediate products (Belloumi, 2014).

Baliamoune-Lutz (2004) found a bidirectional relationship between FDI and exports in Morocco. His study also revealed that FDI has a positive impact on economic growth. It implied that exports can be promoted through FDI and vice-versa. Moreover, Yao (2006) assessed 28

Chinese provinces employing Arellano and Bond's dynamic panel data estimating technique in the dataset over the period of 1987-2000. Yao (2006) found out that there is a positive effect of export trade and FDI on economic growth.

2.1.4 Enhancement of Human Capital

FDI inflows causes spillovers of many forms. One spillover effect of FDI is the transfer of knowledge, which occurs from foreign firms to domestic firms by means of well-trained workers and managers' mobility (Kaufmann, 1997; Haaker, 1999; Fosfuri, Motta, & Rønde, 2001; Glass & Saggi, 2002). Linkages also create spillovers when productivity of foreign companies flows to local firms of the same industry, which is called horizontal spillovers, and upstream and downstream industries or the so-called vertical spillovers. This happen when the range and quality of goods (intermediate) are increased (Borensztein et al., 1998).

In addition, according to Abbes, Mostéfa, Seghir, and Zakarya, (2015), skills levels in the host economy is raised because of FDI inflows. Labor resources' quality is also enhanced because of the development of performing management skills, which is based on the imposed standards of corporate leading systems. In addition, the populations' training levels and its technological development adaptation plays an important role in the enhancement of human resource quality of the host economy (Boghean & State, 2015).

As pointed out by Kokko (2002), educational level and human capital need to be improved to such extent that the labor force's adaptation of foreign technology is quick and easy. These variables can have an effect in the long run on sustained economic growth. Also, as the demand for highly skilled labor force increased in the field of natural sciences, management, and engineering, MNC's may encourage the government to invest in higher education, which in fact helps improve the quality of human resource. In addition, MNC's prospecting to invest in a particular economy plays an important role in tertiary education enhancement by helping universities and institutions through academe-industry partnership alongside imparting scholarships for education.

Moreover, benefits of spillovers of investments in higher education can only be realized when foreign technology can be absorbed by local firms, there is basic level of workforce, and barriers are not high (Kokko, 2002).

2.2. Factors that Attract Foreign Direct Investment

2.2.1. Institutional Quality

Institutional quality is about social, financial and economic policies, governance, and political stability of the host country which could lead to the success of development projects or investments. The literature on FDIs acknowledge the role that institutional quality plays in attracting FDI inflows. Several reasons were pointed on the different ways on how institutions matter in attracting FDI inflows.

FDI is stimulated by the level of productivity of the host country, which is improved through the presence of institutional quality. However, there are requisites for productivity enhancement which ran from the availability of research and development system, financial institutions, flexible labor market, and a stable political government. Hence, an institution's

evolution is related to the development of productivity (Nelson, 2008; Hodgson & Stoelhorst, 2014).

Efficient institutions lower transaction costs and protect property rights. Transaction cost is important in projecting for the revenue, which foreign investors consider before making investment decisions. It includes costs associated with production, logistics, information, and risk monitoring. Without institutional system that is properly regulated, policies on property rights and financial markets that support large-scale financing, as well as the prevalence of corruption and weak incentive structure, costs of doing business may arise (Dunning, 2004).

In addition, property rights are important for the international economy, which is already becoming a knowledge-based economy. Hence, the government's protection of intellectual property rights through effective enforcement of policies can entice international companies to invest in a particular economy (Wall et al., 2010). It also encourages establishments of plants in the host country rather than focusing on distribution projects. Establishment of production plants could provide FDI spillovers (Rondinelli, 2005). Therefore, low transaction costs and protecting intellectual property rights are important factors in assessing business environments in the host country, which could promote trust and commitment for both the investors and the host country as well as upgrade competitiveness that enhances quality of outputs leading to stable and developed business environments (Tomassen et al., 2009, 2012; Rondinelli, 2005).

As argued by Tun, Azman-Saini, and Law (2012), due to the reduction of business costs and in uncertainty, countries should be able to attract investment, especially those with better institutional quality. This is proven by the results of their study employing GMM estimator for assessing the FDI determinants focusing on institutional quality of over the period of 1981–2005. Results revealed that bureaucratic quality, rule of law, corruption, risk of expropriation, and government repudiation of contracts are the factors of institutional quality that determine FDI inflows of the of 77 developing countries (Tun et al., 2012).

Several studies were also conducted with emphasis on the importance of institutional quality indicators in attracting or deterring FDI inflows.

Masron and Nor (2013) found that regulatory quality control, rule of law, and corruption are impacting the FDI inflows of ASEAN member countries as shown by data over the period 2002 to 2010.

On the other hand, economic freedoms, state fragility, and political rights are the significant predictors in attracting FDI inflows in Central and Eastern Europ (CEE) for the period 1996–2009 (Tintin, 2013). This is expounded by the study of Paul, Popovici, and Calin (2014) who conducted the same study in CEE but with focus on the country's public policies for the period 2007–2010, in which the results showed that accuracy and efficiency of public administration are the institutional quality components that create the framework for encouraging FDI. He also pointed out that the role of the government in building institutional quality cannot be substituted by market forces.

Naude and Krugell (2007), upon examining Africa's FDI inflows and its determinants from 1970 to 1990, their results show that it is institutional quality, rule of law, and political stability, and not the geographic location that determine FDI inflows of Africa. Following the results is the policy implications geared toward political stability and good governance enhancement through institutions.

Mina (2012) examined the impact of institutional quality on FDI inflows in Arab countries over the period 1990–2008. The results confirm that reducing the risk of investment expropriation and increasing government stability and bilateral investment treaties have a positive influence on FDI inflows.

Furthermore, GCC countries' institutional quality affects the FDI inflows. Among the components of institutional quality that encourage FDI inflows are political stability and the absence of democracy (Gani & Al-Abri, 2013). In contrast, Helmy (2013) found that two FDI determinants, freedom and security of investments, have a positive impact. He also reported that chances of expropriation and corruption rates will lead to an unsafe business environment, hence, posing a negative influence on FDI.

Therefore, important determinants of FDI flows could include government policies, which can be in the form of taxes, subsidies, regulatory regime, and privatization policy. Evidence from the empirical investigation of Cheng and Kwan (2000) says that the government plays a vital role in inward FDI location attraction. It has also been recognized as a catalyst for economic restructuring. Henceforth, host country's institutional features and political interventions are potential for encouraging FDI.

Furthermore, Sethi, Guisinger, Phelan, and Berg (2003) argued that MNEs often evaluate potential FDI destinations at the regional level, rather than on a host country by county basis due to cultural, political, and economic similarities and significant uniformity in trade and investment policies. Based on our review, the relationship between institutional factors and FDI attractiveness in the top three regional destinations for FDI—Europe, North America, and Asia (Financial Times, 2016)—is decidedly mixed. In Europe, the evidence varies but suggests that Western Europe and Eastern Europe should be viewed as separate destinations for FDI (Disdier & Mayer, 2004). There is significant evidence of political stability having a positive effect on FDI in Hungary (Wang & Swain, 1995), but not in the whole Central and Eastern European region (Bevan & Estrin, 2004). Components of rule of law, such as property rights protections, are significant factors in Eastern Europe (Javorcik, 2004). On the deterring side, tax rates are negative but only significant at higher income levels in Southeastern Europe (Demekas, Horváth, Ribakova, & Wu, 2007). Corruption has a negative relationship in transition economies (Javorcik & Wei, 2009). Finally, cultural distance is not an important factor in Western Europe in the late 1990s (Sethi, Guisinger, Ford, & Phelan, 2002). In the United States and Canada, results follow the theoretical predictions: in Canada, policy changes, including exempting bureaucratic review and strengthening the legal environment, increase FDI attractiveness (Globerman & Shapiro, 1999). A number of scholars found strong evidence that taxation has a profound effect on FDI attractiveness in the United States (Coughlin, Terza, & Arromdee, 1991; Slemrod, 1991; Swenson, 1994). In the Asia region, studies are dominated by explaining Chinese FDI and appear stronger and more consistent in their results. Corruption and tax rates are significant deterring factors (Du, Lu, & Tao, 2008a, 2008b; Wei, 2000b), and other studies find strong evidence of political stability and rule of law in China increasing FDI attractiveness (Du et al., 2008a, 2008b; Wei, 2000b), and other studies find strong evidence of political stability and rule of law in China increasing FDI attractiveness (Du et al., 2008a, 2008b; Wang & Swain, 1995). Thus, the review combined with the arguments for levels of development would suggest that the relationship between institutional factors and FDI will be strongest in Asia (i.e. China), followed by North America, and then Europe.

2.2.2. Economic Development

FDI and economic development have a bidirectional relationship (Agiomirgianakis, Asteriou, & Papathoma, 2004). Economic development status and Investment Development Plan (IDP) of the recipient country matter in attracting FDI inflows (Barrel & Pain, 1998, as cited by Agiomirgianakis et al., 2004). FDI decisions depend on the host country's quality of market infrastructure (De Menil, 1999).

Investment development plan is sometimes measured using GDP per capita in major studies conducted (Agiomirgianakis et al., 2004). Real per capita GNP, as well as real GDP growth, impact the investment decisions (Agiomirgianakis et al., 2004; Agarwal, 1990; Mainardi, 1992). Other variables were also used, such as regional income and infrastructure factors, measured by road constructions (km/km2 of land mass) as a potential for FDI attraction (Agiomirgianakis et al., 2004; Head & Ries, 1996; Cheng & Kwan, 1999).

Moreover, in Qatar, Granger Causally related variables are inward FDI and economic growth as proven by the empirical findings of Almfraji, Almsafir, and Yao (2014), which also show that inward FDI is more sensitive to its own performance, though it can be noted that economic growth positively affected inward FDI. Therefore, government's efforts to create promising economic and investment environment must be continued (Almfraji, Almsafir, & Yao, 2014).

To attract direct investment, infrastructure development, stable and healthy political and economic environment, law and order situation, tax exemption, and curtailing external debts are important for South Asia states (Bashir, Mansha, Zulfiqar, & Riaz, 2014).

In addition, many ASEAN countries are heavily reliant on international trade and FDI because of its relatively small domestic market; thereby, FDI is important for ASEAN economies' economic growth and globalization. On the other hand, recent studies on cross-border investment indicate that FDI decisions consider domestic economic performance and institutional effectiveness of the recipient country, which is confirmed by the study of Buracom (2014), indicating that macroeconomic performance is significantly impacting FDI flows into developing countries. Moreover, macroeconomic performance of ASEAN countries are amenable to private sector and therefore attractive to FDI (Buracom, 2014).

2.2.3. Trade regime and Market Size

Trade openness and the degree of liberalization in trade were found to be potential factors in attracting FDI inflows; although, it can be noted that measurement issues are acknowledged. Despite the difficulties, liberal trade regime's relationship with FDI is still anticipated (Raines et al., 1999). Bhagwati (1978) argued that countries that implement and promote export than import substitution policy best captivate FDI. Likewise, report showed that the ratio of exports to sales and sales concentration ratio, as a proxy for trade regime, are both contributing positively to FDI (Milner & Pentecost, 1996, as cited by Agiomirgianakis et al., 2004). It was also found that export-oriented FDI positively influenced inbound FDI and recently, launching of special export processing zone outweighs the closed economies inherent disadvantage. (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Wang & Swain,1995). China, in particular, associated its FDI inflows with Chinese Economic Zones (Agiomirgianakis et al.,2004; Cheng & Kwan, 2000; Wang & Swain,1995).

Moreover, Asiedu (2002) also revealed SSA and Non-SSA countries' FDIs are promoted by openness to trade. However, there is a variance in the marginal benefit that SSA and Non-SSA countries gets from trade openness in terms of FDI inflows. SSA countries received less FDI since they are less open than other host countries in their region. This is supported by Castro, Fernandes, and Campos (2013) who noted that market seeking is the strategy of multinational companies in Brazil, which is linked to its domestic market size. On the other hand, efficiency seeking is the most dominant strategy in Mexico, which is geared toward trade liberalization to attract FDI.

Evidence from previous empirical and theoretical studies also consider market size as another mechanism playing an important role in attracting FDI (Agiomirgianakis et al., 2004). Foreign companies take advantage of bigger market size by having economies of scale and mass production, which results to decrease in costs of operation and growth thereby affecting supply side (services and inputs) positively. Domestic market and growth prospects were claimed to be indicators considered by foreign investors in selecting host country where they plan to relocate the production plant (Agiomirgianakis et al., 2004; Bhasin, Jun, & Economou, 1994; Morrissey & Rai, 1995).

Furthermore, the linkage between growth level, as measured by profitability rates, and FDI is found to be statistically significant and positive (Jeon, 1992; Wang & Swain, 1995). Foreign firms' output of sales in the host country is used as a function of FDI (Agarwal, 1980). Output of sales is usually measured by the size of the market—absolute and relative value which is measured by GDP level (Agiomirgianakis et al.,2004; Bandera & White, 1968) and growth rate of GDP of the host country (Agiomirgianakis et al., 2004)

2.2.4. Human Resource Development

Quality and availability of human capital promotes labor-intensive and export-oriented FDI (Agiomirgianakis et al.,2004). Expansion of productivity potentials of the firms and country is enabled by FDI through investing in capital stocks (Agiomirgianakis et al.,2004; De Mello, 1997).

Agbola (2014) argued that crowding-out effect is prevalent in the Philippine government investment and private investment. Thus, human capital and infrastructure development must be the direction of government investments since it is most likely to attract FDI.

However, studies show a counter-intuitive result on the educational level's impact on inbound FDI (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Cheng & Zhao, 1995). Both Cheng and Kwan (2000) and Cheng and Zhao (1995) revealed that percentage of population with primarily high education has no positive and significant effect on FDI (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Cheng & Zhao, 1995).

Guntlach, (1995) argued that education has poor explanatory power. Hence, researches may explore the potential role of human capital augmentation instead of human capital accumulation because educations' impact is not direct. Benefits from education are seen through its spillover effect in production.

In contrast to the above findings, Aziz (2017), in his study using education as one of the independent variables which affect FDI inflows, revealed positive and significant effects of education on FDI inflows. With the nature of MNEs that are focusing on research and

development for technology development and innovation, there is a need for the host country to have the required human capital who have the capacity to understand, use, and innovate using the MNEs' newly introduced technology. Therefore, one way to attract FDI is to ensure that the host country has well-educated labor force who can easily adapt and exploit new knowledge and technologies.

Labor characteristics is also another factor in determining FDI. It is one of the considerations of foreign investors in choosing labor intensive or capital intensive investments. Though, sometimes it is inferred that China is the second largest recipient of FDI because of cheap labor. On the other hand, Branstetter and Feenstra (1999) modeled that there is a wage premium payment of multinational firms in China with the aim of attracting quality workers. Several studies were conducted on the role of labor quality in attracting FDI but the results vary. Some authors argued that labor quality has positive and significant impact on FDI (Gao, 2005; Fung, Iizaka, & Parker, 2002; Fung, Iizaka, Lin, & Siu, 2002) while an insignificant role is revealed by the study of Cheng and Kwan (2000a, 2000b). Varying results may be due to the variables used to measure education and quality of labor given that it is really difficult to look for better proxies for labor quality and characteristics.

Cleeve, Debrah, and Yiheyis (2015) showed that quality of labor significantly influences FDI, although they only used traditional variables of quality of labor employing various versions of FDI model. Moreover, it was also reported that human capital has no increasing importance on FDI over time in SSA.

Moreover, human development—which is defined by the UNDP (2012) as using the three basic dimensions: a long and healthy life (health), access to knowledge (education), and a decent standard of living (income) —is associated with FDI and economic growth, educational development, and enrollment (Moe, 2008). In addition, trade and inward investment are determined by good quality schooling of the general population in the host country; though it is also recognized that further training and upgrading of skills are necessary for continued flow of investments. The countries' participation in globalization processes is determined by the quantity and quality of education and the training it offers to its human resources. Globalization processes include value chains, fragmentation, increased migration, and trading of final products, in which human quality of human resources play an important role to better capture the benefits of FDI (Velde, 2005).

Mincenarian earning equation explains how education contributes to economic performance, which is grounded in human capital theory (Mincer, 1974). Mincenarian earnings equation correlated wage rate of an individual to its other own characteristics, which include the level of education attainment. Levels of education, in this case, is measured by the years of schooling and the type of education completed.

Though it was accepted that highly educated individuals earn more, it does not claim that all types of education could raise the growth of all countries. Hence, it is important to assess the types of education that help in creating or building science and those which are geared toward the building of absorptive capacity, thereby exploiting the benefits from best practice technology. As suggested by Borensztein et al. (1998), in order to benefit from inward FDI, education is necessary. However, it was not expanded as to how and in what level of education could the host country best capture such benefits.

In the United States, there were six US universities that were included in the top 10 Times Higher Education ranking in 2006–2007 out of 4,000 plus universities and colleges in the US. Times Higher Education also wrote that 580,000 foreign students enrolled in US universities in 2006–2007. Moreover, out of the total population, 56 million obtained bachelor's degree or higher. In order to succeed in the globalized world, US companies and foreign affiliates take full advantage of this environment because it makes US attractive for FDI. As mentioned in the paper, Sass (2003) stated that education and training are two of the very important factors that attract capital in a country aside from macroeconomic stability and infrastructure. The paper also expounded that not having a medium level of education, as well as higher education's training methods that are not at par with others, are key problems in attracting FDIs.

Moreover, several studies recommended that for an economy to attract higher inward FDI and if it wants to reap the full benefits of such investments, it is highly important to develop better secondary and higher education (Shatz, 2001; Nunnenkamp, 2002), and absorb advanced technologies through higher levels of education (Nunnenkamp, 2002),

On the other hand, Khan (2007) discussed that scarcity in knowledgeable and skilled-based workforce is unfavorable if a country wants to attract FDI. He further argued that in contrast with other South Asian countries which only focused on simple education, Singapore, Malaysia, Korea, and Ireland were successfully sustaining their FDI because of their human resource development strategy. Moreover, Khan (2007) single out Singapore as efficient and consistent in attracting FDI despite its insufficiency in natural resources because it capitalized on human resource development.

On another note, the Malaysian government exerted effort for education and training while the international chambers of commerce and Thailand government are jointly running the country's training programs. According to Michie (2001), Singapore aimed to attract FDI by pursuing national investment in education and training.

Higher education plays an important role in improving the quality of labor force of the host country. Moreover, higher education helps in R&D activities which supports production and management systems that are technology compliant. Effects of research and development can be achieved through the creation of incentive effect in foreign investments (Tolunay & Akyol, 2006). As Narin (2007) pointed out, FDI provides employment opportunity and offers new workforce qualifications of the country.

Furthermore, higher education system and innovation mobility of a country have strong link, thus, without skilled labor force, firms cannot sustain its growth. Hence, improving industrial development requires investment focus in the education sector for a period of one or two decades (Don Almeida, 2010).

2.2.5. Country's Competitiveness

Competitiveness is defined by a country's institutions, policies, and level and factors of productivity (GCR, 2012). Productivity can be measured by the level of quality of labor force and outputs a country generated in the production process. The better labor force and increase in market supply are affected by education level. Hence, it is noteworthy to mention that higher education's contribution to economic development is important. Poverty reduction through the sustainable increase in income leads to the higher living standards of the people and in the long

run bringing the country to higher competitiveness. In effect, improvement in competitiveness forces every economy to make strategic decisions in spending its resources. Higher competitiveness means an increase in spending for higher education so as to reach business sophistication and innovation level, which is considered to be the third and last stage of competitiveness (Bauk & Jusufranic, 2014). According to GCR (2012, p. #), "more competitive economy is one that is likely to sustain growth."

Moreover, the country competitiveness encouraged both inward and outward FDI (Dunning & Zhang, 2008). Level of economic prosperity, which is directly link to productivity level of a country, served as the basis for the estimating the rates of returns that investments obtained.

The association of competitiveness and productivity, as well as higher education, led to more interesting inquiries that expands competitiveness' link with FDI, especially for countries which are highly reliant on capital investments by foreign countries. However, studies utilizing Global Competitiveness Index published by World Economic Forum have been investigated but with more focus on governance and quality of formal institutions. Among those studies are of Outreville (2008) which revealed that local policies and regulation were among the governance aspect that organizations seek when looking for an international location of their investment. Consequently, Seyoum's (2009) study also found a positive influence of strong formal institutions on FDI inflows.

However, few studies dealt with the importance of higher education/tertiary education. Among those few is the correlational study of Usman (2014) examining the relationship of FDI, higher education, and infrastructure using the World Economic Forum Global Competitiveness Index, which revealed that FDI inflows in selected countries have a significant correlation with higher education and infrastructure. Results of Usman's (2014) study are in conformity with the results of Tien (2010) who found that higher education is a better predictor in attracting FDI. It is also in accordance with the results obtained by Sjöholm (2010) with which he determined the factors that affect the multinational corporations' locational decision. He found out that higher education is one of the factors aside from better institutions and liberal trade policies. Salehizadeh (2005) also found that multinational companies' are significantly attracted to states with highly educated employees and managers. Hence, attracting FDI inflows for economic development can be achieved if the government (Pakistan) will give more attention to developing higher education (Usman, 2014).

3. Research Gap

Reviewed literature and studies are geared toward the role of direct investment in the development of a country and the factors that attract FDI inflows in general. Impacts of FDI in economic growth are prevalent as well as its contribution in technology transfer, knowledge enhancement, labor productivity, infrastructure development, and human capital development. It can be noted from the studies reviewed the there are varying and sometimes conflicting effects depending on the region, economy, and industry which the FDI flows. In terms of the factors

attracting FDI inflows, researches have discussed institutional quality as determinants of FDI which pertains to governance, policy framework, political stability, taxation, and law and order situation. On the other hand, most of the economic determinants of FDI being studies are focused on infrastructure, trade regime, and market size. There are a few articles which discussed the connection between human resource developments in terms of education quality, higher education in particular. Most of the studies related to human capital are labor force, wages, enrollment in primary and secondary education, as well as government expenditures in education, in general. In addition, literatures have acknowledged that global competitiveness of the host country influenced FDI inflows, however, studies did not include all pillars of GCI as an independent variable. It only focused on the governance. Though, Usman (2014) discussed higher education's impact in FDI inflows, it only focused on the relationship but not on the extent of contribution of higher education in attracting FDI inflows. Hence, this study bridges the gap by providing new inputs as a result of this study on the Global Competitiveness Indices influence on FDI inflows.

4 Research Framework of the study

4.1 Operational framework

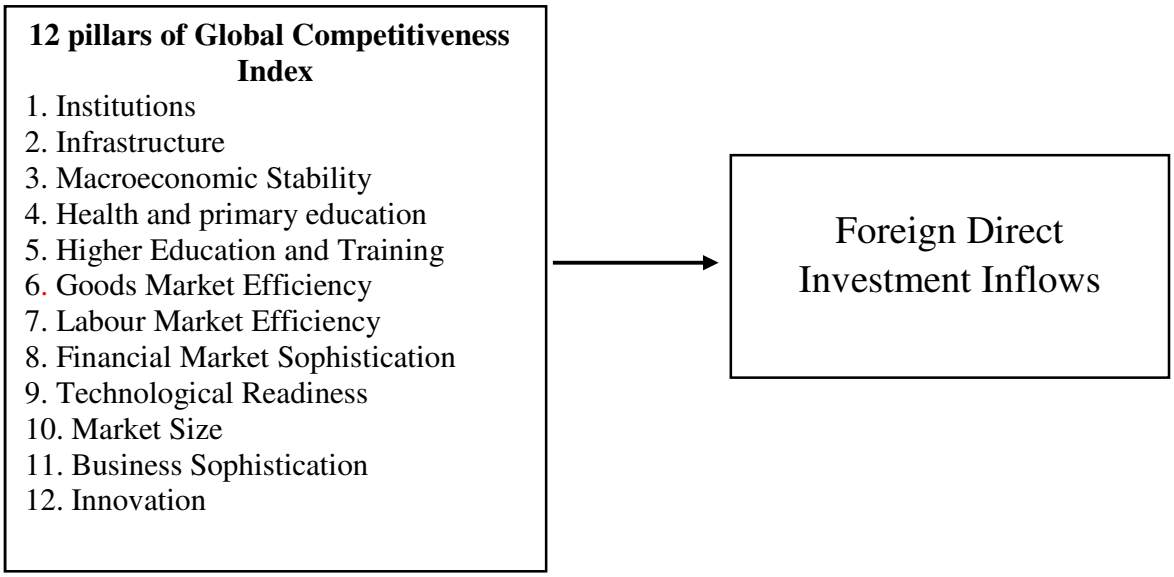

Figure 1. Operational Framework

5. Methodology

Descriptive and causal explanatory were used as research designs of the study. Descriptive research design was used to present the summary of dependent and independent variables in terms of mean, minimum, maximum, and standard deviation. In addition, causal explanatory was employed to measure the extent of relationship of the GCI and FDI as well as to determine the extent of impact of GCI on FDI inflows.

Quantitative data were processed and analyzed using Stata 13.0 program. For the descriptive research, descriptive analysis such as absolute and percentage frequencies, average weights (M), and standard deviation (SD) were employed. For causal explanatory research, multiple regression analysis was utilized to test the degree of impact of GCI on FDI inflows as well as the extent of influence of higher education and training indices on FDI inflows.

A total of 137 countries was considered for this study out of 152 and 264 countries included in the Global Competitiveness Index for 2016 and World Bank Report 2016. The criteria for selection of those 137 countries were based on the completeness of data for both GCI ratings and FDI inflows. Also, countries were classified into four groups: low income group, lower middle income, upper middle income, and high income. This is based on the new classification of countries by the World Bank.

6. Results and Discussion

6.1 Descriptive Analyses

Countries were classified by income and by regions as shown in Table 1. Based on the descriptive analysis of the data, 36% of the countries belong to high income group with which 28 are from Europe and Central Asia Region, 25% and 26% belong to lower middle income group and upper middle income group respectively, while 13% belong to low income group, 17 of which are from Sub-Saharan Africa Region. Lower Middle Income Countries are relatively dispersed among the six regions while upper middle income economies reside in Latin America & Caribbean and Europe & Central Asia Regions comprised of 16 and 11 countries respectively.

Table 1. Income and Regional Classification of Countries

Region	Income Group				Total	%
	Low Income	Lower Middle Income	Upper Middle Income	High Income		
East Asia & Pacific	0	6	3	7	16	12%
Europe & Central Asia	0	5	11	28	44	32%
Latin America & Caribbean	0	8	16	13	37	27%
North America	0	1	0	1	2	1%
South Asia	1	5	0	0	6	4%
Sub-Saharan Africa	17	9	6	0	32	23%
Total	18	34	36	49	137	
%	13%	25%	26%	36%		

It can also be noted based on Table 1 that countries in Sub-Saharan Africa and South Asia belong to Low Income to Upper Middle Income economy. On the other hand, countries in East Asia & Pacific, Europe & Central Asia, Latin America & Caribbean, and North America belong to Lower Middle Income to High Income economy.

Table 2. Summary of Foreign Direct Investment net Inflows (BoP Current US$) by Income Group

Income Group	**Stat**	**Foreign Direct Investment net Inflows (BoP Current US$)**
Low Income	mean	7.32E+08

	min	-1526519
	max	3.20E+09
Lower Middle Income	mean	1.71E+10
	min	-4.16E+09
	max	4.79E+11
Upper Middle Income	mean	1.18E+10
	min	2.27E+08
	max	1.71E+11
High Income	mean	2.02E+10
	min	-2.77E+10
	max	3.00E+11

Table 2 presents the summary of statistics of FDI net inflows per income group. Based on the results, high income group has an average FDI net inflows of US$2.02E+10, upper middle income group have US$1.18E+10, lower middle income group FDI net inflows average is US$1.71E+10, while low income group economies only have US$7.32E+08 for the year 2016.

Table 3. Descriptive Analysis of Foreign Direct Investment net Inflows (BoP Current US$) and Global Competitiveness Indices

Variable	**Mean**	**Std. Dev.**	**Min**	**Max**
Foreign Direct Investment net Inflows (BoP Current US$)	1.47E+10	5.25E+10	-2.77E+10	4.79E+11
Institutions	4.090153	0.8725155	2.155379	6.1273
Infrastructure	4.042862	1.209798	1.720788	6.687211
Macroeconomic Environment	4.673436	0.9880632	1.998103	6.840427
Health and Primary Education	5.547172	0.8861671	2.845082	6.891468
Higher Education and Training	4.304176	1.01809	1.90129	6.293697
Goods Market Efficiency	4.371413	0.5518213	2.857347	5.775369
Labor Market Efficiency	4.244629	0.5965396	2.75254	5.948719
Financial Market Development	3.994615	0.7452509	2.071768	5.785618
Technological Readiness	4.167972	1.231171	1.934808	6.413285
Market Size	3.847705	1.180054	1.34072	7
Business Sophistication	4.054105	0.7194535	2.555229	5.802793
Innovation	3.554551	0.8413481	2.156658	5.802447

Note: N=137 Obs.

FDI net inflows (BoP Current US$) range from a minimum of –US$2.77E+10 to a maximum of US$4.79E+11 with an average of US$1.47E+10. It can be noted that some countries have negative net inflows for the year 2016.

Based from the results presented in Tables 1, 2, and 3, it can be inferred that despite the high number of economies belonging in high income group, still, experts viewed the competitiveness of countries in general as relatively below average. In addition, SSA countries, which are under low income group, have also lower FDI net inflows. Likewise, countries in Europe & Central Asia consequently have higher FDI net inflows compared with those economies in the low income, lower middle income, and upper middle income group.

In terms of the Global Competitiveness Index comprising of 12 pillars of competitiveness, ratings range from as lows as 1.34072 to as high as 7; both are for Pillar 10

which is Market Size, though it is not the pillar that got the highest rating. Among the 12 pillars of competitiveness, experts rated Health and Primary Education the highest, with an average of 5.547172 and Innovation as lowest with an average rating of 3.554551. Over-all Global Competitiveness of the economies gained an average of 4.266029 from the experts for 2016, which range from 2.739177 to 5.807662.

Table 4. Descriptive Analysis of the Components of Higher Education and Training Indices

Variable	Mean	Std. Dev.	Min	Max
Secondary Education Enrolment Rate	85.97937	27.84528	22.40279	164.8117
Tertiary Education Enrolment Rate	41.7352	27.33894	0.79773	110.1627
Quality of Education System	3.807149	0.9192579	2.001713	6.160064
Quality of Math and Science Education	4.05972	0.9389971	2.208421	6.388875
Quality of Management Schools	4.294401	0.8241222	2.530363	6.306078
Internet Access in Schools	4.307229	1.019309	1.671292	6.30487
Availability of Research and Training Services	4.417591	0.8358547	2.498298	6.624842
Extent of Staff Training	4.029365	0.6939243	2.203271	5.710925

Note: N=137 Obs.

The 5th pillar of competitiveness, which is Higher Education and Training, is further analyzed. It is composed of eight sub-components which are classified into three major areas as shown in Table 4.

First major area is Quantity of Education, which pertains to the Secondary Education and Tertiary Education Enrolment rates. As presented in Table 4, Secondary Education average enrolment rate was 85.97937% ranging from 22.40279% to 164.8117% while Tertiary Education average enrolment rate is only 41.7352% ranging from 0.79773% to 110.1627%. This means that there are fewer secondary education graduates who are pushing through with Higher Education.

The second major area is Quality of Education, which refers to the quality of education system, quality of math and science education, quality of management schools, and internet access in schools. Ratings for the sub-components of Quality of Education range from 1.671292 to 6.388875. Quality of Education System got the lowest average rating from the experts having 3.807149 rating while internet access in schools got the highest average rating of 4.307229. It can be noted that internet access in schools got the minimum rating of 1.671292, which the lowest among all the components.

Third, On-the-Job training is only composed of two sub-components: Availability of Research and Training Services and Extent of Staff Training. Both sub-components earned 4.417591 and 4.029365 average rating, respectively.

6.2 Correlation Analyses

Global Competitiveness Indices and FDI net inflows (BoP Current US$) relationships vary among the income groups. Table 5 presents the summary of correlation results.

Table 5. Summary of Correlation Tables (by Income Group)

Variables		Income Group			
		Low Income	**Lower Middle Income**	**Upper Middle Income**	**High Income**
2	Institutions	0.1195	0.4424*	0.0851	0.264
		0.6261	0.0088	0.6219	0.0698
3	Infrastructure	0.7945*	0.6180*	0.2979	0.4443*
		0	0.0001	0.0777	0.0016
4	Macroeconomic Environment	0.5698*	0.0915	0.1677	-0.0253
		0.0109	0.6066	0.3282	0.8647
5	Health and Primary Education	0.4653*	0.2463	0.1603	0.2192
		0.0447	0.1602	0.3504	0.1345
6	Secondary Education Enrolment Rate	0.6028*	0.2226	0.1578	0.2599
		0.0063	0.2058	0.358	0.0745
7	Tertiary Education Enrolment Rate	0.9070*	0.5272*	0.0052	0.0671
		0	0.0014	0.9759	0.6505
8	Quality of Education System	0.0794	0.3828*	0.0913	0.1933
		0.7465	0.0254	0.5963	0.1881
9	Quality of Math and Science Education	0.3494	0.2418	0.0535	0.1391
		0.1426	0.1683	0.7565	0.3459
10	Quality of Management Schools	0.1077	0.4724*	0.0198	0.3890*
		0.6608	0.0048	0.9088	0.0063
11	Internet Access in Schools	0.5528*	0.4494*	0.1644	0.2084
		0.0141	0.0077	0.3381	0.1552
12	Availability of Research and Training Services	0.1857	0.4413*	0.0412	0.2997*
		0.4464	0.009	0.8115	0.0385
13	Extent of Staff Training	0.443	0.4479*	0.2037	0.1723
		0.0575	0.0079	0.2334	0.2416
14	Higher Education and Training	0.7179*	0.4960*	0.1457	0.2352
		0.0005	0.0028	0.3965	0.1076
15	Goods Market Efficiency	0.5456*	0.5693*	0.0228	0.3867*
		0.0157	0.0004	0.8951	0.0066
16	Labor Market Efficiency	-0.0495	0.4910*	0.1538	0.3565*
		0.8405	0.0032	0.3706	0.0129
17	Financial Market Development	0.1457	0.5059*	0.0346	0.2124
		0.5518	0.0023	0.8412	0.1473
18	Technological Readiness	0.8091*	0.6867*	0.0791	0.3497*
		0	0	0.6467	0.0148
19	Market Size	0.7935*	0.4990*	0.6368*	0.4246*
		0.0001	0.0027	0	0.0026
20	Business Sophistication	0.6818*	0.6914*	0.2735	0.3704*
		0.0013	0	0.1065	0.0096
21	Innovation	0.7577*	0.7200*	0.3287	0.2763
		0.0002	0	0.0503	0.0573

Note: All variables are correlated with 1. Foreign Direct Investment net Inflows (BoP Current US$)

For Low Income Countries, there are 12 GCI indices which have significant relationship with FDI net inflows. These are infrastructures, macroeconomic environment, health and primary education, secondary education enrolment rate, tertiary education enrolment rate, internet access

in schools, higher education and training (in general), good market efficiency, technological readiness, market size, business sophistication, and innovation. Three of which are the sub-components of higher education and training.

On the other hand, Lower Middle Income Economies showed a significant relationships of FDI net inflows to majority of the GCI indices, except for macroeconomic environment, health and primary education, secondary education enrolment rate, and quality of math and science education.

Furthermore, Upper Middle Income economies showed only one significant relationship between market size and FDI net inflows. High Income countries showed significant relationships among the eight GCI indices and FDI net inflows. These are infrastructure, quality of management schools, availability of research and training services, good market efficiency, labor market efficiency, technological readiness, market size, and business sophistication.

Results indicate that foreign investors, when making investment decisions in low income and lower middle income economies, are concerned with the basic requirements that a country should have, which include quality of institutions, infrastructures, macro-environment and health, and primary education. Multinational companies may have taken these as considerations because policies, regulations, and infrastructures are basics in establishing businesses. It also entails that the host country needs to have healthy and stable macro environment that will entice foreign firms to put up plants rather than just make the host country an export-distribution outlet of their outputs. MNCs also look at the societal skills and health of the workforce. It is important for companies to ensure that people in the host country are healthy for them to perform in their maximum potential. Unhealthy workforce may lead to less productive economy.

On another note, for countries under upper middle income, only market size have a significant relationship with FDI net inflows. Market size is important for foreign companies in selecting the location of their investment because it allows them to take advantage of economies of scale. Upper middle income group of economies tends to make the most out of their investments. Foreign firms are aiming to efficiently exploit the opportunities at hand.

The first four pillars of competitiveness is important for economies to perform their basic functions and for them to achieve economic development. However, it is also important to note that for a country to attain sustainable social and economic growth and development, countries must pursue higher level of competitiveness.

6.3 Multiple Regression Analyses

FDI net inflows are affected by several factors. In this study, Global Competitiveness Indices and Higher Education and Training Indices were used as independent variables affecting FDI net inflows.

Table 6. Regression Analysis of the Impact of Global Competitiveness Indices on Foreign Direct Investment net Inflows (BoPCurrent US$)

Independent Variables	Low Income[1]			Lower Middle Income[2]			Upper Middle Income[3]			High Income[4]		
	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared
Institutions	-1.86E+09	0.1880	0.8210	-2.49E+10	0.468	0.5407	3.03E+10	0.146	0.4049	-1.48E+10	0.443	0.2378
Infrastructure	3.61E+09	0.0740		4.41E+09	0.897		-1.61E+10	0.237		-8.67E+09	0.686	
Macroeconomic Environment	-6.02E+08	0.3340		1.58E+09	0.921		-1.46E+09	0.818		-2.06E+10	0.053	
Health and Primary Education	1.24E+08	0.8020		2.32E+10	0.318		2.86E+10	0.033*		-1.06E+10	0.816	
Higher Education and Training	1.28E+09	0.4890		-6.56E+10	0.041*		-1.99E+10	0.197		-1.23E+10	0.685	
Goods Market Efficiency	3.90E+09	0.2160		-5.26E+10	0.443		-3.05E+10	0.166		3.05E+10	0.428	
Labor Market Efficiency	1.02E+09	0.4120		3.14E+10	0.314		2.19E+10	0.139		4.73E+10	0.088	
Financial Market Development	-6.97E+08	0.6360		-2.37E+10	0.432		9.76E+09	0.499		2.57E+09	0.87	

Technological Readiness	-2.53E+09	0.3300	6.75E+10	0.03*	6.54E+08	0.958	2.46E+10	0.277
Market Size	1.76E+09	0.0360*	4.14E+08	0.975	2.59E+10	0.001*	2.00E+10	0.039*
Business Sophistication	-4.72E+09	0.3890	6.25E+10	0.431	7.29E+09	0.797	2.30E+10	0.524
Innovation	1.01E+09	0.7080	8.60E+10	0.138	-1.07E+10	0.707	-2.69E+10	0.29
_cons	-5.40E+09	0.2910	-3.36E+11	0.068	-2.06E+11	0.013	-2.14E+11	0.303

Note: DV= Foreign Direct Investment net Inflows (BoP Current US$)

Based on the result of regression analyses, market size is the only significant predictor of FDI net inflows for low income and high income countries; higher education and training and technological readiness are significant predictors of FDI net inflows for lower middle income group; and health and primary education and market size for upper middle income. Overall, it can be gleaned from Table 6 that market size is the common predictor for the majority of economies except for lower middle income group of economies.

Furthermore, higher education and training have a significant impact on FDI inflows only for lower middle income, however, it is counter-intuitive. This means that for every increase in higher education and training, there is a corresponding US$6.56E+10 decrease in FDI net inflows, ceteris paribus. It is also noteworthy to mention that technological readiness is an important determinant in attracting FDI inflows for lower middle income because these investors are looking for affiliates with high absorptive capacity and partners who are capable of maximizing the potential of technology to reach its high productivity level leading to higher competitiveness.

Literature that focused on competitiveness and country classification have argued that upper middle income and high income economies are more concerned with achieving business sophistication and innovation, especially if they want to attract more investors whose aims are to produce and offer innovative and high-quality products and services. However, in this study, business sophistication and innovation are not correlated with FDI. It can also be elucidated from the result of regression analysis that neither of the two has an impact in attracting FDI in all economies.

Table *7. Regression Analysis of the Influence of Higher Education and Training Indices on Foreign Direct Investment net Inflows (BoPCurrent US$)*

Dependent Variables	Low Income[1]			Lower Middle Income[2]			Upper Middle Income[3]			High Income[4]		
	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared
Secondary Education Enrolment Rate	-5.55E+07	0.0530	0.8712	-1.34E+09	0.0780	0.5453	5.16E+08	0.319	-0.1143	6.13E+08	0.299	0.0789
Tertiary Education Enrolment Rate	1.40E+08	0.0000*		4.49E+09	0.0000*		6.52E+07	0.878		-4.48E+08	0.288	

Quality of Education System	4.04E+08	0.5480	4.64E+10	0.1260	9.39E+07	0.996	-2.89E+10	0.249
Quality of Math and Science Education	-3.28E+08	0.6610	-3.61E+10	0.1090	2.96E+09	0.821	2.89E+08	0.987
Quality of Management Schools	-1.23E+09	0.2680	7.36E+10	0.0400*	8.51E+08	0.963	3.98E+10	0.064
Internet Access in Schools	1.04E+09	0.1220	-4.44E+10	0.2560	4.20E+09	0.769	5.24E+09	0.737
Availability of Research and Training Services	-3.22E+08	0.6900	-2.38E+10	0.5950	-2.62E+10	0.283	1.48E+10	0.552
Extent of Staff Training	-6.61E+08	0.5110	1.53E+10	0.6870	3.19E+10	0.126	-8.41E+09	0.736
_cons	6.57E+09	0.0490	-1.15E+11	0.1230	-8.34E+10	0.224	-1.52E+11	0.043

Note: DV= Foreign Direct Investment net Inflows (BoP Current US$)

Given the counter-intuitive result of regression analysis for the 5th pillar of competitiveness, which is Higher Education and Training, this paper further the inquiry by looking in detail the effects of higher education and training sub-components on attracting FDI inflows. Results revealed that Higher Education and Training sub-indices are influencing FDI net inflows of low income and lower middle income economies only. Among the sub-indices, tertiary education enrolment rate is the only significant factor impacting FDI net inflows of low income economies.

One of the possible reasons for such result is that firms need a workforce who possesses the required qualifications, which is tertiary education. Higher enrollees in tertiary education mean more workforces can be tapped by companies in their production process. They also have more chances of selecting a better quality of human resources.

On the other hand, tertiary education enrolment rate and quality of management schools are positively and significantly influencing FDI inflows of Lower Middle Income countries. It can be inferred that aside from the quantity of higher education measured by the enrollment rate in tertiary education, quality education is also vital. Most importantly, firms are not just looking at the quality of schools offering general knowledge, rather, they are more concerned with the quality of management schools. Quality of management schools in the host country may give impression to foreign companies that the government and educational institutions in the host country are committed to upgrading not just the business operations but other institutions by producing human resources who are able to adapt to the changing environment in the global market as well as provide sound strategies that are necessary to achieve firm-level and country-level competitiveness.

On another note, the attractiveness of upper middle income and high income economies for FDI inflows may not be influenced by higher education because it is no longer on that stage where efficiency is the main goal. Rather, foreign companies in high income economies may have been aiming for business sophistication ensuring high quality and sustainability of their production processes through quality workforce, modern technology, and advanced knowledge to meet market demands for unique products and services.

1.7 Conclusions

FDI has contributed to the accumulation of capital and the improvement of the economy's productive capacity through the incorporation of new inputs and modern technologies in the production process. However, its impact varies among economies in different income groups. Sub-Saharan Africa region, having many countries with low income, has also generated lower FDI net inflows compared with the Europe & Central Asia region with economies having high income and consequently with high FDI net inflows. It can also be concluded that FDI net inflow of low income economies is significantly correlated with most of the competitiveness indices compared to upper middle income and high income economies. It was also highlighted by the findings that market size influenced majority of economies in attracting FDI inflows. In addition, higher education may have yielded a counter-intuitive result but when it was analyzed using its eight sub-components, tertiary education enrollment rate and quality of management schools have resulted to positive and significant impact on the attractiveness of a country for FDI inflows. However, none of the sub-components of higher education and training is significantly influencing FDI inflows of upper middle income and high income economies.

Hence, this implies that Global Competitiveness Index can be considered as important in making decisions of foreign firms who wished to put investments in low income and lower middle income countries. Likewise, it can be concluded that Global Competitiveness Index plays a role in investment decisions.

Additionally, there is a growing importance in understanding competitiveness and FDI in the economic growth and development of a country. It is also vital that industries are able to have a full grasp of the role that higher education plays in attracting FDI inflows as well as its involvement in ensuring that host countries reap the full benefits of FDI. Hence, in spite of the significant findings of this study, it is recommended that longitudinal research be conducted to better predict the impact of higher education competitiveness index over a longer period.

1.7 REFRENCES

Abbes, S. M., Mostéfa, B., Seghir, G., & Zakarya, G. Y. (2015). Causal Interactions between FDI, and Economic Growth: Evidence from Dynamic Panel Co-integration. *Procedia Economics and Finance*, *23*(October 2014), 276–290. https://doi.org/10.1016/S2212-5671(15)00541-9

Agarwal, J. P., (1980), "Determinants of Foreign Direct Investment", Weltwirtschaftliches Archiv, No. 4, 116, pp. 739-73

Agbola, F. W. (2014). Modelling the impact of foreign direct investment and human capital on economic growth: empirical evidence from the Philippines. *Asia Pacific Economy*, *19*(2), 272–289. https://doi.org/10.1080/13547860.2014.880282

Agiomirgianakis, G., Asteriou, D., & Papathoma, K. (2004). The Determinants of Foreign Direct Investment: A Panel Data Study for the OECD Countries. *City University-London, …*, (3), 1–19. https://doi.org/10.1007/978-3-540-25939-8

Almfraji, M. A., & Almsafir, M. K. (2014). Foreign Direct Investment and Economic Growth Literature Review from 1994 to 2012. *Procedia - Social and Behavioral Sciences*, *129*, 206–213. https://doi.org/10.1016/j.sbspro.2014.03.668

Almfraji, M. A., Almsafir, M. K., & Yao, L. (2014). Economic Growth and Foreign Direct Investment Inflows: The Case of Qatar. *Procedia - Social and Behavioral Sciences*, *109*, 1040–1045. https://doi.org/10.1016/j.sbspro.2013.12.586

Asiedu, E. (2002). On the Determinants of Foreign Direct Investment to Developing Countries: Is Africa Di erent? *World Development*, *30*(1), 107–19. https://doi.org/10.1016/S0305-750X(01)00100-0

Axarloglou, K., & Pournarakis, M. (2007). Do all foreign direct investment inflows benefit the local economy? *World Economy*, *30*(3), 424–445. https://doi.org/10.1111/j.1467-9701.2006.00824.x

Aziz, O. (2017). Institutional Quality and FDI Inflows in Arab Economies. *Finance Research Letters*, (August 2016). https://doi.org/https://doi.org/10.1016/j.frl.2017.10.026

Baliamoune-Lutz, M., 2004. Does FDI contribute to economic growth? Business Economics 39 (2) 49–56

Bandera , V.N. and White, J.T. (1968), "U.S. Direct Investments and Domestic Markets in Europe", Economia Internazionale, Vol. 21, pp 117-133.

Bashir, T., Mansha, A., Zulfiqar, R., & Riaz, R. (2014). Impact of FDI on Economy Growth: A Comparison of SOuth Asian States & China. *European Scientific Journal, ESJ*, 446–469.

Belloumi, M. (2014). The relationship between trade, FDI and economic growth in Tunisia: An application of the autoregressive distributed lag model. *Economic Systems*, *38*(2), 269–287. https://doi.org/10.1016/j.ecosys.2013.09.002

Bevan, A. A., & Estrin, S. (2004). The determinants of foreign direct inve

Bhagwati, J. N. (1978), "Anatomy and Consequences of Exchange Rates Regimes", Studies in International Economic Relations, 1, 10, New York: NBER

Bhasin, A., Jun, K., and Economou, P. (1994), "Assessing the Sustainability of Foreign Direct Investment Flows", World Bank, International Economics Department

Boghean, C., & State, M. (2015). The Relation between Foreign Direct Investments (FDI) and Labour Productivity in the European Union Countries. *Procedia Economics and Finance*, *32*(15), 278–285. https://doi.org/10.1016/S2212-5671(15)01392-1

Borensztein, E., De Gregorio, J., Lee, J.W. (1998). How does foreign investment affect growth?. Journal of International Economics 45, pp. 115–135

Brincikova, Z., & Darmo, L. (2014). The Impact of FDI Inflows on Employment in V4 Countries. *European Scientific Journal, ESJ*, *1*(Special Issue), 245–252.

Buracom, P. (2014). ASEAN economic performance, institutional effectiveness, and foreign direct investment. *Asian Affairs: An American Review*, *41*(3), 108–126. https://doi.org/10.1080/00927678.2014.936801

Castro, P. G. de, Fernandes, E. A., & Campos, A. C. (2013). The Determinants of Foreign Direct Investment in Brazil and Mexico: An Empirical Analysis. *Procedia Economics and Finance*, *5*(13), 231–240. https://doi.org/10.1016/S2212-5671(13)00029-4

Cheng, L. K., and Kwan, Y. K. (1999), FDI Stock and its Determinants. In: Wu, Y. (Ed.), Foreign Direct Investment and Economic Growth in China, Chapter 3. Edward Elgar, Cheltenham, pp. 42-56

Cheng, L. K., & Kwan, Y. K. (2000a). What are the determinants of the location of foreign direct investment: The Chinese experience. Journal of International Economics, 51, 379–400

Cheng, L. K., & Kwan, Y. K. (2000b). The location of foreign direct investment in Chinese regions: Further analysis of labor quality. In T. Ito, & A. O. Krueger (Eds.), The role of foreign direct investment in East Asian Economic Development. Chicago: University of Chicago Pres

Cheng, L. K., and Zhao, H.(1995), "Geographical Patterns of Foreign Direct Investment in China: Location, Factor Endowments, and Policy Incentives", Department of Economics, Hong-Kong University of Science and Technology, February

Chisăgiu, L. (2015). Multi-dimensional Impact of Foreign Direct Investments on the Host-economy, Determinants and Effects, and their Contribution to Economic Growth in Romania. *Procedia Economics and Finance*, *32*(15), 721–727. https://doi.org/10.1016/S2212-5671(15)01454-9

Cleeve, E. A., Debrah, Y., & Yiheyis, Z. (2015). Human Capital and FDI Inflow: An Assessment of the African Case. *World Development*, *74*, 1–14. https://doi.org/10.1016/j.worlddev.2015.04.003

Coughlin, C. C., Terza, J. V., & Arromdee, V. (1991). State characteristics and the location of foreign direct investment within the United States. Review of Economics and Statistics, 73(4), 675–683

De Mello, L. R. (1997), "Foreign Direct Investment in Developing Countries and Growth: A Selectivity Survey", University of Kent, Working Papers Series, UK, pp. 1-46.

De Mello, L.R. (1999). FDI-led growth: evidence from time series and panel data. Oxford Economic Papers 51, pp.133–151

Demekas, D. G., Horváth, B., Ribakova, E., & Wu, Y. (2007). Foreign direct investment in European transition economies—The role of policies. Journal of Comparative Economics, 35(2), 369–386.

Disdier, A. C., & Mayer, T. (2004). How different is Eastern Europe? Structure and de- terminants of location choices by French firms in Eastern and Western Europe. Journal of Comparative Economics, 32(2), 280–296.

Doms, M. E., J. B. Jensen and J. Bradford (1998), 'Comparing Wages, Skills and Productivity between Domestic and Foreign Owned Manufacturing Establishments in the United States', Geography and Ownership as Basis for Economic Accounting, NBER Studies in Income and Wealth, 53, 235–55

Don Almeida, R. C. (2010). Government's Many Roles in Fostering Innovation. PricewaterhouseCoopers LLP.

Du, J., Lu, Y., & Tao, Z. (2008a). FDI location choice: Agglomeration vs institutions. International Journal of Finance&Economics, 13(1), 92–107

Du, J., Lu, Y., & Tao, Z. (2008b). Economic institutions and FDI location choice: Evidence from US multinationals in China. Journal of Comparative Economics, 36(3), 412–429

Dunning, J.H., and Zhang, F. (2008). Foreign direct investment and the locational competitiveness of countries. Transactional Corporations. 17(3), 1-30.

Dunning, J.H. (2004) 'Institutional reform, FDI and European transition economies', Economics and Management Discussion Paper No.14, University of Reading. Economic & Social Commission for Western Asia (ESCWA), 2013. Short- and medium-Term Economic Challenges of the Arab countries in transition: A review. United Nations, New York, USA.

Figlio, N. D. and B. A. Blonigen (1999), 'The Effects of Direct Foreign Investment on Local Communities', NBER Working Paper No. 7274

Financial Times (2016). The fDi report 2016 At http://forms.fdiintelligence.com/ report2016/files/The_fDi_Report_2016.pdf. [Accessed 13 November 2017].

Fosfuri, A., Motta, M., & Rønde, T. (2001). Foreign direct investment and spillovers through workers' mobility. Journal of International Economics, 53, 205–222

Chan, M. W. L., Hou, K., Li, X., & Mountain, D. C. (2014). Foreign direct investment and its determinants: A regional panel causality analysis. Quarterly Review of Economics and Finance, 54(4), 579–589. https://doi.org/10.1016/j.qref.2013.07.004

Fung, K. C., Iizaka, H., Lin, C., & Siu, A. (2002). An econometric estimation of locational choices of

foreign direct investment: The case of Hong Kong and U.S. firms in China. manuscrip
Gao, T. (2005). Labor quality and the location of foreign direct Investment: Evidence from China. China Economic Review, 16, 274–292.
GCR (2012). The Global Competitiveness Report 2012-2013. World Economic Forum.
Glass, A., Saggi, K., 2002. Multinational firms and technology transfer. Scandinavian Journal of Economics 104 (4) 495–514
Globerman, S., C. J. Ries and I. Vertinsky (1994), 'The Economic Performance of Foreign Affili- ates in Canada', Canadian Journal of Economics, 27, 1, 143 –56.
Globerman, S., & Shapiro, D. M. (1999). The impact of government policies on foreign direct investment: The Canadian experience. Journal of International Business Studies, 30(3), 513–532
Gunther, J., 2002. FDI as a multiplier of modern technology in Hungarian industry. Intereconomics 37 (5) 263–269, ISSN: 0020- 5346
Haaker, M., 1999. Spillovers from foreign direct investment through labor turnover: the supply of management skills. Discussion Paper London School of Economics
Head, C. K., Ries, J. C., and Swenson, D. L. (1995), "Agglomeration Benefits and Locational Choice: Evidence from Japanese Manufacturing Investments in the United States", Journal of International Economics, 10, pp. 92-116
Helmy, H.E., 2013. The impact of corruption on FDI: Is MENA an exception? J.Int. Rev. Appl. Econ. 27, 491–514
Hodgson, M., Stoelhorst, W., 2014. Introduction to the special issue on the future of institutional and evolutionary economics. J. Inst. Econ. 10, 513–540
Javorcik, B. S., & Wei, S. J. (2009). Corruption and cross-border investment in emerging markets: Firm-level evidence. Journal of International Money and Finance, 28(4), 605–624
Javorcik, B. S. (2004). The composition of foreign direct investment and protection of intellectual property rights: Evidence from transition economies. European Economic Review, 48(1), 39–62
Jeon, Y.D. (1992), "The Determinants of Korean Foreign Direct Investment in Manufacturing Industries", Weltwirtschaftliches Archv, Vol. 128, pp. 527-541.
Kaufmann, L., 1997. A model of spillovers through labor recruitment. International Economic Journal 11 (3) 13–34
Khan, D. M. (2007). Role of Human Capital in Attracting Foreign Direct Investment: A South Asian Perspective. SAARC Journal of Human Resource Development, 5-25.
Kokko, M. B. (2002). FDI and Human Capital: A Research Agenda. OECD Development Centre
Mainardi, S. (1992), "Foreign Direct Investment in Latin America and Southeast Asia: Relevance of Macroeconomic and Policy-Related Factors", Giornale delgi Economisti, No. 5-8, 51 (NS), pp. 259-79
Masron, A., Nor, E., 2013. FDI in ASEAN-8: does institutional quality matter? Appl. Econ. Lett. 20, 186–189.
Miner, C., and Pentecost, E. (1996), "Locational Advantage and US Foreign Direct Investment in the UK", Applied Economics, 28, pp. 605-15
Mina, W.M., 2012. The institutional reforms debate and FDI flows to the MENA region: the "best" ensemble. World Dev. 40, 1798–1809
Mincer, J. (1974) Schooling, Experience and Earnings, NBER, New York.
Moe, T.L. (2008). An empirical investigation of relationships between official development assisstance (ODA) and human educational development. International Journal of Social Economics, 35(3), 202-221.
Morrissey, O., and Rai, Y. (1995), "The GATT Agreement on Trade-Related Investment and Their Relationship with Transactional Corporations", Journal of Development Studies, 31, pp. 702-24
Naude, W.A., Krugell, W.F., 2007. Investigating geography and institutions as determinants of foreign direct investment in Africa using panel data. J. Appl. Econ. 39, 1223–1233
Nunnenkamp, P., & Spatz, J. (2002). Determinants of FDI in developing countries: Has globalization changed the rules of the game?. Trans- national Corporations, 2(2), UNCTAD

Outreville, J.F. (2008). Foreign affiliates of the largest insurance groups: location-specific advantages. Journal of Risk and Insurance, 75(2), 463-492.

Paul, A., Popovici, C., Calin, A., 2014. The attractiveness of CEE countries for FDI: a public policy approach using the TOPSIS method. Transylvanian Rev. Administrative Sci. 42, 156–180

Rondinelli, D.A., 2005. Assessing government policies for business competitiveness in emerging market economies: an institutional approach. In: Grosse, R. (Ed.), International and Business Government Relations in the 21st Century. Cambridge University Press, Cambridge, UK, pp. 395–419

Salehizadeh, M. (2005). Foreign Direct Investment Inflows and the US Economy: An Empirical Analysis. Economic Issues, 10(2), 29-50.

Sass, M. (2003). Competitiveness and Economic Policies Related to Foreign Direct Investment . Ministry of Finance

Sethi, D., Guisinger, S. E., Phelan, S. E., & Berg, D. M. (2003). Trends in foreign direct investment flows: A theoretical and empirical analysis. Journal of International Business Studies, 34(4), 315–326.

Sethi, D., Guisinger, S. E., Ford, D. L., & Phelan, S. E. (2002). Seeking greener pastures: A theoretical and empirical investigation into the changing trend of foreign direct in- vestment flows in response to institutional and strategic factors. International Business Review, 11(6), 685–705.

Seyoum, B. (2009). Formal institutions and Foregn Direct Investment. Thunderbird International Business Review, 51(2). 165-181.

Shatz, H. J. (2001). Expanding Foreign Direct Investment in the Andean Countries. Center for International Development at Harvard University.

Sjöholm, R. E. (2010). FDI and Growth in East Asia: Lessons for Indonesia. Stockholm: Research Institute of Industrial Economics.

Slemrod, J. (1991). Taxation and Foreign Direct Investment in the United States: Evidence from a Cross-Country Comparison. In:Razin, A.

Tien, A. F. (2010). African Leaders: Their Education Abroad and FDI Flows. Institute for the Study of Labor IZA

Tintin, C., 2013. The determinants of foreign direct investment inflows in the central and eastern European countries: the importance of institutions. Communist Post- Communist Stud. 46, 287–298.

Tun, Y.-L., Azman-Saini, W, Law, S.-H., 2012. International evidence on the link between foreign direct investment and institutional quality. Eng. Econ. 23, 379–386

Wang, Z., Q., and Swain, N., J. (1995), "The Determinants of Foreign Direct Investment in Transforming Economies: Evidence from Hungary and China", Weltwirtschaftliches Archiv, 131, pp. 359-82

Wang, J.Y., Blomstrom, M., 1992. Foreign investment and technology transfer: a simple model. European Economic Review 36 (1) 137–155

Wei, S. J. (2000b). Local corruption and global capital flows. Brookings Papers on Economic Activity, 2, 303–354.

UNCTAD. (2007).World Investment Report TNCs in Extractive Industries and Development, NewYork: United Nations. World Economic Outlook (WEO) Database.

Usman, S. (2014). Higher Education, Infrastructure and Foreign Direct Investment in Pakistan. *IOSR Journal of Business and Management (IOSR-JBM)*, *15*(6), 54–59. Retrieved from http://www.iosrjournals.org/iosr-jbm/papers/Vol15-issue6/H01565459.pdf

Velde, D. W. te. (2005). Globalisation and education : what do the trade, investment and migration literatures tell us? *Working Paper (Overseas Development Institute) 254*, (August), 70. Retrieved from http://www.odi.org.uk/publications/working_papers/wp254.pdf

Yao, S. 2006. "On Economic Growth, FDI and Exports in China." Applied Economics 38 (3): 339– 351

WEF. (2016). *The Global Competitiveness Report 2016–2017. World Economic Forum Reports 2016*. https://doi.org/92-95044-35-5

World Economic Forum. Th eHlobal Competitiveness Index dataset 2007-2017. Retrieved fromehttps://www.kaggle.com/weforum/global-competitiveness/data. November 30, 2017.

WorldBank.

http://databank.worldbank.org/data/reports.aspx?Code=BN.KLT.DINV.CD&id=1ff4a498&report_name=Popular-Indicators&populartype=series&ispopular=y retrieved last

Linking Global Competitiveness, Higher Education, and Foreign Direct Investment Inflows

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I. Introduction

1.1 Background of the Study

Foreign Direct Investments (FDI) has contributed to the accumulation of capital and the improvement of the economy's productive capacity through the incorporation of new inputs and modern technologies in the production process. Neoclassical and endogenous growth models have been widely used to empirically test the benefits of FDI (Almfraji & Almsafir, 2014). However, results of testing theoretical benefits are varying from regions, countries, and industries. Conflicting relationships and impacts range from significant to non-significant, positive to negative impacts, directly or indirectly. Despite that, FDI inflows have still been recognized to influence employment and wages, infrastructure development, human capital development, technology transfer, and promotion of trade which could have a short and long-term effect on economic of growth of a country. Recognizing the impact of FDI on the development of an economy, many researchers tried to elucidate the factors that encourage foreign countries to invest in a specific economy.

For decades, scholars have been interested in exploring the main factors that determine a country's level of FDI attractiveness. Traditionally, scholars focused on economic factors such as market size, labor costs, exchange rates, infrastructure, and institutional quality which include political stability, investment policies and regulations, as well as governance and others as the key explanatory factors in determining a host country's ability to attract or deter FDI. Reviewed literature also looked into the influence that human capital development offers to induce FDI inflows. Among the human capital elements are enrollment in primary and secondary education, government expenditures in education, as well as the quality of labor measured by the monthly wages. However, few studies dealt with the importance of higher education/tertiary education. Among those few is the correlational study of Usman (2014) examining the relationship of FDI, higher education, and infrastructure using the World Economic Forum Global Competitiveness Index, which revealed that FDI inflows in selected countries have a significant correlation with higher education and infrastructure. Results of Usman's (2014) study are in conformity with the results of Tien (2010) who found that higher education is a better predictor in attracting FDI. It is also in accordance with the results obtained by Sjöholm (2010) with which he determined the factors that affect the multinational corporations' locational decision. He found out that higher education is one of the factors corporations consider, aside from better institutions and liberal trade policies. Salehizadeh (2005) also found that multinational companies are significantly attracted to states with highly educated employees and managers. Hence, attracting FDI inflows

for economic development can be achieved if the government (Pakistan) will give more attention to developing higher education (Usman, 2014).

Acknowledging the importance of FDI in enhancing growth of a country and the role that the host country's competitiveness plays in attracting FDIs, this study tried to ascertain which among the pillars of global competitiveness index significantly influence the attractiveness of the host country for FDI inflows with more focused on the human capital factor, quality of higher education/tertiary education, in particular.

1.2 Statement of the problem:

Generally, this study aimed to answer the question, which among the Global Competitiveness Indices drives the FDI inflows? Specifically, it sought to give answer to the following questions:

1. What is the extent of relationship among the Global Competitiveness Indices and FDI Inflows?

2. What is the degree of impact of Global Competitiveness Indices in attracting FDI inflows?

3. What is the extent of influence of Higher Education and Training Indices in attracting FDI Inflows?

1.3 Significance of the Study:

Results of this study will be beneficial to the host country, government, higher academic institutions, and future researchers. The host country will have an idea on the pillars of competitiveness that they need to enhance to be at par with fast economies. The government of the host country, as well as their partner stakeholders (domestic companies), will be enlightened on the factors that attract FDI to sustain economic development. Higher academic institutions, being the source and developer of the capital, may get inputs on how to strengthen their plans to produce better quality labor force who will be at the forefront of reaping the benefits of FDI in terms of absorbing technology transfer and knowledge transfer. Higher education institutions may also look into its role in enhancing R&D capacities leading to innovation, thereby, climbing the ladder of competitiveness. And given the scarcity in studies relating to education's role in improving competitiveness of the country and attracting FDI inflows, this study contributes to new knowledge, which future researchers may look into as a basis for future researches on FDI, economic development, competitiveness, and higher education.

1.4 Scope and Limitation of the Study

This study employed a causal-explanatory research design to explain the influence of Global Competitiveness Indices as independent variables on the dependent variable which is FDI Inflows. Secondary data, which are available online in the World Economic Forum and World Bank Report for 2016, were used in the analysis.

2. Review of Related Literature and Studies

Review of related literature and studies give an overview of the role of foreign direct investment in the development of a country as well as the factors that attract foreign direct investment.

2.1 Role of FDI in the development of a country

2.1.1 Provision of Employment

FDI inflows play an important role in the local market of the host country. The theory of FDI postulates that it has a positive impact on unemployment vis-a-vis employment. Investments increase jobs, thus, declining unemployment. Researches have explored this accepted claim, however, results vary. Green field investment possesses positive impact of FDI inflows, unlike in the case of privatization where there is a negative impact of FDI on employment (Brincikova & Darmo, 2014). But different aspects of FDI's effects on the host countries have always been considered.

According to Axarloglou and Pournarakis (2007), FDI inflows shifts the labor demand, thereby influencing employment and wages (at least in the short-run). Higher employment and wages are expected at the plant level due to the establishment or expansion of foreign subsidiary (Doms, Jensen & Bradford, 1998). Economic literature has also explored the impact of FDI inflows on growth and development, particularly in the labor market. Though, impacts of FDI on the employment and wage are controversial. Most researches inferred that the impact on economic growth of the investments of foreign companies are basically in terms of wage, technology, trade, and employment (Floyd, 2003; Dicken, 2007).

The U.S. offered strong economic incentives to attract FDI inflows. This strategy was implemented with the anticipation that local economies would be stimulated by FDI. Researchers tried to assess the performance of foreign-owned subsidiaries operating in the US to evaluate the effects of FDIs on local economies (World Economy, 2007). Hownstein and Zeile's (1994) assessment, which was supported by Globerman, Ries, and Vertinsky (1994), found that higher wages are paid by foreign affiliates in the US than the domestic plants.

However, despite FDIs' impact on local economic development in the host US states, very few evaluated how local labor markets are affected by the FDI Inflows. Figlio and Blonigen (1999) evaluated the impact of manufacturing employment by foreign plants in South Carolina using country-level data. They found that country- and industry-specific wages were strongly and positively impacted by such employment. Furthermore, there is an increase in all workers' real wages due to the addition of an averaged-sized foreign subsidiary in the specific county and industry.

Hence, FDI inflows' impact on local labor markets varies, depending on the industry. As explained by Axarloglou and Pournarakis (2007), the variances in the effects of FDI on the labor market are primarily because of industry composition of the FDI inflows. Hence, policymakers should focus on attracting FDI inflows on strategic group of industries such as printing and publishing and transportation equipment (Axarloglou & Pournarakis, 2007).

Vacaflores (2011) also examined 11 countries in Latin America using 1980–2006 data on FDI and employment generation. Results revealed that effects on employment generation is positive and significant in host countries, which is driven by its effect on the male labor force. However, this is only important for less developed economies with low inflation periods. Benefits from FDI inflows are only accrued to the host countries with high level of informality and attracting low average inflows of FDI.

Moreover, employment caused by FDIs increased the country's per-capita income as found out by the Spieza (2004) study on 49 countries, though, for low-income developing countries, the effects is not significant. Vacaflores and Mogab (2012) also found that compared to other regions, the subsidiaries in Asia possess the largest additions in employment due to the increase in FDI followed by those in Americas, but, statistically, significant influence is present in the manufacturing and service sectors.

Furthermore, effects of FDI on labor productivity on host countries is through THE transfer of technology and proficiency in marketing and management. These enable technological progress and economic growth in the long term (Boghean & State, 2015).

2.1.2 Technology Transfer

Technology transfer is one of the FDI inflows' benefits accrued to the host country. Wang and Blomstrom (1992) and Gunther (2002) said that there are four main channels of technology spillovers. These spillovers flow from foreign to local firms by means of imitations, competition, skills, and linkage. Learning by watching effect is what imitation is all about. Local firms are imitating the technology of foreign companies to improve its productivity. Also, with the presence of new entrants, foreign firms, competition is created with local firms. Thus, companies in the host countries are forced to maximize the potential of existing resources and by using it more efficiently and adopting modern technologies (Wang & Blomstrom, 1992; De Mello, 1997, 1999).

The introduction or the transfer of new and modern technologies is one of the benefits that host countries can get from FDI promotion based on the empirical work studying FLGH. (Belloumi, 2014). It supports the findings of Borensztein, De Gregorio, and Lee (1998) who inferred that transfer of modern technology is channeled through FDI. However, the effectiveness of such transfer of technology depends on the host country's stock of human capital.

Also, according to (Chisăgiu, 2015), new production capacities are generated by subsidiaries of transnational companies as well as realized consumer goods. However, it also means high standard capital which made them technological leaders in the industry as well as posting significant impact at occupational level.

2.1.3. Promotion of Trade

Enhanced production capacities of host countries brought by investments of foreign companies bring ripple effect in terms of trade (local and international). More opportunities for trade are being opened. In the case of Tunisia, it needs partners that will provide them technology and other inputs of production. Hence, it needs trade partners. In addition, Tunisia can have the chance to improve its own stock of knowledge by forging linkages and inviting trade partners especially from developed countries where they can import capital equipment and intermediate products (Belloumi, 2014).

Baliamoune-Lutz (2004) found a bidirectional relationship between FDI and exports in Morocco. His study also revealed that FDI has a positive impact on economic growth. It implied that exports can be promoted through FDI and vice-versa. Moreover, Yao (2006) assessed 28

Chinese provinces employing Arellano and Bond's dynamic panel data estimating technique in the dataset over the period of 1987-2000. Yao (2006) found out that there is a positive effect of export trade and FDI on economic growth.

2.1.4 Enhancement of Human Capital

FDI inflows causes spillovers of many forms. One spillover effect of FDI is the transfer of knowledge, which occurs from foreign firms to domestic firms by means of well-trained workers and managers' mobility (Kaufmann, 1997; Haaker, 1999; Fosfuri, Motta, & Rønde, 2001; Glass & Saggi, 2002). Linkages also create spillovers when productivity of foreign companies flows to local firms of the same industry, which is called horizontal spillovers, and upstream and downstream industries or the so-called vertical spillovers. This happen when the range and quality of goods (intermediate) are increased (Borensztein et al., 1998).

In addition, according to Abbes, Mostéfa, Seghir, and Zakarya, (2015), skills levels in the host economy is raised because of FDI inflows. Labor resources' quality is also enhanced because of the development of performing management skills, which is based on the imposed standards of corporate leading systems. In addition, the populations' training levels and its technological development adaptation plays an important role in the enhancement of human resource quality of the host economy (Boghean & State, 2015).

As pointed out by Kokko (2002), educational level and human capital need to be improved to such extent that the labor force's adaptation of foreign technology is quick and easy. These variables can have an effect in the long run on sustained economic growth. Also, as the demand for highly skilled labor force increased in the field of natural sciences, management, and engineering, MNC's may encourage the government to invest in higher education, which in fact helps improve the quality of human resource. In addition, MNC's prospecting to invest in a particular economy plays an important role in tertiary education enhancement by helping universities and institutions through academe-industry partnership alongside imparting scholarships for education.

Moreover, benefits of spillovers of investments in higher education can only be realized when foreign technology can be absorbed by local firms, there is basic level of workforce, and barriers are not high (Kokko, 2002).

2.2. Factors that Attract Foreign Direct Investment

2.2.1. Institutional Quality

Institutional quality is about social, financial and economic policies, governance, and political stability of the host country which could lead to the success of development projects or investments. The literature on FDIs acknowledge the role that institutional quality plays in attracting FDI inflows. Several reasons were pointed on the different ways on how institutions matter in attracting FDI inflows.

FDI is stimulated by the level of productivity of the host country, which is improved through the presence of institutional quality. However, there are requisites for productivity enhancement which ran from the availability of research and development system, financial institutions, flexible labor market, and a stable political government. Hence, an institution's

evolution is related to the development of productivity (Nelson, 2008; Hodgson & Stoelhorst, 2014).

Efficient institutions lower transaction costs and protect property rights. Transaction cost is important in projecting for the revenue, which foreign investors consider before making investment decisions. It includes costs associated with production, logistics, information, and risk monitoring. Without institutional system that is properly regulated, policies on property rights and financial markets that support large-scale financing, as well as the prevalence of corruption and weak incentive structure, costs of doing business may arise (Dunning, 2004).

In addition, property rights are important for the international economy, which is already becoming a knowledge-based economy. Hence, the government's protection of intellectual property rights through effective enforcement of policies can entice international companies to invest in a particular economy (Wall et al., 2010). It also encourages establishments of plants in the host country rather than focusing on distribution projects. Establishment of production plants could provide FDI spillovers (Rondinelli, 2005). Therefore, low transaction costs and protecting intellectual property rights are important factors in assessing business environments in the host country, which could promote trust and commitment for both the investors and the host country as well as upgrade competitiveness that enhances quality of outputs leading to stable and developed business environments (Tomassen et al., 2009, 2012; Rondinelli, 2005).

As argued by Tun, Azman-Saini, and Law (2012), due to the reduction of business costs and in uncertainty, countries should be able to attract investment, especially those with better institutional quality. This is proven by the results of their study employing GMM estimator for assessing the FDI determinants focusing on institutional quality of over the period of 1981–2005. Results revealed that bureaucratic quality, rule of law, corruption, risk of expropriation, and government repudiation of contracts are the factors of institutional quality that determine FDI inflows of the of 77 developing countries (Tun et al., 2012).

Several studies were also conducted with emphasis on the importance of institutional quality indicators in attracting or deterring FDI inflows.

Masron and Nor (2013) found that regulatory quality control, rule of law, and corruption are impacting the FDI inflows of ASEAN member countries as shown by data over the period 2002 to 2010.

On the other hand, economic freedoms, state fragility, and political rights are the significant predictors in attracting FDI inflows in Central and Eastern Europ (CEE) for the period 1996–2009 (Tintin, 2013). This is expounded by the study of Paul, Popovici, and Calin (2014) who conducted the same study in CEE but with focus on the country's public policies for the period 2007–2010, in which the results showed that accuracy and efficiency of public administration are the institutional quality components that create the framework for encouraging FDI. He also pointed out that the role of the government in building institutional quality cannot be substituted by market forces.

Naude and Krugell (2007), upon examining Africa's FDI inflows and its determinants from 1970 to 1990, their results show that it is institutional quality, rule of law, and political stability, and not the geographic location that determine FDI inflows of Africa. Following the results is the policy implications geared toward political stability and good governance enhancement through institutions.

Mina (2012) examined the impact of institutional quality on FDI inflows in Arab countries over the period 1990–2008. The results confirm that reducing the risk of investment expropriation and increasing government stability and bilateral investment treaties have a positive influence on FDI inflows.

Furthermore, GCC countries' institutional quality affects the FDI inflows. Among the components of institutional quality that encourage FDI inflows are political stability and the absence of democracy (Gani & Al-Abri, 2013). In contrast, Helmy (2013) found that two FDI determinants, freedom and security of investments, have a positive impact. He also reported that chances of expropriation and corruption rates will lead to an unsafe business environment, hence, posing a negative influence on FDI.

Therefore, important determinants of FDI flows could include government policies, which can be in the form of taxes, subsidies, regulatory regime, and privatization policy. Evidence from the empirical investigation of Cheng and Kwan (2000) says that the government plays a vital role in inward FDI location attraction. It has also been recognized as a catalyst for economic restructuring. Henceforth, host country's institutional features and political interventions are potential for encouraging FDI.

Furthermore, Sethi, Guisinger, Phelan, and Berg (2003) argued that MNEs often evaluate potential FDI destinations at the regional level, rather than on a host country by county basis due to cultural, political, and economic similarities and significant uniformity in trade and investment policies. Based on our review, the relationship between institutional factors and FDI attractiveness in the top three regional destinations for FDI—Europe, North America, and Asia (Financial Times, 2016)—is decidedly mixed. In Europe, the evidence varies but suggests that Western Europe and Eastern Europe should be viewed as separate destinations for FDI (Disdier & Mayer, 2004). There is significant evidence of political stability having a positive effect on FDI in Hungary (Wang & Swain, 1995), but not in the whole Central and Eastern European region (Bevan & Estrin, 2004). Components of rule of law, such as property rights protections, are significant factors in Eastern Europe (Javorcik, 2004). On the deterring side, tax rates are negative but only significant at higher income levels in Southeastern Europe (Demekas, Horváth, Ribakova, & Wu, 2007). Corruption has a negative relationship in transition economies (Javorcik & Wei, 2009). Finally, cultural distance is not an important factor in Western Europe in the late 1990s (Sethi, Guisinger, Ford, & Phelan, 2002). In the United States and Canada, results follow the theoretical predictions: in Canada, policy changes, including exempting bureaucratic review and strengthening the legal environment, increase FDI attractiveness (Globerman & Shapiro, 1999). A number of scholars found strong evidence that taxation has a profound effect on FDI attractiveness in the United States (Coughlin, Terza, & Arromdee, 1991; Slemrod, 1991; Swenson, 1994). In the Asia region, studies are dominated by explaining Chinese FDI and appear stronger and more consistent in their results. Corruption and tax rates are significant deterring factors (Du, Lu, & Tao, 2008a, 2008b; Wei, 2000b), and other studies find strong evidence of political stability and rule of law in China increasing FDI attractiveness (Du et al., 2008a, 2008b; Wei, 2000b), and other studies find strong evidence of political stability and rule of law in China increasing FDI attractiveness (Du et al., 2008a, 2008b; Wang & Swain, 1995). Thus, the review combined with the arguments for levels of development would suggest that the relationship between institutional factors and FDI will be strongest in Asia (i.e. China), followed by North America, and then Europe.

2.2.2. Economic Development

FDI and economic development have a bidirectional relationship (Agiomirgianakis, Asteriou, & Papathoma, 2004). Economic development status and Investment Development Plan (IDP) of the recipient country matter in attracting FDI inflows (Barrel & Pain, 1998, as cited by Agiomirgianakis et al., 2004). FDI decisions depend on the host country's quality of market infrastructure (De Menil, 1999).

Investment development plan is sometimes measured using GDP per capita in major studies conducted (Agiomirgianakis et al., 2004). Real per capita GNP, as well as real GDP growth, impact the investment decisions (Agiomirgianakis et al., 2004; Agarwal, 1990; Mainardi, 1992). Other variables were also used, such as regional income and infrastructure factors, measured by road constructions (km/km2 of land mass) as a potential for FDI attraction (Agiomirgianakis et al., 2004; Head & Ries, 1996; Cheng & Kwan, 1999).

Moreover, in Qatar, Granger Causally related variables are inward FDI and economic growth as proven by the empirical findings of Almfraji, Almsafir, and Yao (2014), which also show that inward FDI is more sensitive to its own performance, though it can be noted that economic growth positively affected inward FDI. Therefore, government's efforts to create promising economic and investment environment must be continued (Almfraji, Almsafir, & Yao, 2014).

To attract direct investment, infrastructure development, stable and healthy political and economic environment, law and order situation, tax exemption, and curtailing external debts are important for South Asia states (Bashir, Mansha, Zulfiqar, & Riaz, 2014).

In addition, many ASEAN countries are heavily reliant on international trade and FDI because of its relatively small domestic market; thereby, FDI is important for ASEAN economies' economic growth and globalization. On the other hand, recent studies on cross-border investment indicate that FDI decisions consider domestic economic performance and institutional effectiveness of the recipient country, which is confirmed by the study of Buracom (2014), indicating that macroeconomic performance is significantly impacting FDI flows into developing countries. Moreover, macroeconomic performance of ASEAN countries are amenable to private sector and therefore attractive to FDI (Buracom, 2014).

2.2.3. Trade regime and Market Size

Trade openness and the degree of liberalization in trade were found to be potential factors in attracting FDI inflows; although, it can be noted that measurement issues are acknowledged. Despite the difficulties, liberal trade regime's relationship with FDI is still anticipated (Raines et al., 1999). Bhagwati (1978) argued that countries that implement and promote export than import substitution policy best captivate FDI. Likewise, report showed that the ratio of exports to sales and sales concentration ratio, as a proxy for trade regime, are both contributing positively to FDI (Milner & Pentecost, 1996, as cited by Agiomirgianakis et al., 2004). It was also found that export-oriented FDI positively influenced inbound FDI and recently, launching of special export processing zone outweighs the closed economies inherent disadvantage. (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Wang & Swain,1995). China, in particular, associated its FDI inflows with Chinese Economic Zones (Agiomirgianakis et al.,2004; Cheng & Kwan, 2000; Wang & Swain,1995).

Moreover, Asiedu (2002) also revealed SSA and Non-SSA countries' FDIs are promoted by openness to trade. However, there is a variance in the marginal benefit that SSA and Non-SSA countries gets from trade openness in terms of FDI inflows. SSA countries received less FDI since they are less open than other host countries in their region. This is supported by Castro, Fernandes, and Campos (2013) who noted that market seeking is the strategy of multinational companies in Brazil, which is linked to its domestic market size. On the other hand, efficiency seeking is the most dominant strategy in Mexico, which is geared toward trade liberalization to attract FDI.

Evidence from previous empirical and theoretical studies also consider market size as another mechanism playing an important role in attracting FDI (Agiomirgianakis et al., 2004). Foreign companies take advantage of bigger market size by having economies of scale and mass production, which results to decrease in costs of operation and growth thereby affecting supply side (services and inputs) positively. Domestic market and growth prospects were claimed to be indicators considered by foreign investors in selecting host country where they plan to relocate the production plant (Agiomirgianakis et al., 2004; Bhasin, Jun, & Economou, 1994; Morrissey & Rai, 1995).

Furthermore, the linkage between growth level, as measured by profitability rates, and FDI is found to be statistically significant and positive (Jeon, 1992; Wang & Swain, 1995). Foreign firms' output of sales in the host country is used as a function of FDI (Agarwal, 1980). Output of sales is usually measured by the size of the market—absolute and relative value which is measured by GDP level (Agiomirgianakis et al.,2004; Bandera & White, 1968) and growth rate of GDP of the host country (Agiomirgianakis et al., 2004)

2.2.4. Human Resource Development

Quality and availability of human capital promotes labor-intensive and export-oriented FDI (Agiomirgianakis et al.,2004). Expansion of productivity potentials of the firms and country is enabled by FDI through investing in capital stocks (Agiomirgianakis et al.,2004; De Mello, 1997).

Agbola (2014) argued that crowding-out effect is prevalent in the Philippine government investment and private investment. Thus, human capital and infrastructure development must be the direction of government investments since it is most likely to attract FDI.

However, studies show a counter-intuitive result on the educational level's impact on inbound FDI (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Cheng & Zhao, 1995). Both Cheng and Kwan (2000) and Cheng and Zhao (1995) revealed that percentage of population with primarily high education has no positive and significant effect on FDI (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Cheng & Zhao, 1995).

Guntlach, (1995) argued that education has poor explanatory power. Hence, researches may explore the potential role of human capital augmentation instead of human capital accumulation because educations' impact is not direct. Benefits from education are seen through its spillover effect in production.

In contrast to the above findings, Aziz (2017), in his study using education as one of the independent variables which affect FDI inflows, revealed positive and significant effects of education on FDI inflows. With the nature of MNEs that are focusing on research and

development for technology development and innovation, there is a need for the host country to have the required human capital who have the capacity to understand, use, and innovate using the MNEs' newly introduced technology. Therefore, one way to attract FDI is to ensure that the host country has well-educated labor force who can easily adapt and exploit new knowledge and technologies.

Labor characteristics is also another factor in determining FDI. It is one of the considerations of foreign investors in choosing labor intensive or capital intensive investments. Though, sometimes it is inferred that China is the second largest recipient of FDI because of cheap labor. On the other hand, Branstetter and Feenstra (1999) modeled that there is a wage premium payment of multinational firms in China with the aim of attracting quality workers. Several studies were conducted on the role of labor quality in attracting FDI but the results vary. Some authors argued that labor quality has positive and significant impact on FDI (Gao, 2005; Fung, Iizaka, & Parker, 2002; Fung, Iizaka, Lin, & Siu, 2002) while an insignificant role is revealed by the study of Cheng and Kwan (2000a, 2000b). Varying results may be due to the variables used to measure education and quality of labor given that it is really difficult to look for better proxies for labor quality and characteristics.

Cleeve, Debrah, and Yiheyis (2015) showed that quality of labor significantly influences FDI, although they only used traditional variables of quality of labor employing various versions of FDI model. Moreover, it was also reported that human capital has no increasing importance on FDI over time in SSA.

Moreover, human development—which is defined by the UNDP (2012) as using the three basic dimensions: a long and healthy life (health), access to knowledge (education), and a decent standard of living (income) —is associated with FDI and economic growth, educational development, and enrollment (Moe, 2008). In addition, trade and inward investment are determined by good quality schooling of the general population in the host country; though it is also recognized that further training and upgrading of skills are necessary for continued flow of investments. The countries' participation in globalization processes is determined by the quantity and quality of education and the training it offers to its human resources. Globalization processes include value chains, fragmentation, increased migration, and trading of final products, in which human quality of human resources play an important role to better capture the benefits of FDI (Velde, 2005).

Mincenarian earning equation explains how education contributes to economic performance, which is grounded in human capital theory (Mincer, 1974). Mincenarian earnings equation correlated wage rate of an individual to its other own characteristics, which include the level of education attainment. Levels of education, in this case, is measured by the years of schooling and the type of education completed.

Though it was accepted that highly educated individuals earn more, it does not claim that all types of education could raise the growth of all countries. Hence, it is important to assess the types of education that help in creating or building science and those which are geared toward the building of absorptive capacity, thereby exploiting the benefits from best practice technology. As suggested by Borensztein et al. (1998), in order to benefit from inward FDI, education is necessary. However, it was not expanded as to how and in what level of education could the host country best capture such benefits.

In the United States, there were six US universities that were included in the top 10 Times Higher Education ranking in 2006–2007 out of 4,000 plus universities and colleges in the US. Times Higher Education also wrote that 580,000 foreign students enrolled in US universities in 2006–2007. Moreover, out of the total population, 56 million obtained bachelor's degree or higher. In order to succeed in the globalized world, US companies and foreign affiliates take full advantage of this environment because it makes US attractive for FDI. As mentioned in the paper, Sass (2003) stated that education and training are two of the very important factors that attract capital in a country aside from macroeconomic stability and infrastructure. The paper also expounded that not having a medium level of education, as well as higher education's training methods that are not at par with others, are key problems in attracting FDIs.

Moreover, several studies recommended that for an economy to attract higher inward FDI and if it wants to reap the full benefits of such investments, it is highly important to develop better secondary and higher education (Shatz, 2001; Nunnenkamp, 2002), and absorb advanced technologies through higher levels of education (Nunnenkamp, 2002),

On the other hand, Khan (2007) discussed that scarcity in knowledgeable and skilled-based workforce is unfavorable if a country wants to attract FDI. He further argued that in contrast with other South Asian countries which only focused on simple education, Singapore, Malaysia, Korea, and Ireland were successfully sustaining their FDI because of their human resource development strategy. Moreover, Khan (2007) single out Singapore as efficient and consistent in attracting FDI despite its insufficiency in natural resources because it capitalized on human resource development.

On another note, the Malaysian government exerted effort for education and training while the international chambers of commerce and Thailand government are jointly running the country's training programs. According to Michie (2001), Singapore aimed to attract FDI by pursuing national investment in education and training.

Higher education plays an important role in improving the quality of labor force of the host country. Moreover, higher education helps in R&D activities which supports production and management systems that are technology compliant. Effects of research and development can be achieved through the creation of incentive effect in foreign investments (Tolunay & Akyol, 2006). As Narin (2007) pointed out, FDI provides employment opportunity and offers new workforce qualifications of the country.

Furthermore, higher education system and innovation mobility of a country have strong link, thus, without skilled labor force, firms cannot sustain its growth. Hence, improving industrial development requires investment focus in the education sector for a period of one or two decades (Don Almeida, 2010).

2.2.5. Country's Competitiveness

Competitiveness is defined by a country's institutions, policies, and level and factors of productivity (GCR, 2012). Productivity can be measured by the level of quality of labor force and outputs a country generated in the production process. The better labor force and increase in market supply are affected by education level. Hence, it is noteworthy to mention that higher education's contribution to economic development is important. Poverty reduction through the sustainable increase in income leads to the higher living standards of the people and in the long

run bringing the country to higher competitiveness. In effect, improvement in competitiveness forces every economy to make strategic decisions in spending its resources. Higher competitiveness means an increase in spending for higher education so as to reach business sophistication and innovation level, which is considered to be the third and last stage of competitiveness (Bauk & Jusufranic, 2014). According to GCR (2012, p. #), "more competitive economy is one that is likely to sustain growth."

Moreover, the country competitiveness encouraged both inward and outward FDI (Dunning & Zhang, 2008). Level of economic prosperity, which is directly link to productivity level of a country, served as the basis for the estimating the rates of returns that investments obtained.

The association of competitiveness and productivity, as well as higher education, led to more interesting inquiries that expands competitiveness' link with FDI, especially for countries which are highly reliant on capital investments by foreign countries. However, studies utilizing Global Competitiveness Index published by World Economic Forum have been investigated but with more focus on governance and quality of formal institutions. Among those studies are of Outreville (2008) which revealed that local policies and regulation were among the governance aspect that organizations seek when looking for an international location of their investment. Consequently, Seyoum's (2009) study also found a positive influence of strong formal institutions on FDI inflows.

However, few studies dealt with the importance of higher education/tertiary education. Among those few is the correlational study of Usman (2014) examining the relationship of FDI, higher education, and infrastructure using the World Economic Forum Global Competitiveness Index, which revealed that FDI inflows in selected countries have a significant correlation with higher education and infrastructure. Results of Usman's (2014) study are in conformity with the results of Tien (2010) who found that higher education is a better predictor in attracting FDI. It is also in accordance with the results obtained by Sjöholm (2010) with which he determined the factors that affect the multinational corporations' locational decision. He found out that higher education is one of the factors aside from better institutions and liberal trade policies. Salehizadeh (2005) also found that multinational companies' are significantly attracted to states with highly educated employees and managers. Hence, attracting FDI inflows for economic development can be achieved if the government (Pakistan) will give more attention to developing higher education (Usman, 2014).

3. Research Gap

Reviewed literature and studies are geared toward the role of direct investment in the development of a country and the factors that attract FDI inflows in general. Impacts of FDI in economic growth are prevalent as well as its contribution in technology transfer, knowledge enhancement, labor productivity, infrastructure development, and human capital development. It can be noted from the studies reviewed the there are varying and sometimes conflicting effects depending on the region, economy, and industry which the FDI flows. In terms of the factors

attracting FDI inflows, researches have discussed institutional quality as determinants of FDI which pertains to governance, policy framework, political stability, taxation, and law and order situation. On the other hand, most of the economic determinants of FDI being studies are focused on infrastructure, trade regime, and market size. There are a few articles which discussed the connection between human resource developments in terms of education quality, higher education in particular. Most of the studies related to human capital are labor force, wages, enrollment in primary and secondary education, as well as government expenditures in education, in general. In addition, literatures have acknowledged that global competitiveness of the host country influenced FDI inflows, however, studies did not include all pillars of GCI as an independent variable. It only focused on the governance. Though, Usman (2014) discussed higher education's impact in FDI inflows, it only focused on the relationship but not on the extent of contribution of higher education in attracting FDI inflows. Hence, this study bridges the gap by providing new inputs as a result of this study on the Global Competitiveness Indices influence on FDI inflows.

4 Research Framework of the study

4.1 Operational framework

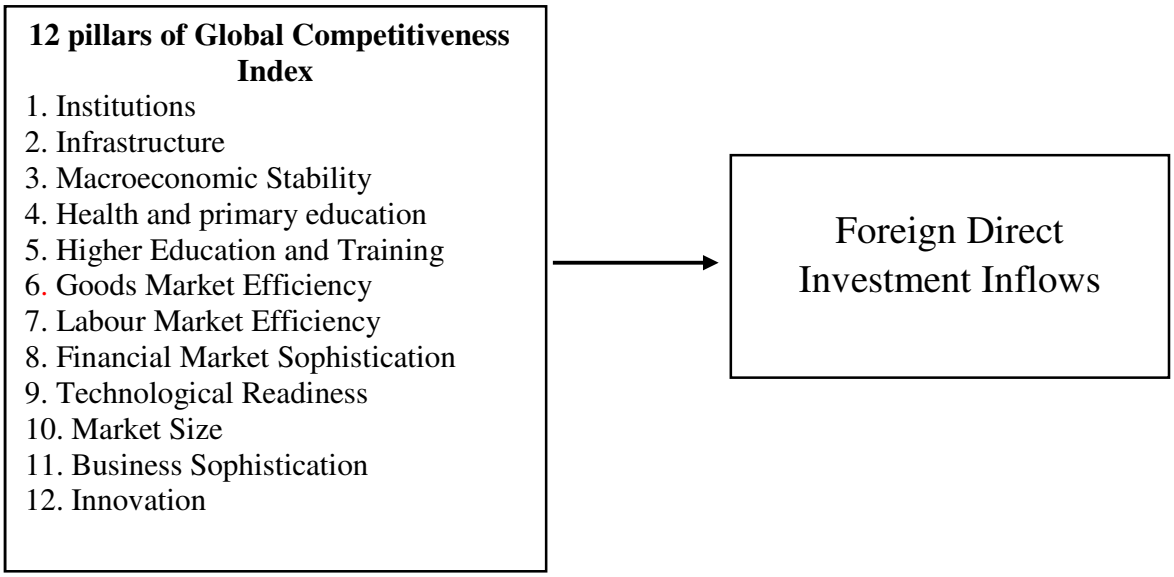

Figure 1. Operational Framework

5. Methodology

Descriptive and causal explanatory were used as research designs of the study. Descriptive research design was used to present the summary of dependent and independent variables in terms of mean, minimum, maximum, and standard deviation. In addition, causal explanatory was employed to measure the extent of relationship of the GCI and FDI as well as to determine the extent of impact of GCI on FDI inflows.

Quantitative data were processed and analyzed using Stata 13.0 program. For the descriptive research, descriptive analysis such as absolute and percentage frequencies, average weights (M), and standard deviation (SD) were employed. For causal explanatory research, multiple regression analysis was utilized to test the degree of impact of GCI on FDI inflows as well as the extent of influence of higher education and training indices on FDI inflows.

A total of 137 countries was considered for this study out of 152 and 264 countries included in the Global Competitiveness Index for 2016 and World Bank Report 2016. The criteria for selection of those 137 countries were based on the completeness of data for both GCI ratings and FDI inflows. Also, countries were classified into four groups: low income group, lower middle income, upper middle income, and high income. This is based on the new classification of countries by the World Bank.

6. Results and Discussion

6.1 Descriptive Analyses

Countries were classified by income and by regions as shown in Table 1. Based on the descriptive analysis of the data, 36% of the countries belong to high income group with which 28 are from Europe and Central Asia Region, 25% and 26% belong to lower middle income group and upper middle income group respectively, while 13% belong to low income group, 17 of which are from Sub-Saharan Africa Region. Lower Middle Income Countries are relatively dispersed among the six regions while upper middle income economies reside in Latin America & Caribbean and Europe & Central Asia Regions comprised of 16 and 11 countries respectively.

Table 1. Income and Regional Classification of Countries

Region	Income Group				Total	%
	Low Income	Lower Middle Income	Upper Middle Income	High Income		
East Asia & Pacific	0	6	3	7	16	12%
Europe & Central Asia	0	5	11	28	44	32%
Latin America & Caribbean	0	8	16	13	37	27%
North America	0	1	0	1	2	1%
South Asia	1	5	0	0	6	4%
Sub-Saharan Africa	17	9	6	0	32	23%
Total	18	34	36	49	137	
%	13%	25%	26%	36%		

It can also be noted based on Table 1 that countries in Sub-Saharan Africa and South Asia belong to Low Income to Upper Middle Income economy. On the other hand, countries in East Asia & Pacific, Europe & Central Asia, Latin America & Caribbean, and North America belong to Lower Middle Income to High Income economy.

Table 2. Summary of Foreign Direct Investment net Inflows (BoP Current US$) by Income Group

Income Group	**Stat**	**Foreign Direct Investment net Inflows (BoP Current US$)**
Low Income	mean	7.32E+08

	min	-1526519
	max	3.20E+09
Lower Middle Income	mean	1.71E+10
	min	-4.16E+09
	max	4.79E+11
Upper Middle Income	mean	1.18E+10
	min	2.27E+08
	max	1.71E+11
High Income	mean	2.02E+10
	min	-2.77E+10
	max	3.00E+11

Table 2 presents the summary of statistics of FDI net inflows per income group. Based on the results, high income group has an average FDI net inflows of US$2.02E+10, upper middle income group have US$1.18E+10, lower middle income group FDI net inflows average is US$1.71E+10, while low income group economies only have US$7.32E+08 for the year 2016.

Table 3. Descriptive Analysis of Foreign Direct Investment net Inflows (BoP Current US$) and Global Competitiveness Indices

Variable	**Mean**	**Std. Dev.**	**Min**	**Max**
Foreign Direct Investment net Inflows (BoP Current US$)	1.47E+10	5.25E+10	-2.77E+10	4.79E+11
Institutions	4.090153	0.8725155	2.155379	6.1273
Infrastructure	4.042862	1.209798	1.720788	6.687211
Macroeconomic Environment	4.673436	0.9880632	1.998103	6.840427
Health and Primary Education	5.547172	0.8861671	2.845082	6.891468
Higher Education and Training	4.304176	1.01809	1.90129	6.293697
Goods Market Efficiency	4.371413	0.5518213	2.857347	5.775369
Labor Market Efficiency	4.244629	0.5965396	2.75254	5.948719
Financial Market Development	3.994615	0.7452509	2.071768	5.785618
Technological Readiness	4.167972	1.231171	1.934808	6.413285
Market Size	3.847705	1.180054	1.34072	7
Business Sophistication	4.054105	0.7194535	2.555229	5.802793
Innovation	3.554551	0.8413481	2.156658	5.802447

Note: N=137 Obs.

FDI net inflows (BoP Current US$) range from a minimum of –US$2.77E+10 to a maximum of US$4.79E+11 with an average of US$1.47E+10. It can be noted that some countries have negative net inflows for the year 2016.

Based from the results presented in Tables 1, 2, and 3, it can be inferred that despite the high number of economies belonging in high income group, still, experts viewed the competitiveness of countries in general as relatively below average. In addition, SSA countries, which are under low income group, have also lower FDI net inflows. Likewise, countries in Europe & Central Asia consequently have higher FDI net inflows compared with those economies in the low income, lower middle income, and upper middle income group.

In terms of the Global Competitiveness Index comprising of 12 pillars of competitiveness, ratings range from as lows as 1.34072 to as high as 7; both are for Pillar 10

which is Market Size, though it is not the pillar that got the highest rating. Among the 12 pillars of competitiveness, experts rated Health and Primary Education the highest, with an average of 5.547172 and Innovation as lowest with an average rating of 3.554551. Over-all Global Competitiveness of the economies gained an average of 4.266029 from the experts for 2016, which range from 2.739177 to 5.807662.

Table 4. Descriptive Analysis of the Components of Higher Education and Training Indices

Variable	Mean	Std. Dev.	Min	Max
Secondary Education Enrolment Rate	85.97937	27.84528	22.40279	164.8117
Tertiary Education Enrolment Rate	41.7352	27.33894	0.79773	110.1627
Quality of Education System	3.807149	0.9192579	2.001713	6.160064
Quality of Math and Science Education	4.05972	0.9389971	2.208421	6.388875
Quality of Management Schools	4.294401	0.8241222	2.530363	6.306078
Internet Access in Schools	4.307229	1.019309	1.671292	6.30487
Availability of Research and Training Services	4.417591	0.8358547	2.498298	6.624842
Extent of Staff Training	4.029365	0.6939243	2.203271	5.710925

Note: N=137 Obs.

The 5th pillar of competitiveness, which is Higher Education and Training, is further analyzed. It is composed of eight sub-components which are classified into three major areas as shown in Table 4.

First major area is Quantity of Education, which pertains to the Secondary Education and Tertiary Education Enrolment rates. As presented in Table 4, Secondary Education average enrolment rate was 85.97937% ranging from 22.40279% to 164.8117% while Tertiary Education average enrolment rate is only 41.7352% ranging from 0.79773% to 110.1627%. This means that there are fewer secondary education graduates who are pushing through with Higher Education.

The second major area is Quality of Education, which refers to the quality of education system, quality of math and science education, quality of management schools, and internet access in schools. Ratings for the sub-components of Quality of Education range from 1.671292 to 6.388875. Quality of Education System got the lowest average rating from the experts having 3.807149 rating while internet access in schools got the highest average rating of 4.307229. It can be noted that internet access in schools got the minimum rating of 1.671292, which the lowest among all the components.

Third, On-the-Job training is only composed of two sub-components: Availability of Research and Training Services and Extent of Staff Training. Both sub-components earned 4.417591 and 4.029365 average rating, respectively.

6.2 Correlation Analyses

Global Competitiveness Indices and FDI net inflows (BoP Current US$) relationships vary among the income groups. Table 5 presents the summary of correlation results.

Table 5. Summary of Correlation Tables (by Income Group)

Variables		Income Group			
		Low Income	**Lower Middle Income**	**Upper Middle Income**	**High Income**
2	Institutions	0.1195	0.4424*	0.0851	0.264
		0.6261	0.0088	0.6219	0.0698
3	Infrastructure	0.7945*	0.6180*	0.2979	0.4443*
		0	0.0001	0.0777	0.0016
4	Macroeconomic Environment	0.5698*	0.0915	0.1677	-0.0253
		0.0109	0.6066	0.3282	0.8647
5	Health and Primary Education	0.4653*	0.2463	0.1603	0.2192
		0.0447	0.1602	0.3504	0.1345
6	Secondary Education Enrolment Rate	0.6028*	0.2226	0.1578	0.2599
		0.0063	0.2058	0.358	0.0745
7	Tertiary Education Enrolment Rate	0.9070*	0.5272*	0.0052	0.0671
		0	0.0014	0.9759	0.6505
8	Quality of Education System	0.0794	0.3828*	0.0913	0.1933
		0.7465	0.0254	0.5963	0.1881
9	Quality of Math and Science Education	0.3494	0.2418	0.0535	0.1391
		0.1426	0.1683	0.7565	0.3459
10	Quality of Management Schools	0.1077	0.4724*	0.0198	0.3890*
		0.6608	0.0048	0.9088	0.0063
11	Internet Access in Schools	0.5528*	0.4494*	0.1644	0.2084
		0.0141	0.0077	0.3381	0.1552
12	Availability of Research and Training Services	0.1857	0.4413*	0.0412	0.2997*
		0.4464	0.009	0.8115	0.0385
13	Extent of Staff Training	0.443	0.4479*	0.2037	0.1723
		0.0575	0.0079	0.2334	0.2416
14	Higher Education and Training	0.7179*	0.4960*	0.1457	0.2352
		0.0005	0.0028	0.3965	0.1076
15	Goods Market Efficiency	0.5456*	0.5693*	0.0228	0.3867*
		0.0157	0.0004	0.8951	0.0066
16	Labor Market Efficiency	-0.0495	0.4910*	0.1538	0.3565*
		0.8405	0.0032	0.3706	0.0129
17	Financial Market Development	0.1457	0.5059*	0.0346	0.2124
		0.5518	0.0023	0.8412	0.1473
18	Technological Readiness	0.8091*	0.6867*	0.0791	0.3497*
		0	0	0.6467	0.0148
19	Market Size	0.7935*	0.4990*	0.6368*	0.4246*
		0.0001	0.0027	0	0.0026
20	Business Sophistication	0.6818*	0.6914*	0.2735	0.3704*
		0.0013	0	0.1065	0.0096
21	Innovation	0.7577*	0.7200*	0.3287	0.2763
		0.0002	0	0.0503	0.0573

Note: All variables are correlated with 1. Foreign Direct Investment net Inflows (BoP Current US$)

For Low Income Countries, there are 12 GCI indices which have significant relationship with FDI net inflows. These are infrastructures, macroeconomic environment, health and primary education, secondary education enrolment rate, tertiary education enrolment rate, internet access

in schools, higher education and training (in general), good market efficiency, technological readiness, market size, business sophistication, and innovation. Three of which are the sub-components of higher education and training.

On the other hand, Lower Middle Income Economies showed a significant relationships of FDI net inflows to majority of the GCI indices, except for macroeconomic environment, health and primary education, secondary education enrolment rate, and quality of math and science education.

Furthermore, Upper Middle Income economies showed only one significant relationship between market size and FDI net inflows. High Income countries showed significant relationships among the eight GCI indices and FDI net inflows. These are infrastructure, quality of management schools, availability of research and training services, good market efficiency, labor market efficiency, technological readiness, market size, and business sophistication.

Results indicate that foreign investors, when making investment decisions in low income and lower middle income economies, are concerned with the basic requirements that a country should have, which include quality of institutions, infrastructures, macro-environment and health, and primary education. Multinational companies may have taken these as considerations because policies, regulations, and infrastructures are basics in establishing businesses. It also entails that the host country needs to have healthy and stable macro environment that will entice foreign firms to put up plants rather than just make the host country an export-distribution outlet of their outputs. MNCs also look at the societal skills and health of the workforce. It is important for companies to ensure that people in the host country are healthy for them to perform in their maximum potential. Unhealthy workforce may lead to less productive economy.

On another note, for countries under upper middle income, only market size have a significant relationship with FDI net inflows. Market size is important for foreign companies in selecting the location of their investment because it allows them to take advantage of economies of scale. Upper middle income group of economies tends to make the most out of their investments. Foreign firms are aiming to efficiently exploit the opportunities at hand.

The first four pillars of competitiveness is important for economies to perform their basic functions and for them to achieve economic development. However, it is also important to note that for a country to attain sustainable social and economic growth and development, countries must pursue higher level of competitiveness.

6.3 Multiple Regression Analyses

FDI net inflows are affected by several factors. In this study, Global Competitiveness Indices and Higher Education and Training Indices were used as independent variables affecting FDI net inflows.

Table 6. Regression Analysis of the Impact of Global Competitiveness Indices on Foreign Direct Investment net Inflows (BoPCurrent US$)

Independent Variables	Low Income[1]			Lower Middle Income[2]			Upper Middle Income[3]			High Income[4]		
	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared
Institutions	-1.86E+09	0.1880	0.8210	-2.49E+10	0.468	0.5407	3.03E+10	0.146	0.4049	-1.48E+10	0.443	0.2378
Infrastructure	3.61E+09	0.0740		4.41E+09	0.897		-1.61E+10	0.237		-8.67E+09	0.686	
Macroeconomic Environment	-6.02E+08	0.3340		1.58E+09	0.921		-1.46E+09	0.818		-2.06E+10	0.053	
Health and Primary Education	1.24E+08	0.8020		2.32E+10	0.318		2.86E+10	0.033*		-1.06E+10	0.816	
Higher Education and Training	1.28E+09	0.4890		-6.56E+10	0.041*		-1.99E+10	0.197		-1.23E+10	0.685	
Goods Market Efficiency	3.90E+09	0.2160		-5.26E+10	0.443		-3.05E+10	0.166		3.05E+10	0.428	
Labor Market Efficiency	1.02E+09	0.4120		3.14E+10	0.314		2.19E+10	0.139		4.73E+10	0.088	
Financial Market Development	-6.97E+08	0.6360		-2.37E+10	0.432		9.76E+09	0.499		2.57E+09	0.87	

Technological Readiness	-2.53E+09	0.3300	6.75E+10	0.03*	6.54E+08	0.958	2.46E+10	0.277
Market Size	1.76E+09	0.0360*	4.14E+08	0.975	2.59E+10	0.001*	2.00E+10	0.039*
Business Sophistication	-4.72E+09	0.3890	6.25E+10	0.431	7.29E+09	0.797	2.30E+10	0.524
Innovation	1.01E+09	0.7080	8.60E+10	0.138	-1.07E+10	0.707	-2.69E+10	0.29
_cons	-5.40E+09	0.2910	-3.36E+11	0.068	-2.06E+11	0.013	-2.14E+11	0.303

Note: DV= Foreign Direct Investment net Inflows (BoP Current US$)

Based on the result of regression analyses, market size is the only significant predictor of FDI net inflows for low income and high income countries; higher education and training and technological readiness are significant predictors of FDI net inflows for lower middle income group; and health and primary education and market size for upper middle income. Overall, it can be gleaned from Table 6 that market size is the common predictor for the majority of economies except for lower middle income group of economies.

Furthermore, higher education and training have a significant impact on FDI inflows only for lower middle income, however, it is counter-intuitive. This means that for every increase in higher education and training, there is a corresponding US$6.56E+10 decrease in FDI net inflows, ceteris paribus. It is also noteworthy to mention that technological readiness is an important determinant in attracting FDI inflows for lower middle income because these investors are looking for affiliates with high absorptive capacity and partners who are capable of maximizing the potential of technology to reach its high productivity level leading to higher competitiveness.

Literature that focused on competitiveness and country classification have argued that upper middle income and high income economies are more concerned with achieving business sophistication and innovation, especially if they want to attract more investors whose aims are to produce and offer innovative and high-quality products and services. However, in this study, business sophistication and innovation are not correlated with FDI. It can also be elucidated from the result of regression analysis that neither of the two has an impact in attracting FDI in all economies.

Table *7. Regression Analysis of the Influence of Higher Education and Training Indices on Foreign Direct Investment net Inflows (BoPCurrent US$)*

Dependent Variables	Low Income[1]			Lower Middle Income[2]			Upper Middle Income[3]			High Income[4]		
	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared
Secondary Education Enrolment Rate	-5.55E+07	0.0530	0.8712	-1.34E+09	0.0780	0.5453	5.16E+08	0.319	-0.1143	6.13E+08	0.299	0.0789
Tertiary Education Enrolment Rate	1.40E+08	0.0000*		4.49E+09	0.0000*		6.52E+07	0.878		-4.48E+08	0.288	

Quality of Education System	4.04E+08	0.5480	4.64E+10	0.1260	9.39E+07	0.996	-2.89E+10	0.249
Quality of Math and Science Education	-3.28E+08	0.6610	-3.61E+10	0.1090	2.96E+09	0.821	2.89E+08	0.987
Quality of Management Schools	-1.23E+09	0.2680	7.36E+10	0.0400*	8.51E+08	0.963	3.98E+10	0.064
Internet Access in Schools	1.04E+09	0.1220	-4.44E+10	0.2560	4.20E+09	0.769	5.24E+09	0.737
Availability of Research and Training Services	-3.22E+08	0.6900	-2.38E+10	0.5950	-2.62E+10	0.283	1.48E+10	0.552
Extent of Staff Training	-6.61E+08	0.5110	1.53E+10	0.6870	3.19E+10	0.126	-8.41E+09	0.736
_cons	6.57E+09	0.0490	-1.15E+11	0.1230	-8.34E+10	0.224	-1.52E+11	0.043

Note: DV= Foreign Direct Investment net Inflows (BoP Current US$)

Given the counter-intuitive result of regression analysis for the 5th pillar of competitiveness, which is Higher Education and Training, this paper further the inquiry by looking in detail the effects of higher education and training sub-components on attracting FDI inflows. Results revealed that Higher Education and Training sub-indices are influencing FDI net inflows of low income and lower middle income economies only. Among the sub-indices, tertiary education enrolment rate is the only significant factor impacting FDI net inflows of low income economies.

One of the possible reasons for such result is that firms need a workforce who possesses the required qualifications, which is tertiary education. Higher enrollees in tertiary education mean more workforces can be tapped by companies in their production process. They also have more chances of selecting a better quality of human resources.

On the other hand, tertiary education enrolment rate and quality of management schools are positively and significantly influencing FDI inflows of Lower Middle Income countries. It can be inferred that aside from the quantity of higher education measured by the enrollment rate in tertiary education, quality education is also vital. Most importantly, firms are not just looking at the quality of schools offering general knowledge, rather, they are more concerned with the quality of management schools. Quality of management schools in the host country may give impression to foreign companies that the government and educational institutions in the host country are committed to upgrading not just the business operations but other institutions by producing human resources who are able to adapt to the changing environment in the global market as well as provide sound strategies that are necessary to achieve firm-level and country-level competitiveness.

On another note, the attractiveness of upper middle income and high income economies for FDI inflows may not be influenced by higher education because it is no longer on that stage where efficiency is the main goal. Rather, foreign companies in high income economies may have been aiming for business sophistication ensuring high quality and sustainability of their production processes through quality workforce, modern technology, and advanced knowledge to meet market demands for unique products and services.

1.7 Conclusions

FDI has contributed to the accumulation of capital and the improvement of the economy's productive capacity through the incorporation of new inputs and modern technologies in the production process. However, its impact varies among economies in different income groups. Sub-Saharan Africa region, having many countries with low income, has also generated lower FDI net inflows compared with the Europe & Central Asia region with economies having high income and consequently with high FDI net inflows. It can also be concluded that FDI net inflow of low income economies is significantly correlated with most of the competitiveness indices compared to upper middle income and high income economies. It was also highlighted by the findings that market size influenced majority of economies in attracting FDI inflows. In addition, higher education may have yielded a counter-intuitive result but when it was analyzed using its eight sub-components, tertiary education enrollment rate and quality of management schools have resulted to positive and significant impact on the attractiveness of a country for FDI inflows. However, none of the sub-components of higher education and training is significantly influencing FDI inflows of upper middle income and high income economies.

Hence, this implies that Global Competitiveness Index can be considered as important in making decisions of foreign firms who wished to put investments in low income and lower middle income countries. Likewise, it can be concluded that Global Competitiveness Index plays a role in investment decisions.

Additionally, there is a growing importance in understanding competitiveness and FDI in the economic growth and development of a country. It is also vital that industries are able to have a full grasp of the role that higher education plays in attracting FDI inflows as well as its involvement in ensuring that host countries reap the full benefits of FDI. Hence, in spite of the significant findings of this study, it is recommended that longitudinal research be conducted to better predict the impact of higher education competitiveness index over a longer period.

1.7 REFRENCES

Abbes, S. M., Mostéfa, B., Seghir, G., & Zakarya, G. Y. (2015). Causal Interactions between FDI, and Economic Growth: Evidence from Dynamic Panel Co-integration. *Procedia Economics and Finance*, *23*(October 2014), 276–290. https://doi.org/10.1016/S2212-5671(15)00541-9

Agarwal, J. P., (1980), "Determinants of Foreign Direct Investment", Weltwirtschaftliches Archiv, No. 4, 116, pp. 739-73

Agbola, F. W. (2014). Modelling the impact of foreign direct investment and human capital on economic growth: empirical evidence from the Philippines. *Asia Pacific Economy*, *19*(2), 272–289. https://doi.org/10.1080/13547860.2014.880282

Agiomirgianakis, G., Asteriou, D., & Papathoma, K. (2004). The Determinants of Foreign Direct Investment: A Panel Data Study for the OECD Countries. *City University-London, …*, (3), 1–19. https://doi.org/10.1007/978-3-540-25939-8

Almfraji, M. A., & Almsafir, M. K. (2014). Foreign Direct Investment and Economic Growth Literature Review from 1994 to 2012. *Procedia - Social and Behavioral Sciences*, *129*, 206–213. https://doi.org/10.1016/j.sbspro.2014.03.668

Almfraji, M. A., Almsafir, M. K., & Yao, L. (2014). Economic Growth and Foreign Direct Investment Inflows: The Case of Qatar. *Procedia - Social and Behavioral Sciences*, *109*, 1040–1045. https://doi.org/10.1016/j.sbspro.2013.12.586

Asiedu, E. (2002). On the Determinants of Foreign Direct Investment to Developing Countries: Is Africa Di erent? *World Development*, *30*(1), 107–19. https://doi.org/10.1016/S0305-750X(01)00100-0

Axarloglou, K., & Pournarakis, M. (2007). Do all foreign direct investment inflows benefit the local economy? *World Economy*, *30*(3), 424–445. https://doi.org/10.1111/j.1467-9701.2006.00824.x

Aziz, O. (2017). Institutional Quality and FDI Inflows in Arab Economies. *Finance Research Letters*, (August 2016). https://doi.org/https://doi.org/10.1016/j.frl.2017.10.026

Baliamoune-Lutz, M., 2004. Does FDI contribute to economic growth? Business Economics 39 (2) 49–56

Bandera , V.N. and White, J.T. (1968), "U.S. Direct Investments and Domestic Markets in Europe", Economia Internazionale, Vol. 21, pp 117-133.

Bashir, T., Mansha, A., Zulfiqar, R., & Riaz, R. (2014). Impact of FDI on Economy Growth: A Comparison of SOuth Asian States & China. *European Scientific Journal, ESJ*, 446–469.

Belloumi, M. (2014). The relationship between trade, FDI and economic growth in Tunisia: An application of the autoregressive distributed lag model. *Economic Systems*, *38*(2), 269–287. https://doi.org/10.1016/j.ecosys.2013.09.002

Bevan, A. A., & Estrin, S. (2004). The determinants of foreign direct inve

Bhagwati, J. N. (1978), "Anatomy and Consequences of Exchange Rates Regimes", Studies in International Economic Relations, 1, 10, New York: NBER

Bhasin, A., Jun, K., and Economou, P. (1994), "Assessing the Sustainability of Foreign Direct Investment Flows", World Bank, International Economics Department

Boghean, C., & State, M. (2015). The Relation between Foreign Direct Investments (FDI) and Labour Productivity in the European Union Countries. *Procedia Economics and Finance*, *32*(15), 278–285. https://doi.org/10.1016/S2212-5671(15)01392-1

Borensztein, E., De Gregorio, J., Lee, J.W. (1998). How does foreign investment affect growth?. Journal of International Economics 45, pp. 115–135

Brincikova, Z., & Darmo, L. (2014). The Impact of FDI Inflows on Employment in V4 Countries. *European Scientific Journal, ESJ*, *1*(Special Issue), 245–252.

Buracom, P. (2014). ASEAN economic performance, institutional effectiveness, and foreign direct investment. *Asian Affairs: An American Review*, *41*(3), 108–126. https://doi.org/10.1080/00927678.2014.936801

Castro, P. G. de, Fernandes, E. A., & Campos, A. C. (2013). The Determinants of Foreign Direct Investment in Brazil and Mexico: An Empirical Analysis. *Procedia Economics and Finance*, *5*(13), 231–240. https://doi.org/10.1016/S2212-5671(13)00029-4

Cheng, L. K., and Kwan, Y. K. (1999), FDI Stock and its Determinants. In: Wu, Y. (Ed.), Foreign Direct Investment and Economic Growth in China, Chapter 3. Edward Elgar, Cheltenham, pp. 42-56

Cheng, L. K., & Kwan, Y. K. (2000a). What are the determinants of the location of foreign direct investment: The Chinese experience. Journal of International Economics, 51, 379–400

Cheng, L. K., & Kwan, Y. K. (2000b). The location of foreign direct investment in Chinese regions: Further analysis of labor quality. In T. Ito, & A. O. Krueger (Eds.), The role of foreign direct investment in East Asian Economic Development. Chicago: University of Chicago Pres

Cheng, L. K., and Zhao, H.(1995), "Geographical Patterns of Foreign Direct Investment in China: Location, Factor Endowments, and Policy Incentives", Department of Economics, Hong-Kong University of Science and Technology, February

Chisăgiu, L. (2015). Multi-dimensional Impact of Foreign Direct Investments on the Host-economy, Determinants and Effects, and their Contribution to Economic Growth in Romania. *Procedia Economics and Finance*, *32*(15), 721–727. https://doi.org/10.1016/S2212-5671(15)01454-9

Cleeve, E. A., Debrah, Y., & Yiheyis, Z. (2015). Human Capital and FDI Inflow: An Assessment of the African Case. *World Development*, *74*, 1–14. https://doi.org/10.1016/j.worlddev.2015.04.003

Coughlin, C. C., Terza, J. V., & Arromdee, V. (1991). State characteristics and the location of foreign direct investment within the United States. Review of Economics and Statistics, 73(4), 675–683

De Mello, L. R. (1997), "Foreign Direct Investment in Developing Countries and Growth: A Selectivity Survey", University of Kent, Working Papers Series, UK, pp. 1-46.

De Mello, L.R. (1999). FDI-led growth: evidence from time series and panel data. Oxford Economic Papers 51, pp.133–151

Demekas, D. G., Horváth, B., Ribakova, E., & Wu, Y. (2007). Foreign direct investment in European transition economies—The role of policies. Journal of Comparative Economics, 35(2), 369–386.

Disdier, A. C., & Mayer, T. (2004). How different is Eastern Europe? Structure and de- terminants of location choices by French firms in Eastern and Western Europe. Journal of Comparative Economics, 32(2), 280–296.

Doms, M. E., J. B. Jensen and J. Bradford (1998), 'Comparing Wages, Skills and Productivity between Domestic and Foreign Owned Manufacturing Establishments in the United States', Geography and Ownership as Basis for Economic Accounting, NBER Studies in Income and Wealth, 53, 235–55

Don Almeida, R. C. (2010). Government's Many Roles in Fostering Innovation. PricewaterhouseCoopers LLP.

Du, J., Lu, Y., & Tao, Z. (2008a). FDI location choice: Agglomeration vs institutions. International Journal of Finance&Economics, 13(1), 92–107

Du, J., Lu, Y., & Tao, Z. (2008b). Economic institutions and FDI location choice: Evidence from US multinationals in China. Journal of Comparative Economics, 36(3), 412–429

Dunning, J.H., and Zhang, F. (2008). Foreign direct investment and the locational competitiveness of countries. Transactional Corporations. 17(3), 1-30.

Dunning, J.H. (2004) 'Institutional reform, FDI and European transition economies', Economics and Management Discussion Paper No.14, University of Reading. Economic & Social Commission for Western Asia (ESCWA), 2013. Short- and medium-Term Economic Challenges of the Arab countries in transition: A review. United Nations, New York, USA.

Figlio, N. D. and B. A. Blonigen (1999), 'The Effects of Direct Foreign Investment on Local Communities', NBER Working Paper No. 7274

Financial Times (2016). The fDi report 2016 At http://forms.fdiintelligence.com/ report2016/files/The_fDi_Report_2016.pdf. [Accessed 13 November 2017].

Fosfuri, A., Motta, M., & Rønde, T. (2001). Foreign direct investment and spillovers through workers' mobility. Journal of International Economics, 53, 205–222

Chan, M. W. L., Hou, K., Li, X., & Mountain, D. C. (2014). Foreign direct investment and its determinants: A regional panel causality analysis. Quarterly Review of Economics and Finance, 54(4), 579–589. https://doi.org/10.1016/j.qref.2013.07.004

Fung, K. C., Iizaka, H., Lin, C., & Siu, A. (2002). An econometric estimation of locational choices of

foreign direct investment: The case of Hong Kong and U.S. firms in China. manuscrip
Gao, T. (2005). Labor quality and the location of foreign direct Investment: Evidence from China. China Economic Review, 16, 274–292.
GCR (2012). The Global Competitiveness Report 2012-2013. World Economic Forum.
Glass, A., Saggi, K., 2002. Multinational firms and technology transfer. Scandinavian Journal of Economics 104 (4) 495–514
Globerman, S., C. J. Ries and I. Vertinsky (1994), 'The Economic Performance of Foreign Affili- ates in Canada', Canadian Journal of Economics, 27, 1, 143 –56.
Globerman, S., & Shapiro, D. M. (1999). The impact of government policies on foreign direct investment: The Canadian experience. Journal of International Business Studies, 30(3), 513–532
Gunther, J., 2002. FDI as a multiplier of modern technology in Hungarian industry. Intereconomics 37 (5) 263–269, ISSN: 0020- 5346
Haaker, M., 1999. Spillovers from foreign direct investment through labor turnover: the supply of management skills. Discussion Paper London School of Economics
Head, C. K., Ries, J. C., and Swenson, D. L. (1995), "Agglomeration Benefits and Locational Choice: Evidence from Japanese Manufacturing Investments in the United States", Journal of International Economics, 10, pp. 92-116
Helmy, H.E., 2013. The impact of corruption on FDI: Is MENA an exception? J.Int. Rev. Appl. Econ. 27, 491–514
Hodgson, M., Stoelhorst, W., 2014. Introduction to the special issue on the future of institutional and evolutionary economics. J. Inst. Econ. 10, 513–540
Javorcik, B. S., & Wei, S. J. (2009). Corruption and cross-border investment in emerging markets: Firm-level evidence. Journal of International Money and Finance, 28(4), 605–624
Javorcik, B. S. (2004). The composition of foreign direct investment and protection of intellectual property rights: Evidence from transition economies. European Economic Review, 48(1), 39–62
Jeon, Y.D. (1992), "The Determinants of Korean Foreign Direct Investment in Manufacturing Industries", Weltwirtschaftliches Archv, Vol. 128, pp. 527-541.
Kaufmann, L., 1997. A model of spillovers through labor recruitment. International Economic Journal 11 (3) 13–34
Khan, D. M. (2007). Role of Human Capital in Attracting Foreign Direct Investment: A South Asian Perspective. SAARC Journal of Human Resource Development, 5-25.
Kokko, M. B. (2002). FDI and Human Capital: A Research Agenda. OECD Development Centre
Mainardi, S. (1992), "Foreign Direct Investment in Latin America and Southeast Asia: Relevance of Macroeconomic and Policy-Related Factors", Giornale delgi Economisti, No. 5-8, 51 (NS), pp. 259-79
Masron, A., Nor, E., 2013. FDI in ASEAN-8: does institutional quality matter? Appl. Econ. Lett. 20, 186–189.
Miner, C., and Pentecost, E. (1996), "Locational Advantage and US Foreign Direct Investment in the UK", Applied Economics, 28, pp. 605-15
Mina, W.M., 2012. The institutional reforms debate and FDI flows to the MENA region: the "best" ensemble. World Dev. 40, 1798–1809
Mincer, J. (1974) Schooling, Experience and Earnings, NBER, New York.
Moe, T.L. (2008). An empirical investigation of relationships between official development assisstance (ODA) and human educational development. International Journal of Social Economics, 35(3), 202-221.
Morrissey, O., and Rai, Y. (1995), "The GATT Agreement on Trade-Related Investment and Their Relationship with Transactional Corporations", Journal of Development Studies, 31, pp. 702-24
Naude, W.A., Krugell, W.F., 2007. Investigating geography and institutions as determinants of foreign direct investment in Africa using panel data. J. Appl. Econ. 39, 1223–1233
Nunnenkamp, P., & Spatz, J. (2002). Determinants of FDI in developing countries: Has globalization changed the rules of the game?. Trans- national Corporations, 2(2), UNCTAD

Outreville, J.F. (2008). Foreign affiliates of the largest insurance groups: location-specific advantages. Journal of Risk and Insurance, 75(2), 463-492.

Paul, A., Popovici, C., Calin, A., 2014. The attractiveness of CEE countries for FDI: a public policy approach using the TOPSIS method. Transylvanian Rev. Administrative Sci. 42, 156–180

Rondinelli, D.A., 2005. Assessing government policies for business competitiveness in emerging market economies: an institutional approach. In: Grosse, R. (Ed.), International and Business Government Relations in the 21st Century. Cambridge University Press, Cambridge, UK, pp. 395–419

Salehizadeh, M. (2005). Foreign Direct Investment Inflows and the US Economy: An Empirical Analysis. Economic Issues, 10(2), 29-50.

Sass, M. (2003). Competitiveness and Economic Policies Related to Foreign Direct Investment . Ministry of Finance

Sethi, D., Guisinger, S. E., Phelan, S. E., & Berg, D. M. (2003). Trends in foreign direct investment flows: A theoretical and empirical analysis. Journal of International Business Studies, 34(4), 315–326.

Sethi, D., Guisinger, S. E., Ford, D. L., & Phelan, S. E. (2002). Seeking greener pastures: A theoretical and empirical investigation into the changing trend of foreign direct in- vestment flows in response to institutional and strategic factors. International Business Review, 11(6), 685–705.

Seyoum, B. (2009). Formal institutions and Foregn Direct Investment. Thunderbird International Business Review, 51(2). 165-181.

Shatz, H. J. (2001). Expanding Foreign Direct Investment in the Andean Countries. Center for International Development at Harvard University.

Sjöholm, R. E. (2010). FDI and Growth in East Asia: Lessons for Indonesia. Stockholm: Research Institute of Industrial Economics.

Slemrod, J. (1991). Taxation and Foreign Direct Investment in the United States: Evidence from a Cross-Country Comparison. In:Razin, A.

Tien, A. F. (2010). African Leaders: Their Education Abroad and FDI Flows. Institute for the Study of Labor IZA

Tintin, C., 2013. The determinants of foreign direct investment inflows in the central and eastern European countries: the importance of institutions. Communist Post- Communist Stud. 46, 287–298.

Tun, Y.-L., Azman-Saini, W, Law, S.-H., 2012. International evidence on the link between foreign direct investment and institutional quality. Eng. Econ. 23, 379–386

Wang, Z., Q., and Swain, N., J. (1995), "The Determinants of Foreign Direct Investment in Transforming Economies: Evidence from Hungary and China", Weltwirtschaftliches Archiv, 131, pp. 359-82

Wang, J.Y., Blomstrom, M., 1992. Foreign investment and technology transfer: a simple model. European Economic Review 36 (1) 137–155

Wei, S. J. (2000b). Local corruption and global capital flows. Brookings Papers on Economic Activity, 2, 303–354.

UNCTAD. (2007).World Investment Report TNCs in Extractive Industries and Development, NewYork: United Nations. World Economic Outlook (WEO) Database.

Usman, S. (2014). Higher Education, Infrastructure and Foreign Direct Investment in Pakistan. *IOSR Journal of Business and Management (IOSR-JBM)*, *15*(6), 54–59. Retrieved from http://www.iosrjournals.org/iosr-jbm/papers/Vol15-issue6/H01565459.pdf

Velde, D. W. te. (2005). Globalisation and education : what do the trade, investment and migration literatures tell us? *Working Paper (Overseas Development Institute) 254*, (August), 70. Retrieved from http://www.odi.org.uk/publications/working_papers/wp254.pdf

Yao, S. 2006. "On Economic Growth, FDI and Exports in China." Applied Economics 38 (3): 339– 351

WEF. (2016). *The Global Competitiveness Report 2016–2017. World Economic Forum Reports 2016*. https://doi.org/92-95044-35-5

World Economic Forum. Th eHlobal Competitiveness Index dataset 2007-2017. Retrieved fromehttps://www.kaggle.com/weforum/global-competitiveness/data. November 30, 2017.

WorldBank.

http://databank.worldbank.org/data/reports.aspx?Code=BN.KLT.DINV.CD&id=1ff4a498&report_name=Popular-Indicators&populartype=series&ispopular=y retrieved last

Linking Global Competitiveness, Higher Education, and Foreign Direct Investment Inflows

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I. Introduction

1.1 Background of the Study

Foreign Direct Investments (FDI) has contributed to the accumulation of capital and the improvement of the economy's productive capacity through the incorporation of new inputs and modern technologies in the production process. Neoclassical and endogenous growth models have been widely used to empirically test the benefits of FDI (Almfraji & Almsafir, 2014). However, results of testing theoretical benefits are varying from regions, countries, and industries. Conflicting relationships and impacts range from significant to non-significant, positive to negative impacts, directly or indirectly. Despite that, FDI inflows have still been recognized to influence employment and wages, infrastructure development, human capital development, technology transfer, and promotion of trade which could have a short and long-term effect on economic of growth of a country. Recognizing the impact of FDI on the development of an economy, many researchers tried to elucidate the factors that encourage foreign countries to invest in a specific economy.

For decades, scholars have been interested in exploring the main factors that determine a country's level of FDI attractiveness. Traditionally, scholars focused on economic factors such as market size, labor costs, exchange rates, infrastructure, and institutional quality which include political stability, investment policies and regulations, as well as governance and others as the key explanatory factors in determining a host country's ability to attract or deter FDI. Reviewed literature also looked into the influence that human capital development offers to induce FDI inflows. Among the human capital elements are enrollment in primary and secondary education, government expenditures in education, as well as the quality of labor measured by the monthly wages. However, few studies dealt with the importance of higher education/tertiary education. Among those few is the correlational study of Usman (2014) examining the relationship of FDI, higher education, and infrastructure using the World Economic Forum Global Competitiveness Index, which revealed that FDI inflows in selected countries have a significant correlation with higher education and infrastructure. Results of Usman's (2014) study are in conformity with the results of Tien (2010) who found that higher education is a better predictor in attracting FDI. It is also in accordance with the results obtained by Sjöholm (2010) with which he determined the factors that affect the multinational corporations' locational decision. He found out that higher education is one of the factors corporations consider, aside from better institutions and liberal trade policies. Salehizadeh (2005) also found that multinational companies are significantly attracted to states with highly educated employees and managers. Hence, attracting FDI inflows

for economic development can be achieved if the government (Pakistan) will give more attention to developing higher education (Usman, 2014).

Acknowledging the importance of FDI in enhancing growth of a country and the role that the host country's competitiveness plays in attracting FDIs, this study tried to ascertain which among the pillars of global competitiveness index significantly influence the attractiveness of the host country for FDI inflows with more focused on the human capital factor, quality of higher education/tertiary education, in particular.

1.2 Statement of the problem:

Generally, this study aimed to answer the question, which among the Global Competitiveness Indices drives the FDI inflows? Specifically, it sought to give answer to the following questions:

1. What is the extent of relationship among the Global Competitiveness Indices and FDI Inflows?

2. What is the degree of impact of Global Competitiveness Indices in attracting FDI inflows?

3. What is the extent of influence of Higher Education and Training Indices in attracting FDI Inflows?

1.3 Significance of the Study:

Results of this study will be beneficial to the host country, government, higher academic institutions, and future researchers. The host country will have an idea on the pillars of competitiveness that they need to enhance to be at par with fast economies. The government of the host country, as well as their partner stakeholders (domestic companies), will be enlightened on the factors that attract FDI to sustain economic development. Higher academic institutions, being the source and developer of the capital, may get inputs on how to strengthen their plans to produce better quality labor force who will be at the forefront of reaping the benefits of FDI in terms of absorbing technology transfer and knowledge transfer. Higher education institutions may also look into its role in enhancing R&D capacities leading to innovation, thereby, climbing the ladder of competitiveness. And given the scarcity in studies relating to education's role in improving competitiveness of the country and attracting FDI inflows, this study contributes to new knowledge, which future researchers may look into as a basis for future researches on FDI, economic development, competitiveness, and higher education.

1.4 Scope and Limitation of the Study

This study employed a causal-explanatory research design to explain the influence of Global Competitiveness Indices as independent variables on the dependent variable which is FDI Inflows. Secondary data, which are available online in the World Economic Forum and World Bank Report for 2016, were used in the analysis.

2. Review of Related Literature and Studies

Review of related literature and studies give an overview of the role of foreign direct investment in the development of a country as well as the factors that attract foreign direct investment.

2.1 Role of FDI in the development of a country

2.1.1 Provision of Employment

FDI inflows play an important role in the local market of the host country. The theory of FDI postulates that it has a positive impact on unemployment vis-a-vis employment. Investments increase jobs, thus, declining unemployment. Researches have explored this accepted claim, however, results vary. Green field investment possesses positive impact of FDI inflows, unlike in the case of privatization where there is a negative impact of FDI on employment (Brincikova & Darmo, 2014). But different aspects of FDI's effects on the host countries have always been considered.

According to Axarloglou and Pournarakis (2007), FDI inflows shifts the labor demand, thereby influencing employment and wages (at least in the short-run). Higher employment and wages are expected at the plant level due to the establishment or expansion of foreign subsidiary (Doms, Jensen & Bradford, 1998). Economic literature has also explored the impact of FDI inflows on growth and development, particularly in the labor market. Though, impacts of FDI on the employment and wage are controversial. Most researches inferred that the impact on economic growth of the investments of foreign companies are basically in terms of wage, technology, trade, and employment (Floyd, 2003; Dicken, 2007).

The U.S. offered strong economic incentives to attract FDI inflows. This strategy was implemented with the anticipation that local economies would be stimulated by FDI. Researchers tried to assess the performance of foreign-owned subsidiaries operating in the US to evaluate the effects of FDIs on local economies (World Economy, 2007). Hownstein and Zeile's (1994) assessment, which was supported by Globerman, Ries, and Vertinsky (1994), found that higher wages are paid by foreign affiliates in the US than the domestic plants.

However, despite FDIs' impact on local economic development in the host US states, very few evaluated how local labor markets are affected by the FDI Inflows. Figlio and Blonigen (1999) evaluated the impact of manufacturing employment by foreign plants in South Carolina using country-level data. They found that country- and industry-specific wages were strongly and positively impacted by such employment. Furthermore, there is an increase in all workers' real wages due to the addition of an averaged-sized foreign subsidiary in the specific county and industry.

Hence, FDI inflows' impact on local labor markets varies, depending on the industry. As explained by Axarloglou and Pournarakis (2007), the variances in the effects of FDI on the labor market are primarily because of industry composition of the FDI inflows. Hence, policymakers should focus on attracting FDI inflows on strategic group of industries such as printing and publishing and transportation equipment (Axarloglou & Pournarakis, 2007).

Vacaflores (2011) also examined 11 countries in Latin America using 1980–2006 data on FDI and employment generation. Results revealed that effects on employment generation is positive and significant in host countries, which is driven by its effect on the male labor force. However, this is only important for less developed economies with low inflation periods. Benefits from FDI inflows are only accrued to the host countries with high level of informality and attracting low average inflows of FDI.

Moreover, employment caused by FDIs increased the country's per-capita income as found out by the Spieza (2004) study on 49 countries, though, for low-income developing countries, the effects is not significant. Vacaflores and Mogab (2012) also found that compared to other regions, the subsidiaries in Asia possess the largest additions in employment due to the increase in FDI followed by those in Americas, but, statistically, significant influence is present in the manufacturing and service sectors.

Furthermore, effects of FDI on labor productivity on host countries is through THE transfer of technology and proficiency in marketing and management. These enable technological progress and economic growth in the long term (Boghean & State, 2015).

2.1.2 Technology Transfer

Technology transfer is one of the FDI inflows' benefits accrued to the host country. Wang and Blomstrom (1992) and Gunther (2002) said that there are four main channels of technology spillovers. These spillovers flow from foreign to local firms by means of imitations, competition, skills, and linkage. Learning by watching effect is what imitation is all about. Local firms are imitating the technology of foreign companies to improve its productivity. Also, with the presence of new entrants, foreign firms, competition is created with local firms. Thus, companies in the host countries are forced to maximize the potential of existing resources and by using it more efficiently and adopting modern technologies (Wang & Blomstrom, 1992; De Mello, 1997, 1999).

The introduction or the transfer of new and modern technologies is one of the benefits that host countries can get from FDI promotion based on the empirical work studying FLGH. (Belloumi, 2014). It supports the findings of Borensztein, De Gregorio, and Lee (1998) who inferred that transfer of modern technology is channeled through FDI. However, the effectiveness of such transfer of technology depends on the host country's stock of human capital.

Also, according to (Chisăgiu, 2015), new production capacities are generated by subsidiaries of transnational companies as well as realized consumer goods. However, it also means high standard capital which made them technological leaders in the industry as well as posting significant impact at occupational level.

2.1.3. Promotion of Trade

Enhanced production capacities of host countries brought by investments of foreign companies bring ripple effect in terms of trade (local and international). More opportunities for trade are being opened. In the case of Tunisia, it needs partners that will provide them technology and other inputs of production. Hence, it needs trade partners. In addition, Tunisia can have the chance to improve its own stock of knowledge by forging linkages and inviting trade partners especially from developed countries where they can import capital equipment and intermediate products (Belloumi, 2014).

Baliamoune-Lutz (2004) found a bidirectional relationship between FDI and exports in Morocco. His study also revealed that FDI has a positive impact on economic growth. It implied that exports can be promoted through FDI and vice-versa. Moreover, Yao (2006) assessed 28

Chinese provinces employing Arellano and Bond's dynamic panel data estimating technique in the dataset over the period of 1987-2000. Yao (2006) found out that there is a positive effect of export trade and FDI on economic growth.

2.1.4 Enhancement of Human Capital

FDI inflows causes spillovers of many forms. One spillover effect of FDI is the transfer of knowledge, which occurs from foreign firms to domestic firms by means of well-trained workers and managers' mobility (Kaufmann, 1997; Haaker, 1999; Fosfuri, Motta, & Rønde, 2001; Glass & Saggi, 2002). Linkages also create spillovers when productivity of foreign companies flows to local firms of the same industry, which is called horizontal spillovers, and upstream and downstream industries or the so-called vertical spillovers. This happen when the range and quality of goods (intermediate) are increased (Borensztein et al., 1998).

In addition, according to Abbes, Mostéfa, Seghir, and Zakarya, (2015), skills levels in the host economy is raised because of FDI inflows. Labor resources' quality is also enhanced because of the development of performing management skills, which is based on the imposed standards of corporate leading systems. In addition, the populations' training levels and its technological development adaptation plays an important role in the enhancement of human resource quality of the host economy (Boghean & State, 2015).

As pointed out by Kokko (2002), educational level and human capital need to be improved to such extent that the labor force's adaptation of foreign technology is quick and easy. These variables can have an effect in the long run on sustained economic growth. Also, as the demand for highly skilled labor force increased in the field of natural sciences, management, and engineering, MNC's may encourage the government to invest in higher education, which in fact helps improve the quality of human resource. In addition, MNC's prospecting to invest in a particular economy plays an important role in tertiary education enhancement by helping universities and institutions through academe-industry partnership alongside imparting scholarships for education.

Moreover, benefits of spillovers of investments in higher education can only be realized when foreign technology can be absorbed by local firms, there is basic level of workforce, and barriers are not high (Kokko, 2002).

2.2. Factors that Attract Foreign Direct Investment

2.2.1. Institutional Quality

Institutional quality is about social, financial and economic policies, governance, and political stability of the host country which could lead to the success of development projects or investments. The literature on FDIs acknowledge the role that institutional quality plays in attracting FDI inflows. Several reasons were pointed on the different ways on how institutions matter in attracting FDI inflows.

FDI is stimulated by the level of productivity of the host country, which is improved through the presence of institutional quality. However, there are requisites for productivity enhancement which ran from the availability of research and development system, financial institutions, flexible labor market, and a stable political government. Hence, an institution's

evolution is related to the development of productivity (Nelson, 2008; Hodgson & Stoelhorst, 2014).

Efficient institutions lower transaction costs and protect property rights. Transaction cost is important in projecting for the revenue, which foreign investors consider before making investment decisions. It includes costs associated with production, logistics, information, and risk monitoring. Without institutional system that is properly regulated, policies on property rights and financial markets that support large-scale financing, as well as the prevalence of corruption and weak incentive structure, costs of doing business may arise (Dunning, 2004).

In addition, property rights are important for the international economy, which is already becoming a knowledge-based economy. Hence, the government's protection of intellectual property rights through effective enforcement of policies can entice international companies to invest in a particular economy (Wall et al., 2010). It also encourages establishments of plants in the host country rather than focusing on distribution projects. Establishment of production plants could provide FDI spillovers (Rondinelli, 2005). Therefore, low transaction costs and protecting intellectual property rights are important factors in assessing business environments in the host country, which could promote trust and commitment for both the investors and the host country as well as upgrade competitiveness that enhances quality of outputs leading to stable and developed business environments (Tomassen et al., 2009, 2012; Rondinelli, 2005).

As argued by Tun, Azman-Saini, and Law (2012), due to the reduction of business costs and in uncertainty, countries should be able to attract investment, especially those with better institutional quality. This is proven by the results of their study employing GMM estimator for assessing the FDI determinants focusing on institutional quality of over the period of 1981–2005. Results revealed that bureaucratic quality, rule of law, corruption, risk of expropriation, and government repudiation of contracts are the factors of institutional quality that determine FDI inflows of the of 77 developing countries (Tun et al., 2012).

Several studies were also conducted with emphasis on the importance of institutional quality indicators in attracting or deterring FDI inflows.

Masron and Nor (2013) found that regulatory quality control, rule of law, and corruption are impacting the FDI inflows of ASEAN member countries as shown by data over the period 2002 to 2010.

On the other hand, economic freedoms, state fragility, and political rights are the significant predictors in attracting FDI inflows in Central and Eastern Europ (CEE) for the period 1996–2009 (Tintin, 2013). This is expounded by the study of Paul, Popovici, and Calin (2014) who conducted the same study in CEE but with focus on the country's public policies for the period 2007–2010, in which the results showed that accuracy and efficiency of public administration are the institutional quality components that create the framework for encouraging FDI. He also pointed out that the role of the government in building institutional quality cannot be substituted by market forces.

Naude and Krugell (2007), upon examining Africa's FDI inflows and its determinants from 1970 to 1990, their results show that it is institutional quality, rule of law, and political stability, and not the geographic location that determine FDI inflows of Africa. Following the results is the policy implications geared toward political stability and good governance enhancement through institutions.

Mina (2012) examined the impact of institutional quality on FDI inflows in Arab countries over the period 1990–2008. The results confirm that reducing the risk of investment expropriation and increasing government stability and bilateral investment treaties have a positive influence on FDI inflows.

Furthermore, GCC countries' institutional quality affects the FDI inflows. Among the components of institutional quality that encourage FDI inflows are political stability and the absence of democracy (Gani & Al-Abri, 2013). In contrast, Helmy (2013) found that two FDI determinants, freedom and security of investments, have a positive impact. He also reported that chances of expropriation and corruption rates will lead to an unsafe business environment, hence, posing a negative influence on FDI.

Therefore, important determinants of FDI flows could include government policies, which can be in the form of taxes, subsidies, regulatory regime, and privatization policy. Evidence from the empirical investigation of Cheng and Kwan (2000) says that the government plays a vital role in inward FDI location attraction. It has also been recognized as a catalyst for economic restructuring. Henceforth, host country's institutional features and political interventions are potential for encouraging FDI.

Furthermore, Sethi, Guisinger, Phelan, and Berg (2003) argued that MNEs often evaluate potential FDI destinations at the regional level, rather than on a host country by county basis due to cultural, political, and economic similarities and significant uniformity in trade and investment policies. Based on our review, the relationship between institutional factors and FDI attractiveness in the top three regional destinations for FDI—Europe, North America, and Asia (Financial Times, 2016)—is decidedly mixed. In Europe, the evidence varies but suggests that Western Europe and Eastern Europe should be viewed as separate destinations for FDI (Disdier & Mayer, 2004). There is significant evidence of political stability having a positive effect on FDI in Hungary (Wang & Swain, 1995), but not in the whole Central and Eastern European region (Bevan & Estrin, 2004). Components of rule of law, such as property rights protections, are significant factors in Eastern Europe (Javorcik, 2004). On the deterring side, tax rates are negative but only significant at higher income levels in Southeastern Europe (Demekas, Horváth, Ribakova, & Wu, 2007). Corruption has a negative relationship in transition economies (Javorcik & Wei, 2009). Finally, cultural distance is not an important factor in Western Europe in the late 1990s (Sethi, Guisinger, Ford, & Phelan, 2002). In the United States and Canada, results follow the theoretical predictions: in Canada, policy changes, including exempting bureaucratic review and strengthening the legal environment, increase FDI attractiveness (Globerman & Shapiro, 1999). A number of scholars found strong evidence that taxation has a profound effect on FDI attractiveness in the United States (Coughlin, Terza, & Arromdee, 1991; Slemrod, 1991; Swenson, 1994). In the Asia region, studies are dominated by explaining Chinese FDI and appear stronger and more consistent in their results. Corruption and tax rates are significant deterring factors (Du, Lu, & Tao, 2008a, 2008b; Wei, 2000b), and other studies find strong evidence of political stability and rule of law in China increasing FDI attractiveness (Du et al., 2008a, 2008b; Wei, 2000b), and other studies find strong evidence of political stability and rule of law in China increasing FDI attractiveness (Du et al., 2008a, 2008b; Wang & Swain, 1995). Thus, the review combined with the arguments for levels of development would suggest that the relationship between institutional factors and FDI will be strongest in Asia (i.e. China), followed by North America, and then Europe.

2.2.2. Economic Development

FDI and economic development have a bidirectional relationship (Agiomirgianakis, Asteriou, & Papathoma, 2004). Economic development status and Investment Development Plan (IDP) of the recipient country matter in attracting FDI inflows (Barrel & Pain, 1998, as cited by Agiomirgianakis et al., 2004). FDI decisions depend on the host country's quality of market infrastructure (De Menil, 1999).

Investment development plan is sometimes measured using GDP per capita in major studies conducted (Agiomirgianakis et al., 2004). Real per capita GNP, as well as real GDP growth, impact the investment decisions (Agiomirgianakis et al., 2004; Agarwal, 1990; Mainardi, 1992). Other variables were also used, such as regional income and infrastructure factors, measured by road constructions (km/km2 of land mass) as a potential for FDI attraction (Agiomirgianakis et al., 2004; Head & Ries, 1996; Cheng & Kwan, 1999).

Moreover, in Qatar, Granger Causally related variables are inward FDI and economic growth as proven by the empirical findings of Almfraji, Almsafir, and Yao (2014), which also show that inward FDI is more sensitive to its own performance, though it can be noted that economic growth positively affected inward FDI. Therefore, government's efforts to create promising economic and investment environment must be continued (Almfraji, Almsafir, & Yao, 2014).

To attract direct investment, infrastructure development, stable and healthy political and economic environment, law and order situation, tax exemption, and curtailing external debts are important for South Asia states (Bashir, Mansha, Zulfiqar, & Riaz, 2014).

In addition, many ASEAN countries are heavily reliant on international trade and FDI because of its relatively small domestic market; thereby, FDI is important for ASEAN economies' economic growth and globalization. On the other hand, recent studies on cross-border investment indicate that FDI decisions consider domestic economic performance and institutional effectiveness of the recipient country, which is confirmed by the study of Buracom (2014), indicating that macroeconomic performance is significantly impacting FDI flows into developing countries. Moreover, macroeconomic performance of ASEAN countries are amenable to private sector and therefore attractive to FDI (Buracom, 2014).

2.2.3. Trade regime and Market Size

Trade openness and the degree of liberalization in trade were found to be potential factors in attracting FDI inflows; although, it can be noted that measurement issues are acknowledged. Despite the difficulties, liberal trade regime's relationship with FDI is still anticipated (Raines et al., 1999). Bhagwati (1978) argued that countries that implement and promote export than import substitution policy best captivate FDI. Likewise, report showed that the ratio of exports to sales and sales concentration ratio, as a proxy for trade regime, are both contributing positively to FDI (Milner & Pentecost, 1996, as cited by Agiomirgianakis et al., 2004). It was also found that export-oriented FDI positively influenced inbound FDI and recently, launching of special export processing zone outweighs the closed economies inherent disadvantage. (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Wang & Swain,1995). China, in particular, associated its FDI inflows with Chinese Economic Zones (Agiomirgianakis et al.,2004; Cheng & Kwan, 2000; Wang & Swain,1995).

Moreover, Asiedu (2002) also revealed SSA and Non-SSA countries' FDIs are promoted by openness to trade. However, there is a variance in the marginal benefit that SSA and Non-SSA countries gets from trade openness in terms of FDI inflows. SSA countries received less FDI since they are less open than other host countries in their region. This is supported by Castro, Fernandes, and Campos (2013) who noted that market seeking is the strategy of multinational companies in Brazil, which is linked to its domestic market size. On the other hand, efficiency seeking is the most dominant strategy in Mexico, which is geared toward trade liberalization to attract FDI.

Evidence from previous empirical and theoretical studies also consider market size as another mechanism playing an important role in attracting FDI (Agiomirgianakis et al., 2004). Foreign companies take advantage of bigger market size by having economies of scale and mass production, which results to decrease in costs of operation and growth thereby affecting supply side (services and inputs) positively. Domestic market and growth prospects were claimed to be indicators considered by foreign investors in selecting host country where they plan to relocate the production plant (Agiomirgianakis et al., 2004; Bhasin, Jun, & Economou, 1994; Morrissey & Rai, 1995).

Furthermore, the linkage between growth level, as measured by profitability rates, and FDI is found to be statistically significant and positive (Jeon, 1992; Wang & Swain, 1995). Foreign firms' output of sales in the host country is used as a function of FDI (Agarwal, 1980). Output of sales is usually measured by the size of the market—absolute and relative value which is measured by GDP level (Agiomirgianakis et al.,2004; Bandera & White, 1968) and growth rate of GDP of the host country (Agiomirgianakis et al., 2004)

2.2.4. Human Resource Development

Quality and availability of human capital promotes labor-intensive and export-oriented FDI (Agiomirgianakis et al.,2004). Expansion of productivity potentials of the firms and country is enabled by FDI through investing in capital stocks (Agiomirgianakis et al.,2004; De Mello, 1997).

Agbola (2014) argued that crowding-out effect is prevalent in the Philippine government investment and private investment. Thus, human capital and infrastructure development must be the direction of government investments since it is most likely to attract FDI.

However, studies show a counter-intuitive result on the educational level's impact on inbound FDI (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Cheng & Zhao, 1995). Both Cheng and Kwan (2000) and Cheng and Zhao (1995) revealed that percentage of population with primarily high education has no positive and significant effect on FDI (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Cheng & Zhao, 1995).

Guntlach, (1995) argued that education has poor explanatory power. Hence, researches may explore the potential role of human capital augmentation instead of human capital accumulation because educations' impact is not direct. Benefits from education are seen through its spillover effect in production.

In contrast to the above findings, Aziz (2017), in his study using education as one of the independent variables which affect FDI inflows, revealed positive and significant effects of education on FDI inflows. With the nature of MNEs that are focusing on research and

development for technology development and innovation, there is a need for the host country to have the required human capital who have the capacity to understand, use, and innovate using the MNEs' newly introduced technology. Therefore, one way to attract FDI is to ensure that the host country has well-educated labor force who can easily adapt and exploit new knowledge and technologies.

Labor characteristics is also another factor in determining FDI. It is one of the considerations of foreign investors in choosing labor intensive or capital intensive investments. Though, sometimes it is inferred that China is the second largest recipient of FDI because of cheap labor. On the other hand, Branstetter and Feenstra (1999) modeled that there is a wage premium payment of multinational firms in China with the aim of attracting quality workers. Several studies were conducted on the role of labor quality in attracting FDI but the results vary. Some authors argued that labor quality has positive and significant impact on FDI (Gao, 2005; Fung, Iizaka, & Parker, 2002; Fung, Iizaka, Lin, & Siu, 2002) while an insignificant role is revealed by the study of Cheng and Kwan (2000a, 2000b). Varying results may be due to the variables used to measure education and quality of labor given that it is really difficult to look for better proxies for labor quality and characteristics.

Cleeve, Debrah, and Yiheyis (2015) showed that quality of labor significantly influences FDI, although they only used traditional variables of quality of labor employing various versions of FDI model. Moreover, it was also reported that human capital has no increasing importance on FDI over time in SSA.

Moreover, human development—which is defined by the UNDP (2012) as using the three basic dimensions: a long and healthy life (health), access to knowledge (education), and a decent standard of living (income) —is associated with FDI and economic growth, educational development, and enrollment (Moe, 2008). In addition, trade and inward investment are determined by good quality schooling of the general population in the host country; though it is also recognized that further training and upgrading of skills are necessary for continued flow of investments. The countries' participation in globalization processes is determined by the quantity and quality of education and the training it offers to its human resources. Globalization processes include value chains, fragmentation, increased migration, and trading of final products, in which human quality of human resources play an important role to better capture the benefits of FDI (Velde, 2005).

Mincenarian earning equation explains how education contributes to economic performance, which is grounded in human capital theory (Mincer, 1974). Mincenarian earnings equation correlated wage rate of an individual to its other own characteristics, which include the level of education attainment. Levels of education, in this case, is measured by the years of schooling and the type of education completed.

Though it was accepted that highly educated individuals earn more, it does not claim that all types of education could raise the growth of all countries. Hence, it is important to assess the types of education that help in creating or building science and those which are geared toward the building of absorptive capacity, thereby exploiting the benefits from best practice technology. As suggested by Borensztein et al. (1998), in order to benefit from inward FDI, education is necessary. However, it was not expanded as to how and in what level of education could the host country best capture such benefits.

In the United States, there were six US universities that were included in the top 10 Times Higher Education ranking in 2006–2007 out of 4,000 plus universities and colleges in the US. Times Higher Education also wrote that 580,000 foreign students enrolled in US universities in 2006–2007. Moreover, out of the total population, 56 million obtained bachelor's degree or higher. In order to succeed in the globalized world, US companies and foreign affiliates take full advantage of this environment because it makes US attractive for FDI. As mentioned in the paper, Sass (2003) stated that education and training are two of the very important factors that attract capital in a country aside from macroeconomic stability and infrastructure. The paper also expounded that not having a medium level of education, as well as higher education's training methods that are not at par with others, are key problems in attracting FDIs.

Moreover, several studies recommended that for an economy to attract higher inward FDI and if it wants to reap the full benefits of such investments, it is highly important to develop better secondary and higher education (Shatz, 2001; Nunnenkamp, 2002), and absorb advanced technologies through higher levels of education (Nunnenkamp, 2002),

On the other hand, Khan (2007) discussed that scarcity in knowledgeable and skilled-based workforce is unfavorable if a country wants to attract FDI. He further argued that in contrast with other South Asian countries which only focused on simple education, Singapore, Malaysia, Korea, and Ireland were successfully sustaining their FDI because of their human resource development strategy. Moreover, Khan (2007) single out Singapore as efficient and consistent in attracting FDI despite its insufficiency in natural resources because it capitalized on human resource development.

On another note, the Malaysian government exerted effort for education and training while the international chambers of commerce and Thailand government are jointly running the country's training programs. According to Michie (2001), Singapore aimed to attract FDI by pursuing national investment in education and training.

Higher education plays an important role in improving the quality of labor force of the host country. Moreover, higher education helps in R&D activities which supports production and management systems that are technology compliant. Effects of research and development can be achieved through the creation of incentive effect in foreign investments (Tolunay & Akyol, 2006). As Narin (2007) pointed out, FDI provides employment opportunity and offers new workforce qualifications of the country.

Furthermore, higher education system and innovation mobility of a country have strong link, thus, without skilled labor force, firms cannot sustain its growth. Hence, improving industrial development requires investment focus in the education sector for a period of one or two decades (Don Almeida, 2010).

2.2.5. Country's Competitiveness

Competitiveness is defined by a country's institutions, policies, and level and factors of productivity (GCR, 2012). Productivity can be measured by the level of quality of labor force and outputs a country generated in the production process. The better labor force and increase in market supply are affected by education level. Hence, it is noteworthy to mention that higher education's contribution to economic development is important. Poverty reduction through the sustainable increase in income leads to the higher living standards of the people and in the long

run bringing the country to higher competitiveness. In effect, improvement in competitiveness forces every economy to make strategic decisions in spending its resources. Higher competitiveness means an increase in spending for higher education so as to reach business sophistication and innovation level, which is considered to be the third and last stage of competitiveness (Bauk & Jusufranic, 2014). According to GCR (2012, p. #), "more competitive economy is one that is likely to sustain growth."

Moreover, the country competitiveness encouraged both inward and outward FDI (Dunning & Zhang, 2008). Level of economic prosperity, which is directly link to productivity level of a country, served as the basis for the estimating the rates of returns that investments obtained.

The association of competitiveness and productivity, as well as higher education, led to more interesting inquiries that expands competitiveness' link with FDI, especially for countries which are highly reliant on capital investments by foreign countries. However, studies utilizing Global Competitiveness Index published by World Economic Forum have been investigated but with more focus on governance and quality of formal institutions. Among those studies are of Outreville (2008) which revealed that local policies and regulation were among the governance aspect that organizations seek when looking for an international location of their investment. Consequently, Seyoum's (2009) study also found a positive influence of strong formal institutions on FDI inflows.

However, few studies dealt with the importance of higher education/tertiary education. Among those few is the correlational study of Usman (2014) examining the relationship of FDI, higher education, and infrastructure using the World Economic Forum Global Competitiveness Index, which revealed that FDI inflows in selected countries have a significant correlation with higher education and infrastructure. Results of Usman's (2014) study are in conformity with the results of Tien (2010) who found that higher education is a better predictor in attracting FDI. It is also in accordance with the results obtained by Sjöholm (2010) with which he determined the factors that affect the multinational corporations' locational decision. He found out that higher education is one of the factors aside from better institutions and liberal trade policies. Salehizadeh (2005) also found that multinational companies' are significantly attracted to states with highly educated employees and managers. Hence, attracting FDI inflows for economic development can be achieved if the government (Pakistan) will give more attention to developing higher education (Usman, 2014).

3. Research Gap

Reviewed literature and studies are geared toward the role of direct investment in the development of a country and the factors that attract FDI inflows in general. Impacts of FDI in economic growth are prevalent as well as its contribution in technology transfer, knowledge enhancement, labor productivity, infrastructure development, and human capital development. It can be noted from the studies reviewed the there are varying and sometimes conflicting effects depending on the region, economy, and industry which the FDI flows. In terms of the factors

attracting FDI inflows, researches have discussed institutional quality as determinants of FDI which pertains to governance, policy framework, political stability, taxation, and law and order situation. On the other hand, most of the economic determinants of FDI being studies are focused on infrastructure, trade regime, and market size. There are a few articles which discussed the connection between human resource developments in terms of education quality, higher education in particular. Most of the studies related to human capital are labor force, wages, enrollment in primary and secondary education, as well as government expenditures in education, in general. In addition, literatures have acknowledged that global competitiveness of the host country influenced FDI inflows, however, studies did not include all pillars of GCI as an independent variable. It only focused on the governance. Though, Usman (2014) discussed higher education's impact in FDI inflows, it only focused on the relationship but not on the extent of contribution of higher education in attracting FDI inflows. Hence, this study bridges the gap by providing new inputs as a result of this study on the Global Competitiveness Indices influence on FDI inflows.

4 Research Framework of the study

4.1 Operational framework

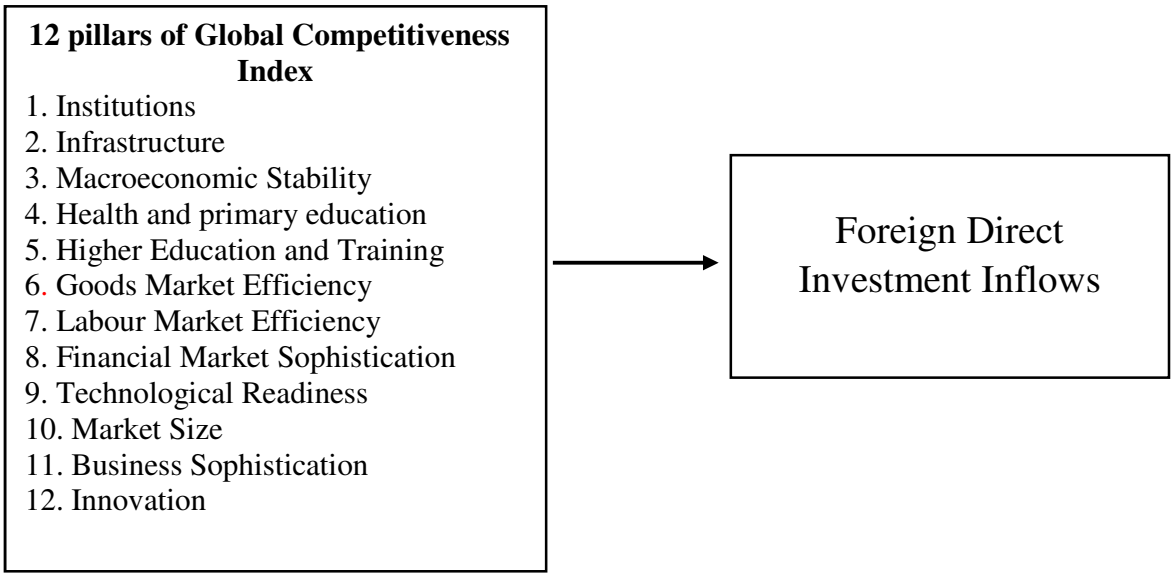

Figure 1. Operational Framework

5. Methodology

Descriptive and causal explanatory were used as research designs of the study. Descriptive research design was used to present the summary of dependent and independent variables in terms of mean, minimum, maximum, and standard deviation. In addition, causal explanatory was employed to measure the extent of relationship of the GCI and FDI as well as to determine the extent of impact of GCI on FDI inflows.

Quantitative data were processed and analyzed using Stata 13.0 program. For the descriptive research, descriptive analysis such as absolute and percentage frequencies, average weights (M), and standard deviation (SD) were employed. For causal explanatory research, multiple regression analysis was utilized to test the degree of impact of GCI on FDI inflows as well as the extent of influence of higher education and training indices on FDI inflows.

A total of 137 countries was considered for this study out of 152 and 264 countries included in the Global Competitiveness Index for 2016 and World Bank Report 2016. The criteria for selection of those 137 countries were based on the completeness of data for both GCI ratings and FDI inflows. Also, countries were classified into four groups: low income group, lower middle income, upper middle income, and high income. This is based on the new classification of countries by the World Bank.

6. Results and Discussion

6.1 Descriptive Analyses

Countries were classified by income and by regions as shown in Table 1. Based on the descriptive analysis of the data, 36% of the countries belong to high income group with which 28 are from Europe and Central Asia Region, 25% and 26% belong to lower middle income group and upper middle income group respectively, while 13% belong to low income group, 17 of which are from Sub-Saharan Africa Region. Lower Middle Income Countries are relatively dispersed among the six regions while upper middle income economies reside in Latin America & Caribbean and Europe & Central Asia Regions comprised of 16 and 11 countries respectively.

Table 1. Income and Regional Classification of Countries

Region	Income Group				Total	%
	Low Income	Lower Middle Income	Upper Middle Income	High Income		
East Asia & Pacific	0	6	3	7	16	12%
Europe & Central Asia	0	5	11	28	44	32%
Latin America & Caribbean	0	8	16	13	37	27%
North America	0	1	0	1	2	1%
South Asia	1	5	0	0	6	4%
Sub-Saharan Africa	17	9	6	0	32	23%
Total	18	34	36	49	137	
%	13%	25%	26%	36%		

It can also be noted based on Table 1 that countries in Sub-Saharan Africa and South Asia belong to Low Income to Upper Middle Income economy. On the other hand, countries in East Asia & Pacific, Europe & Central Asia, Latin America & Caribbean, and North America belong to Lower Middle Income to High Income economy.

Table 2. Summary of Foreign Direct Investment net Inflows (BoP Current US$) by Income Group

Income Group	**Stat**	**Foreign Direct Investment net Inflows (BoP Current US$)**
Low Income	mean	7.32E+08

	min	-1526519
	max	3.20E+09
Lower Middle Income	mean	1.71E+10
	min	-4.16E+09
	max	4.79E+11
Upper Middle Income	mean	1.18E+10
	min	2.27E+08
	max	1.71E+11
High Income	mean	2.02E+10
	min	-2.77E+10
	max	3.00E+11

Table 2 presents the summary of statistics of FDI net inflows per income group. Based on the results, high income group has an average FDI net inflows of US$2.02E+10, upper middle income group have US$1.18E+10, lower middle income group FDI net inflows average is US$1.71E+10, while low income group economies only have US$7.32E+08 for the year 2016.

Table 3. Descriptive Analysis of Foreign Direct Investment net Inflows (BoP Current US$) and Global Competitiveness Indices

Variable	**Mean**	**Std. Dev.**	**Min**	**Max**
Foreign Direct Investment net Inflows (BoP Current US$)	1.47E+10	5.25E+10	-2.77E+10	4.79E+11
Institutions	4.090153	0.8725155	2.155379	6.1273
Infrastructure	4.042862	1.209798	1.720788	6.687211
Macroeconomic Environment	4.673436	0.9880632	1.998103	6.840427
Health and Primary Education	5.547172	0.8861671	2.845082	6.891468
Higher Education and Training	4.304176	1.01809	1.90129	6.293697
Goods Market Efficiency	4.371413	0.5518213	2.857347	5.775369
Labor Market Efficiency	4.244629	0.5965396	2.75254	5.948719
Financial Market Development	3.994615	0.7452509	2.071768	5.785618
Technological Readiness	4.167972	1.231171	1.934808	6.413285
Market Size	3.847705	1.180054	1.34072	7
Business Sophistication	4.054105	0.7194535	2.555229	5.802793
Innovation	3.554551	0.8413481	2.156658	5.802447

Note: N=137 Obs.

FDI net inflows (BoP Current US$) range from a minimum of –US$2.77E+10 to a maximum of US$4.79E+11 with an average of US$1.47E+10. It can be noted that some countries have negative net inflows for the year 2016.

Based from the results presented in Tables 1, 2, and 3, it can be inferred that despite the high number of economies belonging in high income group, still, experts viewed the competitiveness of countries in general as relatively below average. In addition, SSA countries, which are under low income group, have also lower FDI net inflows. Likewise, countries in Europe & Central Asia consequently have higher FDI net inflows compared with those economies in the low income, lower middle income, and upper middle income group.

In terms of the Global Competitiveness Index comprising of 12 pillars of competitiveness, ratings range from as lows as 1.34072 to as high as 7; both are for Pillar 10

which is Market Size, though it is not the pillar that got the highest rating. Among the 12 pillars of competitiveness, experts rated Health and Primary Education the highest, with an average of 5.547172 and Innovation as lowest with an average rating of 3.554551. Over-all Global Competitiveness of the economies gained an average of 4.266029 from the experts for 2016, which range from 2.739177 to 5.807662.

Table 4. Descriptive Analysis of the Components of Higher Education and Training Indices

Variable	Mean	Std. Dev.	Min	Max
Secondary Education Enrolment Rate	85.97937	27.84528	22.40279	164.8117
Tertiary Education Enrolment Rate	41.7352	27.33894	0.79773	110.1627
Quality of Education System	3.807149	0.9192579	2.001713	6.160064
Quality of Math and Science Education	4.05972	0.9389971	2.208421	6.388875
Quality of Management Schools	4.294401	0.8241222	2.530363	6.306078
Internet Access in Schools	4.307229	1.019309	1.671292	6.30487
Availability of Research and Training Services	4.417591	0.8358547	2.498298	6.624842
Extent of Staff Training	4.029365	0.6939243	2.203271	5.710925

Note: N=137 Obs.

The 5th pillar of competitiveness, which is Higher Education and Training, is further analyzed. It is composed of eight sub-components which are classified into three major areas as shown in Table 4.

First major area is Quantity of Education, which pertains to the Secondary Education and Tertiary Education Enrolment rates. As presented in Table 4, Secondary Education average enrolment rate was 85.97937% ranging from 22.40279% to 164.8117% while Tertiary Education average enrolment rate is only 41.7352% ranging from 0.79773% to 110.1627%. This means that there are fewer secondary education graduates who are pushing through with Higher Education.

The second major area is Quality of Education, which refers to the quality of education system, quality of math and science education, quality of management schools, and internet access in schools. Ratings for the sub-components of Quality of Education range from 1.671292 to 6.388875. Quality of Education System got the lowest average rating from the experts having 3.807149 rating while internet access in schools got the highest average rating of 4.307229. It can be noted that internet access in schools got the minimum rating of 1.671292, which the lowest among all the components.

Third, On-the-Job training is only composed of two sub-components: Availability of Research and Training Services and Extent of Staff Training. Both sub-components earned 4.417591 and 4.029365 average rating, respectively.

6.2 Correlation Analyses

Global Competitiveness Indices and FDI net inflows (BoP Current US$) relationships vary among the income groups. Table 5 presents the summary of correlation results.

Table 5. Summary of Correlation Tables (by Income Group)

Variables		Income Group			
		Low Income	**Lower Middle Income**	**Upper Middle Income**	**High Income**
2	Institutions	0.1195	0.4424*	0.0851	0.264
		0.6261	0.0088	0.6219	0.0698
3	Infrastructure	0.7945*	0.6180*	0.2979	0.4443*
		0	0.0001	0.0777	0.0016
4	Macroeconomic Environment	0.5698*	0.0915	0.1677	-0.0253
		0.0109	0.6066	0.3282	0.8647
5	Health and Primary Education	0.4653*	0.2463	0.1603	0.2192
		0.0447	0.1602	0.3504	0.1345
6	Secondary Education Enrolment Rate	0.6028*	0.2226	0.1578	0.2599
		0.0063	0.2058	0.358	0.0745
7	Tertiary Education Enrolment Rate	0.9070*	0.5272*	0.0052	0.0671
		0	0.0014	0.9759	0.6505
8	Quality of Education System	0.0794	0.3828*	0.0913	0.1933
		0.7465	0.0254	0.5963	0.1881
9	Quality of Math and Science Education	0.3494	0.2418	0.0535	0.1391
		0.1426	0.1683	0.7565	0.3459
10	Quality of Management Schools	0.1077	0.4724*	0.0198	0.3890*
		0.6608	0.0048	0.9088	0.0063
11	Internet Access in Schools	0.5528*	0.4494*	0.1644	0.2084
		0.0141	0.0077	0.3381	0.1552
12	Availability of Research and Training Services	0.1857	0.4413*	0.0412	0.2997*
		0.4464	0.009	0.8115	0.0385
13	Extent of Staff Training	0.443	0.4479*	0.2037	0.1723
		0.0575	0.0079	0.2334	0.2416
14	Higher Education and Training	0.7179*	0.4960*	0.1457	0.2352
		0.0005	0.0028	0.3965	0.1076
15	Goods Market Efficiency	0.5456*	0.5693*	0.0228	0.3867*
		0.0157	0.0004	0.8951	0.0066
16	Labor Market Efficiency	-0.0495	0.4910*	0.1538	0.3565*
		0.8405	0.0032	0.3706	0.0129
17	Financial Market Development	0.1457	0.5059*	0.0346	0.2124
		0.5518	0.0023	0.8412	0.1473
18	Technological Readiness	0.8091*	0.6867*	0.0791	0.3497*
		0	0	0.6467	0.0148
19	Market Size	0.7935*	0.4990*	0.6368*	0.4246*
		0.0001	0.0027	0	0.0026
20	Business Sophistication	0.6818*	0.6914*	0.2735	0.3704*
		0.0013	0	0.1065	0.0096
21	Innovation	0.7577*	0.7200*	0.3287	0.2763
		0.0002	0	0.0503	0.0573

Note: All variables are correlated with 1. Foreign Direct Investment net Inflows (BoP Current US$)

For Low Income Countries, there are 12 GCI indices which have significant relationship with FDI net inflows. These are infrastructures, macroeconomic environment, health and primary education, secondary education enrolment rate, tertiary education enrolment rate, internet access

in schools, higher education and training (in general), good market efficiency, technological readiness, market size, business sophistication, and innovation. Three of which are the sub-components of higher education and training.

On the other hand, Lower Middle Income Economies showed a significant relationships of FDI net inflows to majority of the GCI indices, except for macroeconomic environment, health and primary education, secondary education enrolment rate, and quality of math and science education.

Furthermore, Upper Middle Income economies showed only one significant relationship between market size and FDI net inflows. High Income countries showed significant relationships among the eight GCI indices and FDI net inflows. These are infrastructure, quality of management schools, availability of research and training services, good market efficiency, labor market efficiency, technological readiness, market size, and business sophistication.

Results indicate that foreign investors, when making investment decisions in low income and lower middle income economies, are concerned with the basic requirements that a country should have, which include quality of institutions, infrastructures, macro-environment and health, and primary education. Multinational companies may have taken these as considerations because policies, regulations, and infrastructures are basics in establishing businesses. It also entails that the host country needs to have healthy and stable macro environment that will entice foreign firms to put up plants rather than just make the host country an export-distribution outlet of their outputs. MNCs also look at the societal skills and health of the workforce. It is important for companies to ensure that people in the host country are healthy for them to perform in their maximum potential. Unhealthy workforce may lead to less productive economy.

On another note, for countries under upper middle income, only market size have a significant relationship with FDI net inflows. Market size is important for foreign companies in selecting the location of their investment because it allows them to take advantage of economies of scale. Upper middle income group of economies tends to make the most out of their investments. Foreign firms are aiming to efficiently exploit the opportunities at hand.

The first four pillars of competitiveness is important for economies to perform their basic functions and for them to achieve economic development. However, it is also important to note that for a country to attain sustainable social and economic growth and development, countries must pursue higher level of competitiveness.

6.3 Multiple Regression Analyses

FDI net inflows are affected by several factors. In this study, Global Competitiveness Indices and Higher Education and Training Indices were used as independent variables affecting FDI net inflows.

Table 6. Regression Analysis of the Impact of Global Competitiveness Indices on Foreign Direct Investment net Inflows (BoPCurrent US$)

Independent Variables	Low Income[1]			Lower Middle Income[2]			Upper Middle Income[3]			High Income[4]		
	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared
Institutions	-1.86E+09	0.1880	0.8210	-2.49E+10	0.468	0.5407	3.03E+10	0.146	0.4049	-1.48E+10	0.443	0.2378
Infrastructure	3.61E+09	0.0740		4.41E+09	0.897		-1.61E+10	0.237		-8.67E+09	0.686	
Macroeconomic Environment	-6.02E+08	0.3340		1.58E+09	0.921		-1.46E+09	0.818		-2.06E+10	0.053	
Health and Primary Education	1.24E+08	0.8020		2.32E+10	0.318		2.86E+10	0.033*		-1.06E+10	0.816	
Higher Education and Training	1.28E+09	0.4890		-6.56E+10	0.041*		-1.99E+10	0.197		-1.23E+10	0.685	
Goods Market Efficiency	3.90E+09	0.2160		-5.26E+10	0.443		-3.05E+10	0.166		3.05E+10	0.428	
Labor Market Efficiency	1.02E+09	0.4120		3.14E+10	0.314		2.19E+10	0.139		4.73E+10	0.088	
Financial Market Development	-6.97E+08	0.6360		-2.37E+10	0.432		9.76E+09	0.499		2.57E+09	0.87	

Technological Readiness	-2.53E+09	0.3300	6.75E+10	0.03*	6.54E+08	0.958	2.46E+10	0.277
Market Size	1.76E+09	0.0360*	4.14E+08	0.975	2.59E+10	0.001*	2.00E+10	0.039*
Business Sophistication	-4.72E+09	0.3890	6.25E+10	0.431	7.29E+09	0.797	2.30E+10	0.524
Innovation	1.01E+09	0.7080	8.60E+10	0.138	-1.07E+10	0.707	-2.69E+10	0.29
_cons	-5.40E+09	0.2910	-3.36E+11	0.068	-2.06E+11	0.013	-2.14E+11	0.303

Note: DV= Foreign Direct Investment net Inflows (BoP Current US$)

Based on the result of regression analyses, market size is the only significant predictor of FDI net inflows for low income and high income countries; higher education and training and technological readiness are significant predictors of FDI net inflows for lower middle income group; and health and primary education and market size for upper middle income. Overall, it can be gleaned from Table 6 that market size is the common predictor for the majority of economies except for lower middle income group of economies.

Furthermore, higher education and training have a significant impact on FDI inflows only for lower middle income, however, it is counter-intuitive. This means that for every increase in higher education and training, there is a corresponding US$6.56E+10 decrease in FDI net inflows, ceteris paribus. It is also noteworthy to mention that technological readiness is an important determinant in attracting FDI inflows for lower middle income because these investors are looking for affiliates with high absorptive capacity and partners who are capable of maximizing the potential of technology to reach its high productivity level leading to higher competitiveness.

Literature that focused on competitiveness and country classification have argued that upper middle income and high income economies are more concerned with achieving business sophistication and innovation, especially if they want to attract more investors whose aims are to produce and offer innovative and high-quality products and services. However, in this study, business sophistication and innovation are not correlated with FDI. It can also be elucidated from the result of regression analysis that neither of the two has an impact in attracting FDI in all economies.

Table *7. Regression Analysis of the Influence of Higher Education and Training Indices on Foreign Direct Investment net Inflows (BoPCurrent US$)*

Dependent Variables	Low Income[1]			Lower Middle Income[2]			Upper Middle Income[3]			High Income[4]		
	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared
Secondary Education Enrolment Rate	-5.55E+07	0.0530	0.8712	-1.34E+09	0.0780	0.5453	5.16E+08	0.319	-0.1143	6.13E+08	0.299	0.0789
Tertiary Education Enrolment Rate	1.40E+08	0.0000*		4.49E+09	0.0000*		6.52E+07	0.878		-4.48E+08	0.288	

Quality of Education System	4.04E+08	0.5480	4.64E+10	0.1260	9.39E+07	0.996	-2.89E+10	0.249
Quality of Math and Science Education	-3.28E+08	0.6610	-3.61E+10	0.1090	2.96E+09	0.821	2.89E+08	0.987
Quality of Management Schools	-1.23E+09	0.2680	7.36E+10	0.0400*	8.51E+08	0.963	3.98E+10	0.064
Internet Access in Schools	1.04E+09	0.1220	-4.44E+10	0.2560	4.20E+09	0.769	5.24E+09	0.737
Availability of Research and Training Services	-3.22E+08	0.6900	-2.38E+10	0.5950	-2.62E+10	0.283	1.48E+10	0.552
Extent of Staff Training	-6.61E+08	0.5110	1.53E+10	0.6870	3.19E+10	0.126	-8.41E+09	0.736
_cons	6.57E+09	0.0490	-1.15E+11	0.1230	-8.34E+10	0.224	-1.52E+11	0.043

Note: DV= Foreign Direct Investment net Inflows (BoP Current US$)

Given the counter-intuitive result of regression analysis for the 5th pillar of competitiveness, which is Higher Education and Training, this paper further the inquiry by looking in detail the effects of higher education and training sub-components on attracting FDI inflows. Results revealed that Higher Education and Training sub-indices are influencing FDI net inflows of low income and lower middle income economies only. Among the sub-indices, tertiary education enrolment rate is the only significant factor impacting FDI net inflows of low income economies.

One of the possible reasons for such result is that firms need a workforce who possesses the required qualifications, which is tertiary education. Higher enrollees in tertiary education mean more workforces can be tapped by companies in their production process. They also have more chances of selecting a better quality of human resources.

On the other hand, tertiary education enrolment rate and quality of management schools are positively and significantly influencing FDI inflows of Lower Middle Income countries. It can be inferred that aside from the quantity of higher education measured by the enrollment rate in tertiary education, quality education is also vital. Most importantly, firms are not just looking at the quality of schools offering general knowledge, rather, they are more concerned with the quality of management schools. Quality of management schools in the host country may give impression to foreign companies that the government and educational institutions in the host country are committed to upgrading not just the business operations but other institutions by producing human resources who are able to adapt to the changing environment in the global market as well as provide sound strategies that are necessary to achieve firm-level and country-level competitiveness.

On another note, the attractiveness of upper middle income and high income economies for FDI inflows may not be influenced by higher education because it is no longer on that stage where efficiency is the main goal. Rather, foreign companies in high income economies may have been aiming for business sophistication ensuring high quality and sustainability of their production processes through quality workforce, modern technology, and advanced knowledge to meet market demands for unique products and services.

1.7 Conclusions

FDI has contributed to the accumulation of capital and the improvement of the economy's productive capacity through the incorporation of new inputs and modern technologies in the production process. However, its impact varies among economies in different income groups. Sub-Saharan Africa region, having many countries with low income, has also generated lower FDI net inflows compared with the Europe & Central Asia region with economies having high income and consequently with high FDI net inflows. It can also be concluded that FDI net inflow of low income economies is significantly correlated with most of the competitiveness indices compared to upper middle income and high income economies. It was also highlighted by the findings that market size influenced majority of economies in attracting FDI inflows. In addition, higher education may have yielded a counter-intuitive result but when it was analyzed using its eight sub-components, tertiary education enrollment rate and quality of management schools have resulted to positive and significant impact on the attractiveness of a country for FDI inflows. However, none of the sub-components of higher education and training is significantly influencing FDI inflows of upper middle income and high income economies.

Hence, this implies that Global Competitiveness Index can be considered as important in making decisions of foreign firms who wished to put investments in low income and lower middle income countries. Likewise, it can be concluded that Global Competitiveness Index plays a role in investment decisions.

Additionally, there is a growing importance in understanding competitiveness and FDI in the economic growth and development of a country. It is also vital that industries are able to have a full grasp of the role that higher education plays in attracting FDI inflows as well as its involvement in ensuring that host countries reap the full benefits of FDI. Hence, in spite of the significant findings of this study, it is recommended that longitudinal research be conducted to better predict the impact of higher education competitiveness index over a longer period.

1.7 REFRENCES

Abbes, S. M., Mostéfa, B., Seghir, G., & Zakarya, G. Y. (2015). Causal Interactions between FDI, and Economic Growth: Evidence from Dynamic Panel Co-integration. *Procedia Economics and Finance*, *23*(October 2014), 276–290. https://doi.org/10.1016/S2212-5671(15)00541-9

Agarwal, J. P., (1980), "Determinants of Foreign Direct Investment", Weltwirtschaftliches Archiv, No. 4, 116, pp. 739-73

Agbola, F. W. (2014). Modelling the impact of foreign direct investment and human capital on economic growth: empirical evidence from the Philippines. *Asia Pacific Economy*, *19*(2), 272–289. https://doi.org/10.1080/13547860.2014.880282

Agiomirgianakis, G., Asteriou, D., & Papathoma, K. (2004). The Determinants of Foreign Direct Investment: A Panel Data Study for the OECD Countries. *City University-London, …*, (3), 1–19. https://doi.org/10.1007/978-3-540-25939-8

Almfraji, M. A., & Almsafir, M. K. (2014). Foreign Direct Investment and Economic Growth Literature Review from 1994 to 2012. *Procedia - Social and Behavioral Sciences*, *129*, 206–213. https://doi.org/10.1016/j.sbspro.2014.03.668

Almfraji, M. A., Almsafir, M. K., & Yao, L. (2014). Economic Growth and Foreign Direct Investment Inflows: The Case of Qatar. *Procedia - Social and Behavioral Sciences*, *109*, 1040–1045. https://doi.org/10.1016/j.sbspro.2013.12.586

Asiedu, E. (2002). On the Determinants of Foreign Direct Investment to Developing Countries: Is Africa Di erent? *World Development*, *30*(1), 107–19. https://doi.org/10.1016/S0305-750X(01)00100-0

Axarloglou, K., & Pournarakis, M. (2007). Do all foreign direct investment inflows benefit the local economy? *World Economy*, *30*(3), 424–445. https://doi.org/10.1111/j.1467-9701.2006.00824.x

Aziz, O. (2017). Institutional Quality and FDI Inflows in Arab Economies. *Finance Research Letters*, (August 2016). https://doi.org/https://doi.org/10.1016/j.frl.2017.10.026

Baliamoune-Lutz, M., 2004. Does FDI contribute to economic growth? Business Economics 39 (2) 49–56

Bandera , V.N. and White, J.T. (1968), "U.S. Direct Investments and Domestic Markets in Europe", Economia Internazionale, Vol. 21, pp 117-133.

Bashir, T., Mansha, A., Zulfiqar, R., & Riaz, R. (2014). Impact of FDI on Economy Growth: A Comparison of SOuth Asian States & China. *European Scientific Journal, ESJ*, 446–469.

Belloumi, M. (2014). The relationship between trade, FDI and economic growth in Tunisia: An application of the autoregressive distributed lag model. *Economic Systems*, *38*(2), 269–287. https://doi.org/10.1016/j.ecosys.2013.09.002

Bevan, A. A., & Estrin, S. (2004). The determinants of foreign direct inve

Bhagwati, J. N. (1978), "Anatomy and Consequences of Exchange Rates Regimes", Studies in International Economic Relations, 1, 10, New York: NBER

Bhasin, A., Jun, K., and Economou, P. (1994), "Assessing the Sustainability of Foreign Direct Investment Flows", World Bank, International Economics Department

Boghean, C., & State, M. (2015). The Relation between Foreign Direct Investments (FDI) and Labour Productivity in the European Union Countries. *Procedia Economics and Finance*, *32*(15), 278–285. https://doi.org/10.1016/S2212-5671(15)01392-1

Borensztein, E., De Gregorio, J., Lee, J.W. (1998). How does foreign investment affect growth?. Journal of International Economics 45, pp. 115–135

Brincikova, Z., & Darmo, L. (2014). The Impact of FDI Inflows on Employment in V4 Countries. *European Scientific Journal, ESJ*, *1*(Special Issue), 245–252.

Buracom, P. (2014). ASEAN economic performance, institutional effectiveness, and foreign direct investment. *Asian Affairs: An American Review*, *41*(3), 108–126. https://doi.org/10.1080/00927678.2014.936801

Castro, P. G. de, Fernandes, E. A., & Campos, A. C. (2013). The Determinants of Foreign Direct Investment in Brazil and Mexico: An Empirical Analysis. *Procedia Economics and Finance*, *5*(13), 231–240. https://doi.org/10.1016/S2212-5671(13)00029-4

Cheng, L. K., and Kwan, Y. K. (1999), FDI Stock and its Determinants. In: Wu, Y. (Ed.), Foreign Direct Investment and Economic Growth in China, Chapter 3. Edward Elgar, Cheltenham, pp. 42-56

Cheng, L. K., & Kwan, Y. K. (2000a). What are the determinants of the location of foreign direct investment: The Chinese experience. Journal of International Economics, 51, 379–400

Cheng, L. K., & Kwan, Y. K. (2000b). The location of foreign direct investment in Chinese regions: Further analysis of labor quality. In T. Ito, & A. O. Krueger (Eds.), The role of foreign direct investment in East Asian Economic Development. Chicago: University of Chicago Pres

Cheng, L. K., and Zhao, H.(1995), "Geographical Patterns of Foreign Direct Investment in China: Location, Factor Endowments, and Policy Incentives", Department of Economics, Hong-Kong University of Science and Technology, February

Chisăgiu, L. (2015). Multi-dimensional Impact of Foreign Direct Investments on the Host-economy, Determinants and Effects, and their Contribution to Economic Growth in Romania. *Procedia Economics and Finance*, *32*(15), 721–727. https://doi.org/10.1016/S2212-5671(15)01454-9

Cleeve, E. A., Debrah, Y., & Yiheyis, Z. (2015). Human Capital and FDI Inflow: An Assessment of the African Case. *World Development*, *74*, 1–14. https://doi.org/10.1016/j.worlddev.2015.04.003

Coughlin, C. C., Terza, J. V., & Arromdee, V. (1991). State characteristics and the location of foreign direct investment within the United States. Review of Economics and Statistics, 73(4), 675–683

De Mello, L. R. (1997), "Foreign Direct Investment in Developing Countries and Growth: A Selectivity Survey", University of Kent, Working Papers Series, UK, pp. 1-46.

De Mello, L.R. (1999). FDI-led growth: evidence from time series and panel data. Oxford Economic Papers 51, pp.133–151

Demekas, D. G., Horváth, B., Ribakova, E., & Wu, Y. (2007). Foreign direct investment in European transition economies—The role of policies. Journal of Comparative Economics, 35(2), 369–386.

Disdier, A. C., & Mayer, T. (2004). How different is Eastern Europe? Structure and de- terminants of location choices by French firms in Eastern and Western Europe. Journal of Comparative Economics, 32(2), 280–296.

Doms, M. E., J. B. Jensen and J. Bradford (1998), 'Comparing Wages, Skills and Productivity between Domestic and Foreign Owned Manufacturing Establishments in the United States', Geography and Ownership as Basis for Economic Accounting, NBER Studies in Income and Wealth, 53, 235–55

Don Almeida, R. C. (2010). Government's Many Roles in Fostering Innovation. PricewaterhouseCoopers LLP.

Du, J., Lu, Y., & Tao, Z. (2008a). FDI location choice: Agglomeration vs institutions. International Journal of Finance&Economics, 13(1), 92–107

Du, J., Lu, Y., & Tao, Z. (2008b). Economic institutions and FDI location choice: Evidence from US multinationals in China. Journal of Comparative Economics, 36(3), 412–429

Dunning, J.H., and Zhang, F. (2008). Foreign direct investment and the locational competitiveness of countries. Transactional Corporations. 17(3), 1-30.

Dunning, J.H. (2004) 'Institutional reform, FDI and European transition economies', Economics and Management Discussion Paper No.14, University of Reading. Economic & Social Commission for Western Asia (ESCWA), 2013. Short- and medium-Term Economic Challenges of the Arab countries in transition: A review. United Nations, New York, USA.

Figlio, N. D. and B. A. Blonigen (1999), 'The Effects of Direct Foreign Investment on Local Communities', NBER Working Paper No. 7274

Financial Times (2016). The fDi report 2016 At http://forms.fdiintelligence.com/ report2016/files/The_fDi_Report_2016.pdf. [Accessed 13 November 2017].

Fosfuri, A., Motta, M., & Rønde, T. (2001). Foreign direct investment and spillovers through workers' mobility. Journal of International Economics, 53, 205–222

Chan, M. W. L., Hou, K., Li, X., & Mountain, D. C. (2014). Foreign direct investment and its determinants: A regional panel causality analysis. Quarterly Review of Economics and Finance, 54(4), 579–589. https://doi.org/10.1016/j.qref.2013.07.004

Fung, K. C., Iizaka, H., Lin, C., & Siu, A. (2002). An econometric estimation of locational choices of

foreign direct investment: The case of Hong Kong and U.S. firms in China. manuscrip
Gao, T. (2005). Labor quality and the location of foreign direct Investment: Evidence from China. China Economic Review, 16, 274–292.
GCR (2012). The Global Competitiveness Report 2012-2013. World Economic Forum.
Glass, A., Saggi, K., 2002. Multinational firms and technology transfer. Scandinavian Journal of Economics 104 (4) 495–514
Globerman, S., C. J. Ries and I. Vertinsky (1994), 'The Economic Performance of Foreign Affili- ates in Canada', Canadian Journal of Economics, 27, 1, 143 –56.
Globerman, S., & Shapiro, D. M. (1999). The impact of government policies on foreign direct investment: The Canadian experience. Journal of International Business Studies, 30(3), 513–532
Gunther, J., 2002. FDI as a multiplier of modern technology in Hungarian industry. Intereconomics 37 (5) 263–269, ISSN: 0020- 5346
Haaker, M., 1999. Spillovers from foreign direct investment through labor turnover: the supply of management skills. Discussion Paper London School of Economics
Head, C. K., Ries, J. C., and Swenson, D. L. (1995), "Agglomeration Benefits and Locational Choice: Evidence from Japanese Manufacturing Investments in the United States", Journal of International Economics, 10, pp. 92-116
Helmy, H.E., 2013. The impact of corruption on FDI: Is MENA an exception? J.Int. Rev. Appl. Econ. 27, 491–514
Hodgson, M., Stoelhorst, W., 2014. Introduction to the special issue on the future of institutional and evolutionary economics. J. Inst. Econ. 10, 513–540
Javorcik, B. S., & Wei, S. J. (2009). Corruption and cross-border investment in emerging markets: Firm-level evidence. Journal of International Money and Finance, 28(4), 605–624
Javorcik, B. S. (2004). The composition of foreign direct investment and protection of intellectual property rights: Evidence from transition economies. European Economic Review, 48(1), 39–62
Jeon, Y.D. (1992), "The Determinants of Korean Foreign Direct Investment in Manufacturing Industries", Weltwirtschaftliches Archv, Vol. 128, pp. 527-541.
Kaufmann, L., 1997. A model of spillovers through labor recruitment. International Economic Journal 11 (3) 13–34
Khan, D. M. (2007). Role of Human Capital in Attracting Foreign Direct Investment: A South Asian Perspective. SAARC Journal of Human Resource Development, 5-25.
Kokko, M. B. (2002). FDI and Human Capital: A Research Agenda. OECD Development Centre
Mainardi, S. (1992), "Foreign Direct Investment in Latin America and Southeast Asia: Relevance of Macroeconomic and Policy-Related Factors", Giornale delgi Economisti, No. 5-8, 51 (NS), pp. 259-79
Masron, A., Nor, E., 2013. FDI in ASEAN-8: does institutional quality matter? Appl. Econ. Lett. 20, 186–189.
Miner, C., and Pentecost, E. (1996), "Locational Advantage and US Foreign Direct Investment in the UK", Applied Economics, 28, pp. 605-15
Mina, W.M., 2012. The institutional reforms debate and FDI flows to the MENA region: the "best" ensemble. World Dev. 40, 1798–1809
Mincer, J. (1974) Schooling, Experience and Earnings, NBER, New York.
Moe, T.L. (2008). An empirical investigation of relationships between official development assisstance (ODA) and human educational development. International Journal of Social Economics, 35(3), 202-221.
Morrissey, O., and Rai, Y. (1995), "The GATT Agreement on Trade-Related Investment and Their Relationship with Transactional Corporations", Journal of Development Studies, 31, pp. 702-24
Naude, W.A., Krugell, W.F., 2007. Investigating geography and institutions as determinants of foreign direct investment in Africa using panel data. J. Appl. Econ. 39, 1223–1233
Nunnenkamp, P., & Spatz, J. (2002). Determinants of FDI in developing countries: Has globalization changed the rules of the game?. Trans- national Corporations, 2(2), UNCTAD

Outreville, J.F. (2008). Foreign affiliates of the largest insurance groups: location-specific advantages. Journal of Risk and Insurance, 75(2), 463-492.

Paul, A., Popovici, C., Calin, A., 2014. The attractiveness of CEE countries for FDI: a public policy approach using the TOPSIS method. Transylvanian Rev. Administrative Sci. 42, 156–180

Rondinelli, D.A., 2005. Assessing government policies for business competitiveness in emerging market economies: an institutional approach. In: Grosse, R. (Ed.), International and Business Government Relations in the 21st Century. Cambridge University Press, Cambridge, UK, pp. 395–419

Salehizadeh, M. (2005). Foreign Direct Investment Inflows and the US Economy: An Empirical Analysis. Economic Issues, 10(2), 29-50.

Sass, M. (2003). Competitiveness and Economic Policies Related to Foreign Direct Investment . Ministry of Finance

Sethi, D., Guisinger, S. E., Phelan, S. E., & Berg, D. M. (2003). Trends in foreign direct investment flows: A theoretical and empirical analysis. Journal of International Business Studies, 34(4), 315–326.

Sethi, D., Guisinger, S. E., Ford, D. L., & Phelan, S. E. (2002). Seeking greener pastures: A theoretical and empirical investigation into the changing trend of foreign direct in- vestment flows in response to institutional and strategic factors. International Business Review, 11(6), 685–705.

Seyoum, B. (2009). Formal institutions and Foregn Direct Investment. Thunderbird International Business Review, 51(2). 165-181.

Shatz, H. J. (2001). Expanding Foreign Direct Investment in the Andean Countries. Center for International Development at Harvard University.

Sjöholm, R. E. (2010). FDI and Growth in East Asia: Lessons for Indonesia. Stockholm: Research Institute of Industrial Economics.

Slemrod, J. (1991). Taxation and Foreign Direct Investment in the United States: Evidence from a Cross-Country Comparison. In:Razin, A.

Tien, A. F. (2010). African Leaders: Their Education Abroad and FDI Flows. Institute for the Study of Labor IZA

Tintin, C., 2013. The determinants of foreign direct investment inflows in the central and eastern European countries: the importance of institutions. Communist Post- Communist Stud. 46, 287–298.

Tun, Y.-L., Azman-Saini, W, Law, S.-H., 2012. International evidence on the link between foreign direct investment and institutional quality. Eng. Econ. 23, 379–386

Wang, Z., Q., and Swain, N., J. (1995), "The Determinants of Foreign Direct Investment in Transforming Economies: Evidence from Hungary and China", Weltwirtschaftliches Archiv, 131, pp. 359-82

Wang, J.Y., Blomstrom, M., 1992. Foreign investment and technology transfer: a simple model. European Economic Review 36 (1) 137–155

Wei, S. J. (2000b). Local corruption and global capital flows. Brookings Papers on Economic Activity, 2, 303–354.

UNCTAD. (2007).World Investment Report TNCs in Extractive Industries and Development, NewYork: United Nations. World Economic Outlook (WEO) Database.

Usman, S. (2014). Higher Education, Infrastructure and Foreign Direct Investment in Pakistan. *IOSR Journal of Business and Management (IOSR-JBM)*, *15*(6), 54–59. Retrieved from http://www.iosrjournals.org/iosr-jbm/papers/Vol15-issue6/H01565459.pdf

Velde, D. W. te. (2005). Globalisation and education : what do the trade, investment and migration literatures tell us? *Working Paper (Overseas Development Institute) 254*, (August), 70. Retrieved from http://www.odi.org.uk/publications/working_papers/wp254.pdf

Yao, S. 2006. "On Economic Growth, FDI and Exports in China." Applied Economics 38 (3): 339– 351

WEF. (2016). *The Global Competitiveness Report 2016–2017. World Economic Forum Reports 2016*. https://doi.org/92-95044-35-5

World Economic Forum. Th eHlobal Competitiveness Index dataset 2007-2017. Retrieved fromehttps://www.kaggle.com/weforum/global-competitiveness/data. November 30, 2017.

WorldBank.

http://databank.worldbank.org/data/reports.aspx?Code=BN.KLT.DINV.CD&id=1ff4a498&report_name=Popular-Indicators&populartype=series&ispopular=y retrieved last

Linking Global Competitiveness, Higher Education, and Foreign Direct Investment Inflows

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I. Introduction

1.1 Background of the Study

Foreign Direct Investments (FDI) has contributed to the accumulation of capital and the improvement of the economy's productive capacity through the incorporation of new inputs and modern technologies in the production process. Neoclassical and endogenous growth models have been widely used to empirically test the benefits of FDI (Almfraji & Almsafir, 2014). However, results of testing theoretical benefits are varying from regions, countries, and industries. Conflicting relationships and impacts range from significant to non-significant, positive to negative impacts, directly or indirectly. Despite that, FDI inflows have still been recognized to influence employment and wages, infrastructure development, human capital development, technology transfer, and promotion of trade which could have a short and long-term effect on economic of growth of a country. Recognizing the impact of FDI on the development of an economy, many researchers tried to elucidate the factors that encourage foreign countries to invest in a specific economy.

For decades, scholars have been interested in exploring the main factors that determine a country's level of FDI attractiveness. Traditionally, scholars focused on economic factors such as market size, labor costs, exchange rates, infrastructure, and institutional quality which include political stability, investment policies and regulations, as well as governance and others as the key explanatory factors in determining a host country's ability to attract or deter FDI. Reviewed literature also looked into the influence that human capital development offers to induce FDI inflows. Among the human capital elements are enrollment in primary and secondary education, government expenditures in education, as well as the quality of labor measured by the monthly wages. However, few studies dealt with the importance of higher education/tertiary education. Among those few is the correlational study of Usman (2014) examining the relationship of FDI, higher education, and infrastructure using the World Economic Forum Global Competitiveness Index, which revealed that FDI inflows in selected countries have a significant correlation with higher education and infrastructure. Results of Usman's (2014) study are in conformity with the results of Tien (2010) who found that higher education is a better predictor in attracting FDI. It is also in accordance with the results obtained by Sjöholm (2010) with which he determined the factors that affect the multinational corporations' locational decision. He found out that higher education is one of the factors corporations consider, aside from better institutions and liberal trade policies. Salehizadeh (2005) also found that multinational companies are significantly attracted to states with highly educated employees and managers. Hence, attracting FDI inflows

for economic development can be achieved if the government (Pakistan) will give more attention to developing higher education (Usman, 2014).

Acknowledging the importance of FDI in enhancing growth of a country and the role that the host country's competitiveness plays in attracting FDIs, this study tried to ascertain which among the pillars of global competitiveness index significantly influence the attractiveness of the host country for FDI inflows with more focused on the human capital factor, quality of higher education/tertiary education, in particular.

1.2 Statement of the problem:

Generally, this study aimed to answer the question, which among the Global Competitiveness Indices drives the FDI inflows? Specifically, it sought to give answer to the following questions:

1. What is the extent of relationship among the Global Competitiveness Indices and FDI Inflows?

2. What is the degree of impact of Global Competitiveness Indices in attracting FDI inflows?

3. What is the extent of influence of Higher Education and Training Indices in attracting FDI Inflows?

1.3 Significance of the Study:

Results of this study will be beneficial to the host country, government, higher academic institutions, and future researchers. The host country will have an idea on the pillars of competitiveness that they need to enhance to be at par with fast economies. The government of the host country, as well as their partner stakeholders (domestic companies), will be enlightened on the factors that attract FDI to sustain economic development. Higher academic institutions, being the source and developer of the capital, may get inputs on how to strengthen their plans to produce better quality labor force who will be at the forefront of reaping the benefits of FDI in terms of absorbing technology transfer and knowledge transfer. Higher education institutions may also look into its role in enhancing R&D capacities leading to innovation, thereby, climbing the ladder of competitiveness. And given the scarcity in studies relating to education's role in improving competitiveness of the country and attracting FDI inflows, this study contributes to new knowledge, which future researchers may look into as a basis for future researches on FDI, economic development, competitiveness, and higher education.

1.4 Scope and Limitation of the Study

This study employed a causal-explanatory research design to explain the influence of Global Competitiveness Indices as independent variables on the dependent variable which is FDI Inflows. Secondary data, which are available online in the World Economic Forum and World Bank Report for 2016, were used in the analysis.

2. Review of Related Literature and Studies

Review of related literature and studies give an overview of the role of foreign direct investment in the development of a country as well as the factors that attract foreign direct investment.

2.1 Role of FDI in the development of a country

2.1.1 Provision of Employment

FDI inflows play an important role in the local market of the host country. The theory of FDI postulates that it has a positive impact on unemployment vis-a-vis employment. Investments increase jobs, thus, declining unemployment. Researches have explored this accepted claim, however, results vary. Green field investment possesses positive impact of FDI inflows, unlike in the case of privatization where there is a negative impact of FDI on employment (Brincikova & Darmo, 2014). But different aspects of FDI's effects on the host countries have always been considered.

According to Axarloglou and Pournarakis (2007), FDI inflows shifts the labor demand, thereby influencing employment and wages (at least in the short-run). Higher employment and wages are expected at the plant level due to the establishment or expansion of foreign subsidiary (Doms, Jensen & Bradford, 1998). Economic literature has also explored the impact of FDI inflows on growth and development, particularly in the labor market. Though, impacts of FDI on the employment and wage are controversial. Most researches inferred that the impact on economic growth of the investments of foreign companies are basically in terms of wage, technology, trade, and employment (Floyd, 2003; Dicken, 2007).

The U.S. offered strong economic incentives to attract FDI inflows. This strategy was implemented with the anticipation that local economies would be stimulated by FDI. Researchers tried to assess the performance of foreign-owned subsidiaries operating in the US to evaluate the effects of FDIs on local economies (World Economy, 2007). Hownstein and Zeile's (1994) assessment, which was supported by Globerman, Ries, and Vertinsky (1994), found that higher wages are paid by foreign affiliates in the US than the domestic plants.

However, despite FDIs' impact on local economic development in the host US states, very few evaluated how local labor markets are affected by the FDI Inflows. Figlio and Blonigen (1999) evaluated the impact of manufacturing employment by foreign plants in South Carolina using country-level data. They found that country- and industry-specific wages were strongly and positively impacted by such employment. Furthermore, there is an increase in all workers' real wages due to the addition of an averaged-sized foreign subsidiary in the specific county and industry.

Hence, FDI inflows' impact on local labor markets varies, depending on the industry. As explained by Axarloglou and Pournarakis (2007), the variances in the effects of FDI on the labor market are primarily because of industry composition of the FDI inflows. Hence, policymakers should focus on attracting FDI inflows on strategic group of industries such as printing and publishing and transportation equipment (Axarloglou & Pournarakis, 2007).

Vacaflores (2011) also examined 11 countries in Latin America using 1980–2006 data on FDI and employment generation. Results revealed that effects on employment generation is positive and significant in host countries, which is driven by its effect on the male labor force. However, this is only important for less developed economies with low inflation periods. Benefits from FDI inflows are only accrued to the host countries with high level of informality and attracting low average inflows of FDI.

Moreover, employment caused by FDIs increased the country's per-capita income as found out by the Spieza (2004) study on 49 countries, though, for low-income developing countries, the effects is not significant. Vacaflores and Mogab (2012) also found that compared to other regions, the subsidiaries in Asia possess the largest additions in employment due to the increase in FDI followed by those in Americas, but, statistically, significant influence is present in the manufacturing and service sectors.

Furthermore, effects of FDI on labor productivity on host countries is through THE transfer of technology and proficiency in marketing and management. These enable technological progress and economic growth in the long term (Boghean & State, 2015).

2.1.2 Technology Transfer

Technology transfer is one of the FDI inflows' benefits accrued to the host country. Wang and Blomstrom (1992) and Gunther (2002) said that there are four main channels of technology spillovers. These spillovers flow from foreign to local firms by means of imitations, competition, skills, and linkage. Learning by watching effect is what imitation is all about. Local firms are imitating the technology of foreign companies to improve its productivity. Also, with the presence of new entrants, foreign firms, competition is created with local firms. Thus, companies in the host countries are forced to maximize the potential of existing resources and by using it more efficiently and adopting modern technologies (Wang & Blomstrom, 1992; De Mello, 1997, 1999).

The introduction or the transfer of new and modern technologies is one of the benefits that host countries can get from FDI promotion based on the empirical work studying FLGH. (Belloumi, 2014). It supports the findings of Borensztein, De Gregorio, and Lee (1998) who inferred that transfer of modern technology is channeled through FDI. However, the effectiveness of such transfer of technology depends on the host country's stock of human capital.

Also, according to (Chisăgiu, 2015), new production capacities are generated by subsidiaries of transnational companies as well as realized consumer goods. However, it also means high standard capital which made them technological leaders in the industry as well as posting significant impact at occupational level.

2.1.3. Promotion of Trade

Enhanced production capacities of host countries brought by investments of foreign companies bring ripple effect in terms of trade (local and international). More opportunities for trade are being opened. In the case of Tunisia, it needs partners that will provide them technology and other inputs of production. Hence, it needs trade partners. In addition, Tunisia can have the chance to improve its own stock of knowledge by forging linkages and inviting trade partners especially from developed countries where they can import capital equipment and intermediate products (Belloumi, 2014).

Baliamoune-Lutz (2004) found a bidirectional relationship between FDI and exports in Morocco. His study also revealed that FDI has a positive impact on economic growth. It implied that exports can be promoted through FDI and vice-versa. Moreover, Yao (2006) assessed 28

Chinese provinces employing Arellano and Bond's dynamic panel data estimating technique in the dataset over the period of 1987-2000. Yao (2006) found out that there is a positive effect of export trade and FDI on economic growth.

2.1.4 Enhancement of Human Capital

FDI inflows causes spillovers of many forms. One spillover effect of FDI is the transfer of knowledge, which occurs from foreign firms to domestic firms by means of well-trained workers and managers' mobility (Kaufmann, 1997; Haaker, 1999; Fosfuri, Motta, & Rønde, 2001; Glass & Saggi, 2002). Linkages also create spillovers when productivity of foreign companies flows to local firms of the same industry, which is called horizontal spillovers, and upstream and downstream industries or the so-called vertical spillovers. This happen when the range and quality of goods (intermediate) are increased (Borensztein et al., 1998).

In addition, according to Abbes, Mostéfa, Seghir, and Zakarya, (2015), skills levels in the host economy is raised because of FDI inflows. Labor resources' quality is also enhanced because of the development of performing management skills, which is based on the imposed standards of corporate leading systems. In addition, the populations' training levels and its technological development adaptation plays an important role in the enhancement of human resource quality of the host economy (Boghean & State, 2015).

As pointed out by Kokko (2002), educational level and human capital need to be improved to such extent that the labor force's adaptation of foreign technology is quick and easy. These variables can have an effect in the long run on sustained economic growth. Also, as the demand for highly skilled labor force increased in the field of natural sciences, management, and engineering, MNC's may encourage the government to invest in higher education, which in fact helps improve the quality of human resource. In addition, MNC's prospecting to invest in a particular economy plays an important role in tertiary education enhancement by helping universities and institutions through academe-industry partnership alongside imparting scholarships for education.

Moreover, benefits of spillovers of investments in higher education can only be realized when foreign technology can be absorbed by local firms, there is basic level of workforce, and barriers are not high (Kokko, 2002).

2.2. Factors that Attract Foreign Direct Investment

2.2.1. Institutional Quality

Institutional quality is about social, financial and economic policies, governance, and political stability of the host country which could lead to the success of development projects or investments. The literature on FDIs acknowledge the role that institutional quality plays in attracting FDI inflows. Several reasons were pointed on the different ways on how institutions matter in attracting FDI inflows.

FDI is stimulated by the level of productivity of the host country, which is improved through the presence of institutional quality. However, there are requisites for productivity enhancement which ran from the availability of research and development system, financial institutions, flexible labor market, and a stable political government. Hence, an institution's

evolution is related to the development of productivity (Nelson, 2008; Hodgson & Stoelhorst, 2014).

Efficient institutions lower transaction costs and protect property rights. Transaction cost is important in projecting for the revenue, which foreign investors consider before making investment decisions. It includes costs associated with production, logistics, information, and risk monitoring. Without institutional system that is properly regulated, policies on property rights and financial markets that support large-scale financing, as well as the prevalence of corruption and weak incentive structure, costs of doing business may arise (Dunning, 2004).

In addition, property rights are important for the international economy, which is already becoming a knowledge-based economy. Hence, the government's protection of intellectual property rights through effective enforcement of policies can entice international companies to invest in a particular economy (Wall et al., 2010). It also encourages establishments of plants in the host country rather than focusing on distribution projects. Establishment of production plants could provide FDI spillovers (Rondinelli, 2005). Therefore, low transaction costs and protecting intellectual property rights are important factors in assessing business environments in the host country, which could promote trust and commitment for both the investors and the host country as well as upgrade competitiveness that enhances quality of outputs leading to stable and developed business environments (Tomassen et al., 2009, 2012; Rondinelli, 2005).

As argued by Tun, Azman-Saini, and Law (2012), due to the reduction of business costs and in uncertainty, countries should be able to attract investment, especially those with better institutional quality. This is proven by the results of their study employing GMM estimator for assessing the FDI determinants focusing on institutional quality of over the period of 1981–2005. Results revealed that bureaucratic quality, rule of law, corruption, risk of expropriation, and government repudiation of contracts are the factors of institutional quality that determine FDI inflows of the of 77 developing countries (Tun et al., 2012).

Several studies were also conducted with emphasis on the importance of institutional quality indicators in attracting or deterring FDI inflows.

Masron and Nor (2013) found that regulatory quality control, rule of law, and corruption are impacting the FDI inflows of ASEAN member countries as shown by data over the period 2002 to 2010.

On the other hand, economic freedoms, state fragility, and political rights are the significant predictors in attracting FDI inflows in Central and Eastern Europ (CEE) for the period 1996–2009 (Tintin, 2013). This is expounded by the study of Paul, Popovici, and Calin (2014) who conducted the same study in CEE but with focus on the country's public policies for the period 2007–2010, in which the results showed that accuracy and efficiency of public administration are the institutional quality components that create the framework for encouraging FDI. He also pointed out that the role of the government in building institutional quality cannot be substituted by market forces.

Naude and Krugell (2007), upon examining Africa's FDI inflows and its determinants from 1970 to 1990, their results show that it is institutional quality, rule of law, and political stability, and not the geographic location that determine FDI inflows of Africa. Following the results is the policy implications geared toward political stability and good governance enhancement through institutions.

Mina (2012) examined the impact of institutional quality on FDI inflows in Arab countries over the period 1990–2008. The results confirm that reducing the risk of investment expropriation and increasing government stability and bilateral investment treaties have a positive influence on FDI inflows.

Furthermore, GCC countries' institutional quality affects the FDI inflows. Among the components of institutional quality that encourage FDI inflows are political stability and the absence of democracy (Gani & Al-Abri, 2013). In contrast, Helmy (2013) found that two FDI determinants, freedom and security of investments, have a positive impact. He also reported that chances of expropriation and corruption rates will lead to an unsafe business environment, hence, posing a negative influence on FDI.

Therefore, important determinants of FDI flows could include government policies, which can be in the form of taxes, subsidies, regulatory regime, and privatization policy. Evidence from the empirical investigation of Cheng and Kwan (2000) says that the government plays a vital role in inward FDI location attraction. It has also been recognized as a catalyst for economic restructuring. Henceforth, host country's institutional features and political interventions are potential for encouraging FDI.

Furthermore, Sethi, Guisinger, Phelan, and Berg (2003) argued that MNEs often evaluate potential FDI destinations at the regional level, rather than on a host country by county basis due to cultural, political, and economic similarities and significant uniformity in trade and investment policies. Based on our review, the relationship between institutional factors and FDI attractiveness in the top three regional destinations for FDI—Europe, North America, and Asia (Financial Times, 2016)—is decidedly mixed. In Europe, the evidence varies but suggests that Western Europe and Eastern Europe should be viewed as separate destinations for FDI (Disdier & Mayer, 2004). There is significant evidence of political stability having a positive effect on FDI in Hungary (Wang & Swain, 1995), but not in the whole Central and Eastern European region (Bevan & Estrin, 2004). Components of rule of law, such as property rights protections, are significant factors in Eastern Europe (Javorcik, 2004). On the deterring side, tax rates are negative but only significant at higher income levels in Southeastern Europe (Demekas, Horváth, Ribakova, & Wu, 2007). Corruption has a negative relationship in transition economies (Javorcik & Wei, 2009). Finally, cultural distance is not an important factor in Western Europe in the late 1990s (Sethi, Guisinger, Ford, & Phelan, 2002). In the United States and Canada, results follow the theoretical predictions: in Canada, policy changes, including exempting bureaucratic review and strengthening the legal environment, increase FDI attractiveness (Globerman & Shapiro, 1999). A number of scholars found strong evidence that taxation has a profound effect on FDI attractiveness in the United States (Coughlin, Terza, & Arromdee, 1991; Slemrod, 1991; Swenson, 1994). In the Asia region, studies are dominated by explaining Chinese FDI and appear stronger and more consistent in their results. Corruption and tax rates are significant deterring factors (Du, Lu, & Tao, 2008a, 2008b; Wei, 2000b), and other studies find strong evidence of political stability and rule of law in China increasing FDI attractiveness (Du et al., 2008a, 2008b; Wei, 2000b), and other studies find strong evidence of political stability and rule of law in China increasing FDI attractiveness (Du et al., 2008a, 2008b; Wang & Swain, 1995). Thus, the review combined with the arguments for levels of development would suggest that the relationship between institutional factors and FDI will be strongest in Asia (i.e. China), followed by North America, and then Europe.

2.2.2. Economic Development

FDI and economic development have a bidirectional relationship (Agiomirgianakis, Asteriou, & Papathoma, 2004). Economic development status and Investment Development Plan (IDP) of the recipient country matter in attracting FDI inflows (Barrel & Pain, 1998, as cited by Agiomirgianakis et al., 2004). FDI decisions depend on the host country's quality of market infrastructure (De Menil, 1999).

Investment development plan is sometimes measured using GDP per capita in major studies conducted (Agiomirgianakis et al., 2004). Real per capita GNP, as well as real GDP growth, impact the investment decisions (Agiomirgianakis et al., 2004; Agarwal, 1990; Mainardi, 1992). Other variables were also used, such as regional income and infrastructure factors, measured by road constructions (km/km2 of land mass) as a potential for FDI attraction (Agiomirgianakis et al., 2004; Head & Ries, 1996; Cheng & Kwan, 1999).

Moreover, in Qatar, Granger Causally related variables are inward FDI and economic growth as proven by the empirical findings of Almfraji, Almsafir, and Yao (2014), which also show that inward FDI is more sensitive to its own performance, though it can be noted that economic growth positively affected inward FDI. Therefore, government's efforts to create promising economic and investment environment must be continued (Almfraji, Almsafir, & Yao, 2014).

To attract direct investment, infrastructure development, stable and healthy political and economic environment, law and order situation, tax exemption, and curtailing external debts are important for South Asia states (Bashir, Mansha, Zulfiqar, & Riaz, 2014).

In addition, many ASEAN countries are heavily reliant on international trade and FDI because of its relatively small domestic market; thereby, FDI is important for ASEAN economies' economic growth and globalization. On the other hand, recent studies on cross-border investment indicate that FDI decisions consider domestic economic performance and institutional effectiveness of the recipient country, which is confirmed by the study of Buracom (2014), indicating that macroeconomic performance is significantly impacting FDI flows into developing countries. Moreover, macroeconomic performance of ASEAN countries are amenable to private sector and therefore attractive to FDI (Buracom, 2014).

2.2.3. Trade regime and Market Size

Trade openness and the degree of liberalization in trade were found to be potential factors in attracting FDI inflows; although, it can be noted that measurement issues are acknowledged. Despite the difficulties, liberal trade regime's relationship with FDI is still anticipated (Raines et al., 1999). Bhagwati (1978) argued that countries that implement and promote export than import substitution policy best captivate FDI. Likewise, report showed that the ratio of exports to sales and sales concentration ratio, as a proxy for trade regime, are both contributing positively to FDI (Milner & Pentecost, 1996, as cited by Agiomirgianakis et al., 2004). It was also found that export-oriented FDI positively influenced inbound FDI and recently, launching of special export processing zone outweighs the closed economies inherent disadvantage. (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Wang & Swain,1995). China, in particular, associated its FDI inflows with Chinese Economic Zones (Agiomirgianakis et al.,2004; Cheng & Kwan, 2000; Wang & Swain,1995).

Moreover, Asiedu (2002) also revealed SSA and Non-SSA countries' FDIs are promoted by openness to trade. However, there is a variance in the marginal benefit that SSA and Non-SSA countries gets from trade openness in terms of FDI inflows. SSA countries received less FDI since they are less open than other host countries in their region. This is supported by Castro, Fernandes, and Campos (2013) who noted that market seeking is the strategy of multinational companies in Brazil, which is linked to its domestic market size. On the other hand, efficiency seeking is the most dominant strategy in Mexico, which is geared toward trade liberalization to attract FDI.

Evidence from previous empirical and theoretical studies also consider market size as another mechanism playing an important role in attracting FDI (Agiomirgianakis et al., 2004). Foreign companies take advantage of bigger market size by having economies of scale and mass production, which results to decrease in costs of operation and growth thereby affecting supply side (services and inputs) positively. Domestic market and growth prospects were claimed to be indicators considered by foreign investors in selecting host country where they plan to relocate the production plant (Agiomirgianakis et al., 2004; Bhasin, Jun, & Economou, 1994; Morrissey & Rai, 1995).

Furthermore, the linkage between growth level, as measured by profitability rates, and FDI is found to be statistically significant and positive (Jeon, 1992; Wang & Swain, 1995). Foreign firms' output of sales in the host country is used as a function of FDI (Agarwal, 1980). Output of sales is usually measured by the size of the market—absolute and relative value which is measured by GDP level (Agiomirgianakis et al.,2004; Bandera & White, 1968) and growth rate of GDP of the host country (Agiomirgianakis et al., 2004)

2.2.4. Human Resource Development

Quality and availability of human capital promotes labor-intensive and export-oriented FDI (Agiomirgianakis et al.,2004). Expansion of productivity potentials of the firms and country is enabled by FDI through investing in capital stocks (Agiomirgianakis et al.,2004; De Mello, 1997).

Agbola (2014) argued that crowding-out effect is prevalent in the Philippine government investment and private investment. Thus, human capital and infrastructure development must be the direction of government investments since it is most likely to attract FDI.

However, studies show a counter-intuitive result on the educational level's impact on inbound FDI (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Cheng & Zhao, 1995). Both Cheng and Kwan (2000) and Cheng and Zhao (1995) revealed that percentage of population with primarily high education has no positive and significant effect on FDI (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Cheng & Zhao, 1995).

Guntlach, (1995) argued that education has poor explanatory power. Hence, researches may explore the potential role of human capital augmentation instead of human capital accumulation because educations' impact is not direct. Benefits from education are seen through its spillover effect in production.

In contrast to the above findings, Aziz (2017), in his study using education as one of the independent variables which affect FDI inflows, revealed positive and significant effects of education on FDI inflows. With the nature of MNEs that are focusing on research and

development for technology development and innovation, there is a need for the host country to have the required human capital who have the capacity to understand, use, and innovate using the MNEs' newly introduced technology. Therefore, one way to attract FDI is to ensure that the host country has well-educated labor force who can easily adapt and exploit new knowledge and technologies.

Labor characteristics is also another factor in determining FDI. It is one of the considerations of foreign investors in choosing labor intensive or capital intensive investments. Though, sometimes it is inferred that China is the second largest recipient of FDI because of cheap labor. On the other hand, Branstetter and Feenstra (1999) modeled that there is a wage premium payment of multinational firms in China with the aim of attracting quality workers. Several studies were conducted on the role of labor quality in attracting FDI but the results vary. Some authors argued that labor quality has positive and significant impact on FDI (Gao, 2005; Fung, Iizaka, & Parker, 2002; Fung, Iizaka, Lin, & Siu, 2002) while an insignificant role is revealed by the study of Cheng and Kwan (2000a, 2000b). Varying results may be due to the variables used to measure education and quality of labor given that it is really difficult to look for better proxies for labor quality and characteristics.

Cleeve, Debrah, and Yiheyis (2015) showed that quality of labor significantly influences FDI, although they only used traditional variables of quality of labor employing various versions of FDI model. Moreover, it was also reported that human capital has no increasing importance on FDI over time in SSA.

Moreover, human development—which is defined by the UNDP (2012) as using the three basic dimensions: a long and healthy life (health), access to knowledge (education), and a decent standard of living (income) —is associated with FDI and economic growth, educational development, and enrollment (Moe, 2008). In addition, trade and inward investment are determined by good quality schooling of the general population in the host country; though it is also recognized that further training and upgrading of skills are necessary for continued flow of investments. The countries' participation in globalization processes is determined by the quantity and quality of education and the training it offers to its human resources. Globalization processes include value chains, fragmentation, increased migration, and trading of final products, in which human quality of human resources play an important role to better capture the benefits of FDI (Velde, 2005).

Mincenarian earning equation explains how education contributes to economic performance, which is grounded in human capital theory (Mincer, 1974). Mincenarian earnings equation correlated wage rate of an individual to its other own characteristics, which include the level of education attainment. Levels of education, in this case, is measured by the years of schooling and the type of education completed.

Though it was accepted that highly educated individuals earn more, it does not claim that all types of education could raise the growth of all countries. Hence, it is important to assess the types of education that help in creating or building science and those which are geared toward the building of absorptive capacity, thereby exploiting the benefits from best practice technology. As suggested by Borensztein et al. (1998), in order to benefit from inward FDI, education is necessary. However, it was not expanded as to how and in what level of education could the host country best capture such benefits.

In the United States, there were six US universities that were included in the top 10 Times Higher Education ranking in 2006–2007 out of 4,000 plus universities and colleges in the US. Times Higher Education also wrote that 580,000 foreign students enrolled in US universities in 2006–2007. Moreover, out of the total population, 56 million obtained bachelor's degree or higher. In order to succeed in the globalized world, US companies and foreign affiliates take full advantage of this environment because it makes US attractive for FDI. As mentioned in the paper, Sass (2003) stated that education and training are two of the very important factors that attract capital in a country aside from macroeconomic stability and infrastructure. The paper also expounded that not having a medium level of education, as well as higher education's training methods that are not at par with others, are key problems in attracting FDIs.

Moreover, several studies recommended that for an economy to attract higher inward FDI and if it wants to reap the full benefits of such investments, it is highly important to develop better secondary and higher education (Shatz, 2001; Nunnenkamp, 2002), and absorb advanced technologies through higher levels of education (Nunnenkamp, 2002),

On the other hand, Khan (2007) discussed that scarcity in knowledgeable and skilled-based workforce is unfavorable if a country wants to attract FDI. He further argued that in contrast with other South Asian countries which only focused on simple education, Singapore, Malaysia, Korea, and Ireland were successfully sustaining their FDI because of their human resource development strategy. Moreover, Khan (2007) single out Singapore as efficient and consistent in attracting FDI despite its insufficiency in natural resources because it capitalized on human resource development.

On another note, the Malaysian government exerted effort for education and training while the international chambers of commerce and Thailand government are jointly running the country's training programs. According to Michie (2001), Singapore aimed to attract FDI by pursuing national investment in education and training.

Higher education plays an important role in improving the quality of labor force of the host country. Moreover, higher education helps in R&D activities which supports production and management systems that are technology compliant. Effects of research and development can be achieved through the creation of incentive effect in foreign investments (Tolunay & Akyol, 2006). As Narin (2007) pointed out, FDI provides employment opportunity and offers new workforce qualifications of the country.

Furthermore, higher education system and innovation mobility of a country have strong link, thus, without skilled labor force, firms cannot sustain its growth. Hence, improving industrial development requires investment focus in the education sector for a period of one or two decades (Don Almeida, 2010).

2.2.5. Country's Competitiveness

Competitiveness is defined by a country's institutions, policies, and level and factors of productivity (GCR, 2012). Productivity can be measured by the level of quality of labor force and outputs a country generated in the production process. The better labor force and increase in market supply are affected by education level. Hence, it is noteworthy to mention that higher education's contribution to economic development is important. Poverty reduction through the sustainable increase in income leads to the higher living standards of the people and in the long

run bringing the country to higher competitiveness. In effect, improvement in competitiveness forces every economy to make strategic decisions in spending its resources. Higher competitiveness means an increase in spending for higher education so as to reach business sophistication and innovation level, which is considered to be the third and last stage of competitiveness (Bauk & Jusufranic, 2014). According to GCR (2012, p. #), "more competitive economy is one that is likely to sustain growth."

Moreover, the country competitiveness encouraged both inward and outward FDI (Dunning & Zhang, 2008). Level of economic prosperity, which is directly link to productivity level of a country, served as the basis for the estimating the rates of returns that investments obtained.

The association of competitiveness and productivity, as well as higher education, led to more interesting inquiries that expands competitiveness' link with FDI, especially for countries which are highly reliant on capital investments by foreign countries. However, studies utilizing Global Competitiveness Index published by World Economic Forum have been investigated but with more focus on governance and quality of formal institutions. Among those studies are of Outreville (2008) which revealed that local policies and regulation were among the governance aspect that organizations seek when looking for an international location of their investment. Consequently, Seyoum's (2009) study also found a positive influence of strong formal institutions on FDI inflows.

However, few studies dealt with the importance of higher education/tertiary education. Among those few is the correlational study of Usman (2014) examining the relationship of FDI, higher education, and infrastructure using the World Economic Forum Global Competitiveness Index, which revealed that FDI inflows in selected countries have a significant correlation with higher education and infrastructure. Results of Usman's (2014) study are in conformity with the results of Tien (2010) who found that higher education is a better predictor in attracting FDI. It is also in accordance with the results obtained by Sjöholm (2010) with which he determined the factors that affect the multinational corporations' locational decision. He found out that higher education is one of the factors aside from better institutions and liberal trade policies. Salehizadeh (2005) also found that multinational companies' are significantly attracted to states with highly educated employees and managers. Hence, attracting FDI inflows for economic development can be achieved if the government (Pakistan) will give more attention to developing higher education (Usman, 2014).

3. Research Gap

Reviewed literature and studies are geared toward the role of direct investment in the development of a country and the factors that attract FDI inflows in general. Impacts of FDI in economic growth are prevalent as well as its contribution in technology transfer, knowledge enhancement, labor productivity, infrastructure development, and human capital development. It can be noted from the studies reviewed the there are varying and sometimes conflicting effects depending on the region, economy, and industry which the FDI flows. In terms of the factors

attracting FDI inflows, researches have discussed institutional quality as determinants of FDI which pertains to governance, policy framework, political stability, taxation, and law and order situation. On the other hand, most of the economic determinants of FDI being studies are focused on infrastructure, trade regime, and market size. There are a few articles which discussed the connection between human resource developments in terms of education quality, higher education in particular. Most of the studies related to human capital are labor force, wages, enrollment in primary and secondary education, as well as government expenditures in education, in general. In addition, literatures have acknowledged that global competitiveness of the host country influenced FDI inflows, however, studies did not include all pillars of GCI as an independent variable. It only focused on the governance. Though, Usman (2014) discussed higher education's impact in FDI inflows, it only focused on the relationship but not on the extent of contribution of higher education in attracting FDI inflows. Hence, this study bridges the gap by providing new inputs as a result of this study on the Global Competitiveness Indices influence on FDI inflows.

4 Research Framework of the study

4.1 Operational framework

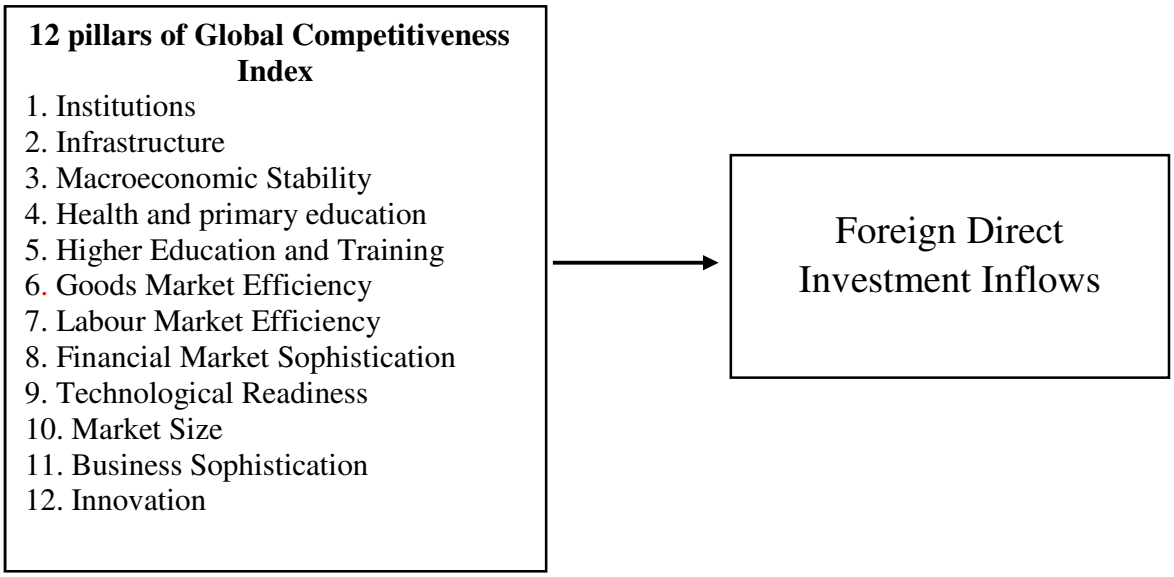

Figure 1. Operational Framework

5. Methodology

Descriptive and causal explanatory were used as research designs of the study. Descriptive research design was used to present the summary of dependent and independent variables in terms of mean, minimum, maximum, and standard deviation. In addition, causal explanatory was employed to measure the extent of relationship of the GCI and FDI as well as to determine the extent of impact of GCI on FDI inflows.

Quantitative data were processed and analyzed using Stata 13.0 program. For the descriptive research, descriptive analysis such as absolute and percentage frequencies, average weights (M), and standard deviation (SD) were employed. For causal explanatory research, multiple regression analysis was utilized to test the degree of impact of GCI on FDI inflows as well as the extent of influence of higher education and training indices on FDI inflows.

A total of 137 countries was considered for this study out of 152 and 264 countries included in the Global Competitiveness Index for 2016 and World Bank Report 2016. The criteria for selection of those 137 countries were based on the completeness of data for both GCI ratings and FDI inflows. Also, countries were classified into four groups: low income group, lower middle income, upper middle income, and high income. This is based on the new classification of countries by the World Bank.

6. Results and Discussion

6.1 Descriptive Analyses

Countries were classified by income and by regions as shown in Table 1. Based on the descriptive analysis of the data, 36% of the countries belong to high income group with which 28 are from Europe and Central Asia Region, 25% and 26% belong to lower middle income group and upper middle income group respectively, while 13% belong to low income group, 17 of which are from Sub-Saharan Africa Region. Lower Middle Income Countries are relatively dispersed among the six regions while upper middle income economies reside in Latin America & Caribbean and Europe & Central Asia Regions comprised of 16 and 11 countries respectively.

Table 1. Income and Regional Classification of Countries

Region	Income Group				Total	%
	Low Income	Lower Middle Income	Upper Middle Income	High Income		
East Asia & Pacific	0	6	3	7	16	12%
Europe & Central Asia	0	5	11	28	44	32%
Latin America & Caribbean	0	8	16	13	37	27%
North America	0	1	0	1	2	1%
South Asia	1	5	0	0	6	4%
Sub-Saharan Africa	17	9	6	0	32	23%
Total	18	34	36	49	137	
%	13%	25%	26%	36%		

It can also be noted based on Table 1 that countries in Sub-Saharan Africa and South Asia belong to Low Income to Upper Middle Income economy. On the other hand, countries in East Asia & Pacific, Europe & Central Asia, Latin America & Caribbean, and North America belong to Lower Middle Income to High Income economy.

Table 2. Summary of Foreign Direct Investment net Inflows (BoP Current US$) by Income Group

Income Group	**Stat**	**Foreign Direct Investment net Inflows (BoP Current US$)**
Low Income	mean	7.32E+08

	min	-1526519
	max	3.20E+09
Lower Middle Income	mean	1.71E+10
	min	-4.16E+09
	max	4.79E+11
Upper Middle Income	mean	1.18E+10
	min	2.27E+08
	max	1.71E+11
High Income	mean	2.02E+10
	min	-2.77E+10
	max	3.00E+11

Table 2 presents the summary of statistics of FDI net inflows per income group. Based on the results, high income group has an average FDI net inflows of US$2.02E+10, upper middle income group have US$1.18E+10, lower middle income group FDI net inflows average is US$1.71E+10, while low income group economies only have US$7.32E+08 for the year 2016.

Table 3. Descriptive Analysis of Foreign Direct Investment net Inflows (BoP Current US$) and Global Competitiveness Indices

Variable	**Mean**	**Std. Dev.**	**Min**	**Max**
Foreign Direct Investment net Inflows (BoP Current US$)	1.47E+10	5.25E+10	-2.77E+10	4.79E+11
Institutions	4.090153	0.8725155	2.155379	6.1273
Infrastructure	4.042862	1.209798	1.720788	6.687211
Macroeconomic Environment	4.673436	0.9880632	1.998103	6.840427
Health and Primary Education	5.547172	0.8861671	2.845082	6.891468
Higher Education and Training	4.304176	1.01809	1.90129	6.293697
Goods Market Efficiency	4.371413	0.5518213	2.857347	5.775369
Labor Market Efficiency	4.244629	0.5965396	2.75254	5.948719
Financial Market Development	3.994615	0.7452509	2.071768	5.785618
Technological Readiness	4.167972	1.231171	1.934808	6.413285
Market Size	3.847705	1.180054	1.34072	7
Business Sophistication	4.054105	0.7194535	2.555229	5.802793
Innovation	3.554551	0.8413481	2.156658	5.802447

Note: N=137 Obs.

FDI net inflows (BoP Current US$) range from a minimum of –US$2.77E+10 to a maximum of US$4.79E+11 with an average of US$1.47E+10. It can be noted that some countries have negative net inflows for the year 2016.

Based from the results presented in Tables 1, 2, and 3, it can be inferred that despite the high number of economies belonging in high income group, still, experts viewed the competitiveness of countries in general as relatively below average. In addition, SSA countries, which are under low income group, have also lower FDI net inflows. Likewise, countries in Europe & Central Asia consequently have higher FDI net inflows compared with those economies in the low income, lower middle income, and upper middle income group.

In terms of the Global Competitiveness Index comprising of 12 pillars of competitiveness, ratings range from as lows as 1.34072 to as high as 7; both are for Pillar 10

which is Market Size, though it is not the pillar that got the highest rating. Among the 12 pillars of competitiveness, experts rated Health and Primary Education the highest, with an average of 5.547172 and Innovation as lowest with an average rating of 3.554551. Over-all Global Competitiveness of the economies gained an average of 4.266029 from the experts for 2016, which range from 2.739177 to 5.807662.

Table 4. Descriptive Analysis of the Components of Higher Education and Training Indices

Variable	Mean	Std. Dev.	Min	Max
Secondary Education Enrolment Rate	85.97937	27.84528	22.40279	164.8117
Tertiary Education Enrolment Rate	41.7352	27.33894	0.79773	110.1627
Quality of Education System	3.807149	0.9192579	2.001713	6.160064
Quality of Math and Science Education	4.05972	0.9389971	2.208421	6.388875
Quality of Management Schools	4.294401	0.8241222	2.530363	6.306078
Internet Access in Schools	4.307229	1.019309	1.671292	6.30487
Availability of Research and Training Services	4.417591	0.8358547	2.498298	6.624842
Extent of Staff Training	4.029365	0.6939243	2.203271	5.710925

Note: N=137 Obs.

The 5th pillar of competitiveness, which is Higher Education and Training, is further analyzed. It is composed of eight sub-components which are classified into three major areas as shown in Table 4.

First major area is Quantity of Education, which pertains to the Secondary Education and Tertiary Education Enrolment rates. As presented in Table 4, Secondary Education average enrolment rate was 85.97937% ranging from 22.40279% to 164.8117% while Tertiary Education average enrolment rate is only 41.7352% ranging from 0.79773% to 110.1627%. This means that there are fewer secondary education graduates who are pushing through with Higher Education.

The second major area is Quality of Education, which refers to the quality of education system, quality of math and science education, quality of management schools, and internet access in schools. Ratings for the sub-components of Quality of Education range from 1.671292 to 6.388875. Quality of Education System got the lowest average rating from the experts having 3.807149 rating while internet access in schools got the highest average rating of 4.307229. It can be noted that internet access in schools got the minimum rating of 1.671292, which the lowest among all the components.

Third, On-the-Job training is only composed of two sub-components: Availability of Research and Training Services and Extent of Staff Training. Both sub-components earned 4.417591 and 4.029365 average rating, respectively.

6.2 Correlation Analyses

Global Competitiveness Indices and FDI net inflows (BoP Current US$) relationships vary among the income groups. Table 5 presents the summary of correlation results.

Table 5. Summary of Correlation Tables (by Income Group)

Variables		Income Group			
		Low Income	**Lower Middle Income**	**Upper Middle Income**	**High Income**
2	Institutions	0.1195	0.4424*	0.0851	0.264
		0.6261	0.0088	0.6219	0.0698
3	Infrastructure	0.7945*	0.6180*	0.2979	0.4443*
		0	0.0001	0.0777	0.0016
4	Macroeconomic Environment	0.5698*	0.0915	0.1677	-0.0253
		0.0109	0.6066	0.3282	0.8647
5	Health and Primary Education	0.4653*	0.2463	0.1603	0.2192
		0.0447	0.1602	0.3504	0.1345
6	Secondary Education Enrolment Rate	0.6028*	0.2226	0.1578	0.2599
		0.0063	0.2058	0.358	0.0745
7	Tertiary Education Enrolment Rate	0.9070*	0.5272*	0.0052	0.0671
		0	0.0014	0.9759	0.6505
8	Quality of Education System	0.0794	0.3828*	0.0913	0.1933
		0.7465	0.0254	0.5963	0.1881
9	Quality of Math and Science Education	0.3494	0.2418	0.0535	0.1391
		0.1426	0.1683	0.7565	0.3459
10	Quality of Management Schools	0.1077	0.4724*	0.0198	0.3890*
		0.6608	0.0048	0.9088	0.0063
11	Internet Access in Schools	0.5528*	0.4494*	0.1644	0.2084
		0.0141	0.0077	0.3381	0.1552
12	Availability of Research and Training Services	0.1857	0.4413*	0.0412	0.2997*
		0.4464	0.009	0.8115	0.0385
13	Extent of Staff Training	0.443	0.4479*	0.2037	0.1723
		0.0575	0.0079	0.2334	0.2416
14	Higher Education and Training	0.7179*	0.4960*	0.1457	0.2352
		0.0005	0.0028	0.3965	0.1076
15	Goods Market Efficiency	0.5456*	0.5693*	0.0228	0.3867*
		0.0157	0.0004	0.8951	0.0066
16	Labor Market Efficiency	-0.0495	0.4910*	0.1538	0.3565*
		0.8405	0.0032	0.3706	0.0129
17	Financial Market Development	0.1457	0.5059*	0.0346	0.2124
		0.5518	0.0023	0.8412	0.1473
18	Technological Readiness	0.8091*	0.6867*	0.0791	0.3497*
		0	0	0.6467	0.0148
19	Market Size	0.7935*	0.4990*	0.6368*	0.4246*
		0.0001	0.0027	0	0.0026
20	Business Sophistication	0.6818*	0.6914*	0.2735	0.3704*
		0.0013	0	0.1065	0.0096
21	Innovation	0.7577*	0.7200*	0.3287	0.2763
		0.0002	0	0.0503	0.0573

Note: All variables are correlated with 1. Foreign Direct Investment net Inflows (BoP Current US$)

For Low Income Countries, there are 12 GCI indices which have significant relationship with FDI net inflows. These are infrastructures, macroeconomic environment, health and primary education, secondary education enrolment rate, tertiary education enrolment rate, internet access

in schools, higher education and training (in general), good market efficiency, technological readiness, market size, business sophistication, and innovation. Three of which are the sub-components of higher education and training.

On the other hand, Lower Middle Income Economies showed a significant relationships of FDI net inflows to majority of the GCI indices, except for macroeconomic environment, health and primary education, secondary education enrolment rate, and quality of math and science education.

Furthermore, Upper Middle Income economies showed only one significant relationship between market size and FDI net inflows. High Income countries showed significant relationships among the eight GCI indices and FDI net inflows. These are infrastructure, quality of management schools, availability of research and training services, good market efficiency, labor market efficiency, technological readiness, market size, and business sophistication.

Results indicate that foreign investors, when making investment decisions in low income and lower middle income economies, are concerned with the basic requirements that a country should have, which include quality of institutions, infrastructures, macro-environment and health, and primary education. Multinational companies may have taken these as considerations because policies, regulations, and infrastructures are basics in establishing businesses. It also entails that the host country needs to have healthy and stable macro environment that will entice foreign firms to put up plants rather than just make the host country an export-distribution outlet of their outputs. MNCs also look at the societal skills and health of the workforce. It is important for companies to ensure that people in the host country are healthy for them to perform in their maximum potential. Unhealthy workforce may lead to less productive economy.

On another note, for countries under upper middle income, only market size have a significant relationship with FDI net inflows. Market size is important for foreign companies in selecting the location of their investment because it allows them to take advantage of economies of scale. Upper middle income group of economies tends to make the most out of their investments. Foreign firms are aiming to efficiently exploit the opportunities at hand.

The first four pillars of competitiveness is important for economies to perform their basic functions and for them to achieve economic development. However, it is also important to note that for a country to attain sustainable social and economic growth and development, countries must pursue higher level of competitiveness.

6.3 Multiple Regression Analyses

FDI net inflows are affected by several factors. In this study, Global Competitiveness Indices and Higher Education and Training Indices were used as independent variables affecting FDI net inflows.

Table 6. Regression Analysis of the Impact of Global Competitiveness Indices on Foreign Direct Investment net Inflows (BoPCurrent US$)

Independent Variables	Low Income[1]			Lower Middle Income[2]			Upper Middle Income[3]			High Income[4]		
	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared
Institutions	-1.86E+09	0.1880	0.8210	-2.49E+10	0.468	0.5407	3.03E+10	0.146	0.4049	-1.48E+10	0.443	0.2378
Infrastructure	3.61E+09	0.0740		4.41E+09	0.897		-1.61E+10	0.237		-8.67E+09	0.686	
Macroeconomic Environment	-6.02E+08	0.3340		1.58E+09	0.921		-1.46E+09	0.818		-2.06E+10	0.053	
Health and Primary Education	1.24E+08	0.8020		2.32E+10	0.318		2.86E+10	0.033*		-1.06E+10	0.816	
Higher Education and Training	1.28E+09	0.4890		-6.56E+10	0.041*		-1.99E+10	0.197		-1.23E+10	0.685	
Goods Market Efficiency	3.90E+09	0.2160		-5.26E+10	0.443		-3.05E+10	0.166		3.05E+10	0.428	
Labor Market Efficiency	1.02E+09	0.4120		3.14E+10	0.314		2.19E+10	0.139		4.73E+10	0.088	
Financial Market Development	-6.97E+08	0.6360		-2.37E+10	0.432		9.76E+09	0.499		2.57E+09	0.87	

Technological Readiness	-2.53E+09	0.3300	6.75E+10	0.03*	6.54E+08	0.958	2.46E+10	0.277
Market Size	1.76E+09	0.0360*	4.14E+08	0.975	2.59E+10	0.001*	2.00E+10	0.039*
Business Sophistication	-4.72E+09	0.3890	6.25E+10	0.431	7.29E+09	0.797	2.30E+10	0.524
Innovation	1.01E+09	0.7080	8.60E+10	0.138	-1.07E+10	0.707	-2.69E+10	0.29
_cons	-5.40E+09	0.2910	-3.36E+11	0.068	-2.06E+11	0.013	-2.14E+11	0.303

Note: DV= Foreign Direct Investment net Inflows (BoP Current US$)

Based on the result of regression analyses, market size is the only significant predictor of FDI net inflows for low income and high income countries; higher education and training and technological readiness are significant predictors of FDI net inflows for lower middle income group; and health and primary education and market size for upper middle income. Overall, it can be gleaned from Table 6 that market size is the common predictor for the majority of economies except for lower middle income group of economies.

Furthermore, higher education and training have a significant impact on FDI inflows only for lower middle income, however, it is counter-intuitive. This means that for every increase in higher education and training, there is a corresponding US$6.56E+10 decrease in FDI net inflows, ceteris paribus. It is also noteworthy to mention that technological readiness is an important determinant in attracting FDI inflows for lower middle income because these investors are looking for affiliates with high absorptive capacity and partners who are capable of maximizing the potential of technology to reach its high productivity level leading to higher competitiveness.

Literature that focused on competitiveness and country classification have argued that upper middle income and high income economies are more concerned with achieving business sophistication and innovation, especially if they want to attract more investors whose aims are to produce and offer innovative and high-quality products and services. However, in this study, business sophistication and innovation are not correlated with FDI. It can also be elucidated from the result of regression analysis that neither of the two has an impact in attracting FDI in all economies.

Table *7. Regression Analysis of the Influence of Higher Education and Training Indices on Foreign Direct Investment net Inflows (BoPCurrent US$)*

Dependent Variables	Low Income[1]			Lower Middle Income[2]			Upper Middle Income[3]			High Income[4]		
	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared
Secondary Education Enrolment Rate	-5.55E+07	0.0530	0.8712	-1.34E+09	0.0780	0.5453	5.16E+08	0.319	-0.1143	6.13E+08	0.299	0.0789
Tertiary Education Enrolment Rate	1.40E+08	0.0000*		4.49E+09	0.0000*		6.52E+07	0.878		-4.48E+08	0.288	

Quality of Education System	4.04E+08	0.5480	4.64E+10	0.1260	9.39E+07	0.996	-2.89E+10	0.249
Quality of Math and Science Education	-3.28E+08	0.6610	-3.61E+10	0.1090	2.96E+09	0.821	2.89E+08	0.987
Quality of Management Schools	-1.23E+09	0.2680	7.36E+10	0.0400*	8.51E+08	0.963	3.98E+10	0.064
Internet Access in Schools	1.04E+09	0.1220	-4.44E+10	0.2560	4.20E+09	0.769	5.24E+09	0.737
Availability of Research and Training Services	-3.22E+08	0.6900	-2.38E+10	0.5950	-2.62E+10	0.283	1.48E+10	0.552
Extent of Staff Training	-6.61E+08	0.5110	1.53E+10	0.6870	3.19E+10	0.126	-8.41E+09	0.736
_cons	6.57E+09	0.0490	-1.15E+11	0.1230	-8.34E+10	0.224	-1.52E+11	0.043

Note: DV= Foreign Direct Investment net Inflows (BoP Current US$)

Given the counter-intuitive result of regression analysis for the 5th pillar of competitiveness, which is Higher Education and Training, this paper further the inquiry by looking in detail the effects of higher education and training sub-components on attracting FDI inflows. Results revealed that Higher Education and Training sub-indices are influencing FDI net inflows of low income and lower middle income economies only. Among the sub-indices, tertiary education enrolment rate is the only significant factor impacting FDI net inflows of low income economies.

One of the possible reasons for such result is that firms need a workforce who possesses the required qualifications, which is tertiary education. Higher enrollees in tertiary education mean more workforces can be tapped by companies in their production process. They also have more chances of selecting a better quality of human resources.

On the other hand, tertiary education enrolment rate and quality of management schools are positively and significantly influencing FDI inflows of Lower Middle Income countries. It can be inferred that aside from the quantity of higher education measured by the enrollment rate in tertiary education, quality education is also vital. Most importantly, firms are not just looking at the quality of schools offering general knowledge, rather, they are more concerned with the quality of management schools. Quality of management schools in the host country may give impression to foreign companies that the government and educational institutions in the host country are committed to upgrading not just the business operations but other institutions by producing human resources who are able to adapt to the changing environment in the global market as well as provide sound strategies that are necessary to achieve firm-level and country-level competitiveness.

On another note, the attractiveness of upper middle income and high income economies for FDI inflows may not be influenced by higher education because it is no longer on that stage where efficiency is the main goal. Rather, foreign companies in high income economies may have been aiming for business sophistication ensuring high quality and sustainability of their production processes through quality workforce, modern technology, and advanced knowledge to meet market demands for unique products and services.

1.7 Conclusions

FDI has contributed to the accumulation of capital and the improvement of the economy's productive capacity through the incorporation of new inputs and modern technologies in the production process. However, its impact varies among economies in different income groups. Sub-Saharan Africa region, having many countries with low income, has also generated lower FDI net inflows compared with the Europe & Central Asia region with economies having high income and consequently with high FDI net inflows. It can also be concluded that FDI net inflow of low income economies is significantly correlated with most of the competitiveness indices compared to upper middle income and high income economies. It was also highlighted by the findings that market size influenced majority of economies in attracting FDI inflows. In addition, higher education may have yielded a counter-intuitive result but when it was analyzed using its eight sub-components, tertiary education enrollment rate and quality of management schools have resulted to positive and significant impact on the attractiveness of a country for FDI inflows. However, none of the sub-components of higher education and training is significantly influencing FDI inflows of upper middle income and high income economies.

Hence, this implies that Global Competitiveness Index can be considered as important in making decisions of foreign firms who wished to put investments in low income and lower middle income countries. Likewise, it can be concluded that Global Competitiveness Index plays a role in investment decisions.

Additionally, there is a growing importance in understanding competitiveness and FDI in the economic growth and development of a country. It is also vital that industries are able to have a full grasp of the role that higher education plays in attracting FDI inflows as well as its involvement in ensuring that host countries reap the full benefits of FDI. Hence, in spite of the significant findings of this study, it is recommended that longitudinal research be conducted to better predict the impact of higher education competitiveness index over a longer period.

1.7 REFRENCES

Abbes, S. M., Mostéfa, B., Seghir, G., & Zakarya, G. Y. (2015). Causal Interactions between FDI, and Economic Growth: Evidence from Dynamic Panel Co-integration. *Procedia Economics and Finance*, *23*(October 2014), 276–290. https://doi.org/10.1016/S2212-5671(15)00541-9

Agarwal, J. P., (1980), "Determinants of Foreign Direct Investment", Weltwirtschaftliches Archiv, No. 4, 116, pp. 739-73

Agbola, F. W. (2014). Modelling the impact of foreign direct investment and human capital on economic growth: empirical evidence from the Philippines. *Asia Pacific Economy*, *19*(2), 272–289. https://doi.org/10.1080/13547860.2014.880282

Agiomirgianakis, G., Asteriou, D., & Papathoma, K. (2004). The Determinants of Foreign Direct Investment: A Panel Data Study for the OECD Countries. *City University-London, …*, (3), 1–19. https://doi.org/10.1007/978-3-540-25939-8

Almfraji, M. A., & Almsafir, M. K. (2014). Foreign Direct Investment and Economic Growth Literature Review from 1994 to 2012. *Procedia - Social and Behavioral Sciences*, *129*, 206–213. https://doi.org/10.1016/j.sbspro.2014.03.668

Almfraji, M. A., Almsafir, M. K., & Yao, L. (2014). Economic Growth and Foreign Direct Investment Inflows: The Case of Qatar. *Procedia - Social and Behavioral Sciences*, *109*, 1040–1045. https://doi.org/10.1016/j.sbspro.2013.12.586

Asiedu, E. (2002). On the Determinants of Foreign Direct Investment to Developing Countries: Is Africa Di erent? *World Development*, *30*(1), 107–19. https://doi.org/10.1016/S0305-750X(01)00100-0

Axarloglou, K., & Pournarakis, M. (2007). Do all foreign direct investment inflows benefit the local economy? *World Economy*, *30*(3), 424–445. https://doi.org/10.1111/j.1467-9701.2006.00824.x

Aziz, O. (2017). Institutional Quality and FDI Inflows in Arab Economies. *Finance Research Letters*, (August 2016). https://doi.org/https://doi.org/10.1016/j.frl.2017.10.026

Baliamoune-Lutz, M., 2004. Does FDI contribute to economic growth? Business Economics 39 (2) 49–56

Bandera , V.N. and White, J.T. (1968), "U.S. Direct Investments and Domestic Markets in Europe", Economia Internazionale, Vol. 21, pp 117-133.

Bashir, T., Mansha, A., Zulfiqar, R., & Riaz, R. (2014). Impact of FDI on Economy Growth: A Comparison of SOuth Asian States & China. *European Scientific Journal, ESJ*, 446–469.

Belloumi, M. (2014). The relationship between trade, FDI and economic growth in Tunisia: An application of the autoregressive distributed lag model. *Economic Systems*, *38*(2), 269–287. https://doi.org/10.1016/j.ecosys.2013.09.002

Bevan, A. A., & Estrin, S. (2004). The determinants of foreign direct inve

Bhagwati, J. N. (1978), "Anatomy and Consequences of Exchange Rates Regimes", Studies in International Economic Relations, 1, 10, New York: NBER

Bhasin, A., Jun, K., and Economou, P. (1994), "Assessing the Sustainability of Foreign Direct Investment Flows", World Bank, International Economics Department

Boghean, C., & State, M. (2015). The Relation between Foreign Direct Investments (FDI) and Labour Productivity in the European Union Countries. *Procedia Economics and Finance*, *32*(15), 278–285. https://doi.org/10.1016/S2212-5671(15)01392-1

Borensztein, E., De Gregorio, J., Lee, J.W. (1998). How does foreign investment affect growth?. Journal of International Economics 45, pp. 115–135

Brincikova, Z., & Darmo, L. (2014). The Impact of FDI Inflows on Employment in V4 Countries. *European Scientific Journal, ESJ*, *1*(Special Issue), 245–252.

Buracom, P. (2014). ASEAN economic performance, institutional effectiveness, and foreign direct investment. *Asian Affairs: An American Review*, *41*(3), 108–126. https://doi.org/10.1080/00927678.2014.936801

Castro, P. G. de, Fernandes, E. A., & Campos, A. C. (2013). The Determinants of Foreign Direct Investment in Brazil and Mexico: An Empirical Analysis. *Procedia Economics and Finance*, *5*(13), 231–240. https://doi.org/10.1016/S2212-5671(13)00029-4

Cheng, L. K., and Kwan, Y. K. (1999), FDI Stock and its Determinants. In: Wu, Y. (Ed.), Foreign Direct Investment and Economic Growth in China, Chapter 3. Edward Elgar, Cheltenham, pp. 42-56

Cheng, L. K., & Kwan, Y. K. (2000a). What are the determinants of the location of foreign direct investment: The Chinese experience. Journal of International Economics, 51, 379–400

Cheng, L. K., & Kwan, Y. K. (2000b). The location of foreign direct investment in Chinese regions: Further analysis of labor quality. In T. Ito, & A. O. Krueger (Eds.), The role of foreign direct investment in East Asian Economic Development. Chicago: University of Chicago Pres

Cheng, L. K., and Zhao, H.(1995), "Geographical Patterns of Foreign Direct Investment in China: Location, Factor Endowments, and Policy Incentives", Department of Economics, Hong-Kong University of Science and Technology, February

Chisăgiu, L. (2015). Multi-dimensional Impact of Foreign Direct Investments on the Host-economy, Determinants and Effects, and their Contribution to Economic Growth in Romania. *Procedia Economics and Finance*, *32*(15), 721–727. https://doi.org/10.1016/S2212-5671(15)01454-9

Cleeve, E. A., Debrah, Y., & Yiheyis, Z. (2015). Human Capital and FDI Inflow: An Assessment of the African Case. *World Development*, *74*, 1–14. https://doi.org/10.1016/j.worlddev.2015.04.003

Coughlin, C. C., Terza, J. V., & Arromdee, V. (1991). State characteristics and the location of foreign direct investment within the United States. Review of Economics and Statistics, 73(4), 675–683

De Mello, L. R. (1997), "Foreign Direct Investment in Developing Countries and Growth: A Selectivity Survey", University of Kent, Working Papers Series, UK, pp. 1-46.

De Mello, L.R. (1999). FDI-led growth: evidence from time series and panel data. Oxford Economic Papers 51, pp.133–151

Demekas, D. G., Horváth, B., Ribakova, E., & Wu, Y. (2007). Foreign direct investment in European transition economies—The role of policies. Journal of Comparative Economics, 35(2), 369–386.

Disdier, A. C., & Mayer, T. (2004). How different is Eastern Europe? Structure and de- terminants of location choices by French firms in Eastern and Western Europe. Journal of Comparative Economics, 32(2), 280–296.

Doms, M. E., J. B. Jensen and J. Bradford (1998), 'Comparing Wages, Skills and Productivity between Domestic and Foreign Owned Manufacturing Establishments in the United States', Geography and Ownership as Basis for Economic Accounting, NBER Studies in Income and Wealth, 53, 235–55

Don Almeida, R. C. (2010). Government's Many Roles in Fostering Innovation. PricewaterhouseCoopers LLP.

Du, J., Lu, Y., & Tao, Z. (2008a). FDI location choice: Agglomeration vs institutions. International Journal of Finance&Economics, 13(1), 92–107

Du, J., Lu, Y., & Tao, Z. (2008b). Economic institutions and FDI location choice: Evidence from US multinationals in China. Journal of Comparative Economics, 36(3), 412–429

Dunning, J.H., and Zhang, F. (2008). Foreign direct investment and the locational competitiveness of countries. Transactional Corporations. 17(3), 1-30.

Dunning, J.H. (2004) 'Institutional reform, FDI and European transition economies', Economics and Management Discussion Paper No.14, University of Reading. Economic & Social Commission for Western Asia (ESCWA), 2013. Short- and medium-Term Economic Challenges of the Arab countries in transition: A review. United Nations, New York, USA.

Figlio, N. D. and B. A. Blonigen (1999), 'The Effects of Direct Foreign Investment on Local Communities', NBER Working Paper No. 7274

Financial Times (2016). The fDi report 2016 At http://forms.fdiintelligence.com/ report2016/files/The_fDi_Report_2016.pdf. [Accessed 13 November 2017].

Fosfuri, A., Motta, M., & Rønde, T. (2001). Foreign direct investment and spillovers through workers' mobility. Journal of International Economics, 53, 205–222

Chan, M. W. L., Hou, K., Li, X., & Mountain, D. C. (2014). Foreign direct investment and its determinants: A regional panel causality analysis. Quarterly Review of Economics and Finance, 54(4), 579–589. https://doi.org/10.1016/j.qref.2013.07.004

Fung, K. C., Iizaka, H., Lin, C., & Siu, A. (2002). An econometric estimation of locational choices of

foreign direct investment: The case of Hong Kong and U.S. firms in China. manuscrip
Gao, T. (2005). Labor quality and the location of foreign direct Investment: Evidence from China. China Economic Review, 16, 274–292.
GCR (2012). The Global Competitiveness Report 2012-2013. World Economic Forum.
Glass, A., Saggi, K., 2002. Multinational firms and technology transfer. Scandinavian Journal of Economics 104 (4) 495–514
Globerman, S., C. J. Ries and I. Vertinsky (1994), 'The Economic Performance of Foreign Affili- ates in Canada', Canadian Journal of Economics, 27, 1, 143 –56.
Globerman, S., & Shapiro, D. M. (1999). The impact of government policies on foreign direct investment: The Canadian experience. Journal of International Business Studies, 30(3), 513–532
Gunther, J., 2002. FDI as a multiplier of modern technology in Hungarian industry. Intereconomics 37 (5) 263–269, ISSN: 0020- 5346
Haaker, M., 1999. Spillovers from foreign direct investment through labor turnover: the supply of management skills. Discussion Paper London School of Economics
Head, C. K., Ries, J. C., and Swenson, D. L. (1995), "Agglomeration Benefits and Locational Choice: Evidence from Japanese Manufacturing Investments in the United States", Journal of International Economics, 10, pp. 92-116
Helmy, H.E., 2013. The impact of corruption on FDI: Is MENA an exception? J.Int. Rev. Appl. Econ. 27, 491–514
Hodgson, M., Stoelhorst, W., 2014. Introduction to the special issue on the future of institutional and evolutionary economics. J. Inst. Econ. 10, 513–540
Javorcik, B. S., & Wei, S. J. (2009). Corruption and cross-border investment in emerging markets: Firm-level evidence. Journal of International Money and Finance, 28(4), 605–624
Javorcik, B. S. (2004). The composition of foreign direct investment and protection of intellectual property rights: Evidence from transition economies. European Economic Review, 48(1), 39–62
Jeon, Y.D. (1992), "The Determinants of Korean Foreign Direct Investment in Manufacturing Industries", Weltwirtschaftliches Archv, Vol. 128, pp. 527-541.
Kaufmann, L., 1997. A model of spillovers through labor recruitment. International Economic Journal 11 (3) 13–34
Khan, D. M. (2007). Role of Human Capital in Attracting Foreign Direct Investment: A South Asian Perspective. SAARC Journal of Human Resource Development, 5-25.
Kokko, M. B. (2002). FDI and Human Capital: A Research Agenda. OECD Development Centre
Mainardi, S. (1992), "Foreign Direct Investment in Latin America and Southeast Asia: Relevance of Macroeconomic and Policy-Related Factors", Giornale delgi Economisti, No. 5-8, 51 (NS), pp. 259-79
Masron, A., Nor, E., 2013. FDI in ASEAN-8: does institutional quality matter? Appl. Econ. Lett. 20, 186–189.
Miner, C., and Pentecost, E. (1996), "Locational Advantage and US Foreign Direct Investment in the UK", Applied Economics, 28, pp. 605-15
Mina, W.M., 2012. The institutional reforms debate and FDI flows to the MENA region: the "best" ensemble. World Dev. 40, 1798–1809
Mincer, J. (1974) Schooling, Experience and Earnings, NBER, New York.
Moe, T.L. (2008). An empirical investigation of relationships between official development assisstance (ODA) and human educational development. International Journal of Social Economics, 35(3), 202-221.
Morrissey, O., and Rai, Y. (1995), "The GATT Agreement on Trade-Related Investment and Their Relationship with Transactional Corporations", Journal of Development Studies, 31, pp. 702-24
Naude, W.A., Krugell, W.F., 2007. Investigating geography and institutions as determinants of foreign direct investment in Africa using panel data. J. Appl. Econ. 39, 1223–1233
Nunnenkamp, P., & Spatz, J. (2002). Determinants of FDI in developing countries: Has globalization changed the rules of the game?. Trans- national Corporations, 2(2), UNCTAD

Outreville, J.F. (2008). Foreign affiliates of the largest insurance groups: location-specific advantages. Journal of Risk and Insurance, 75(2), 463-492.

Paul, A., Popovici, C., Calin, A., 2014. The attractiveness of CEE countries for FDI: a public policy approach using the TOPSIS method. Transylvanian Rev. Administrative Sci. 42, 156–180

Rondinelli, D.A., 2005. Assessing government policies for business competitiveness in emerging market economies: an institutional approach. In: Grosse, R. (Ed.), International and Business Government Relations in the 21st Century. Cambridge University Press, Cambridge, UK, pp. 395–419

Salehizadeh, M. (2005). Foreign Direct Investment Inflows and the US Economy: An Empirical Analysis. Economic Issues, 10(2), 29-50.

Sass, M. (2003). Competitiveness and Economic Policies Related to Foreign Direct Investment . Ministry of Finance

Sethi, D., Guisinger, S. E., Phelan, S. E., & Berg, D. M. (2003). Trends in foreign direct investment flows: A theoretical and empirical analysis. Journal of International Business Studies, 34(4), 315–326.

Sethi, D., Guisinger, S. E., Ford, D. L., & Phelan, S. E. (2002). Seeking greener pastures: A theoretical and empirical investigation into the changing trend of foreign direct in- vestment flows in response to institutional and strategic factors. International Business Review, 11(6), 685–705.

Seyoum, B. (2009). Formal institutions and Foregn Direct Investment. Thunderbird International Business Review, 51(2). 165-181.

Shatz, H. J. (2001). Expanding Foreign Direct Investment in the Andean Countries. Center for International Development at Harvard University.

Sjöholm, R. E. (2010). FDI and Growth in East Asia: Lessons for Indonesia. Stockholm: Research Institute of Industrial Economics.

Slemrod, J. (1991). Taxation and Foreign Direct Investment in the United States: Evidence from a Cross-Country Comparison. In:Razin, A.

Tien, A. F. (2010). African Leaders: Their Education Abroad and FDI Flows. Institute for the Study of Labor IZA

Tintin, C., 2013. The determinants of foreign direct investment inflows in the central and eastern European countries: the importance of institutions. Communist Post- Communist Stud. 46, 287–298.

Tun, Y.-L., Azman-Saini, W, Law, S.-H., 2012. International evidence on the link between foreign direct investment and institutional quality. Eng. Econ. 23, 379–386

Wang, Z., Q., and Swain, N., J. (1995), "The Determinants of Foreign Direct Investment in Transforming Economies: Evidence from Hungary and China", Weltwirtschaftliches Archiv, 131, pp. 359-82

Wang, J.Y., Blomstrom, M., 1992. Foreign investment and technology transfer: a simple model. European Economic Review 36 (1) 137–155

Wei, S. J. (2000b). Local corruption and global capital flows. Brookings Papers on Economic Activity, 2, 303–354.

UNCTAD. (2007).World Investment Report TNCs in Extractive Industries and Development, NewYork: United Nations. World Economic Outlook (WEO) Database.

Usman, S. (2014). Higher Education, Infrastructure and Foreign Direct Investment in Pakistan. *IOSR Journal of Business and Management (IOSR-JBM)*, *15*(6), 54–59. Retrieved from http://www.iosrjournals.org/iosr-jbm/papers/Vol15-issue6/H01565459.pdf

Velde, D. W. te. (2005). Globalisation and education : what do the trade, investment and migration literatures tell us? *Working Paper (Overseas Development Institute) 254*, (August), 70. Retrieved from http://www.odi.org.uk/publications/working_papers/wp254.pdf

Yao, S. 2006. "On Economic Growth, FDI and Exports in China." Applied Economics 38 (3): 339– 351

WEF. (2016). *The Global Competitiveness Report 2016–2017. World Economic Forum Reports 2016*. https://doi.org/92-95044-35-5

World Economic Forum. Th eHlobal Competitiveness Index dataset 2007-2017. Retrieved fromehttps://www.kaggle.com/weforum/global-competitiveness/data. November 30, 2017.

WorldBank.

http://databank.worldbank.org/data/reports.aspx?Code=BN.KLT.DINV.CD&id=1ff4a498&report_name=Popular-Indicators&populartype=series&ispopular=y retrieved last

Linking Global Competitiveness, Higher Education, and Foreign Direct Investment Inflows

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I. Introduction

1.1 Background of the Study

Foreign Direct Investments (FDI) has contributed to the accumulation of capital and the improvement of the economy's productive capacity through the incorporation of new inputs and modern technologies in the production process. Neoclassical and endogenous growth models have been widely used to empirically test the benefits of FDI (Almfraji & Almsafir, 2014). However, results of testing theoretical benefits are varying from regions, countries, and industries. Conflicting relationships and impacts range from significant to non-significant, positive to negative impacts, directly or indirectly. Despite that, FDI inflows have still been recognized to influence employment and wages, infrastructure development, human capital development, technology transfer, and promotion of trade which could have a short and long-term effect on economic of growth of a country. Recognizing the impact of FDI on the development of an economy, many researchers tried to elucidate the factors that encourage foreign countries to invest in a specific economy.

For decades, scholars have been interested in exploring the main factors that determine a country's level of FDI attractiveness. Traditionally, scholars focused on economic factors such as market size, labor costs, exchange rates, infrastructure, and institutional quality which include political stability, investment policies and regulations, as well as governance and others as the key explanatory factors in determining a host country's ability to attract or deter FDI. Reviewed literature also looked into the influence that human capital development offers to induce FDI inflows. Among the human capital elements are enrollment in primary and secondary education, government expenditures in education, as well as the quality of labor measured by the monthly wages. However, few studies dealt with the importance of higher education/tertiary education. Among those few is the correlational study of Usman (2014) examining the relationship of FDI, higher education, and infrastructure using the World Economic Forum Global Competitiveness Index, which revealed that FDI inflows in selected countries have a significant correlation with higher education and infrastructure. Results of Usman's (2014) study are in conformity with the results of Tien (2010) who found that higher education is a better predictor in attracting FDI. It is also in accordance with the results obtained by Sjöholm (2010) with which he determined the factors that affect the multinational corporations' locational decision. He found out that higher education is one of the factors corporations consider, aside from better institutions and liberal trade policies. Salehizadeh (2005) also found that multinational companies are significantly attracted to states with highly educated employees and managers. Hence, attracting FDI inflows

for economic development can be achieved if the government (Pakistan) will give more attention to developing higher education (Usman, 2014).

Acknowledging the importance of FDI in enhancing growth of a country and the role that the host country's competitiveness plays in attracting FDIs, this study tried to ascertain which among the pillars of global competitiveness index significantly influence the attractiveness of the host country for FDI inflows with more focused on the human capital factor, quality of higher education/tertiary education, in particular.

1.2 Statement of the problem:

Generally, this study aimed to answer the question, which among the Global Competitiveness Indices drives the FDI inflows? Specifically, it sought to give answer to the following questions:

1. What is the extent of relationship among the Global Competitiveness Indices and FDI Inflows?

2. What is the degree of impact of Global Competitiveness Indices in attracting FDI inflows?

3. What is the extent of influence of Higher Education and Training Indices in attracting FDI Inflows?

1.3 Significance of the Study:

Results of this study will be beneficial to the host country, government, higher academic institutions, and future researchers. The host country will have an idea on the pillars of competitiveness that they need to enhance to be at par with fast economies. The government of the host country, as well as their partner stakeholders (domestic companies), will be enlightened on the factors that attract FDI to sustain economic development. Higher academic institutions, being the source and developer of the capital, may get inputs on how to strengthen their plans to produce better quality labor force who will be at the forefront of reaping the benefits of FDI in terms of absorbing technology transfer and knowledge transfer. Higher education institutions may also look into its role in enhancing R&D capacities leading to innovation, thereby, climbing the ladder of competitiveness. And given the scarcity in studies relating to education's role in improving competitiveness of the country and attracting FDI inflows, this study contributes to new knowledge, which future researchers may look into as a basis for future researches on FDI, economic development, competitiveness, and higher education.

1.4 Scope and Limitation of the Study

This study employed a causal-explanatory research design to explain the influence of Global Competitiveness Indices as independent variables on the dependent variable which is FDI Inflows. Secondary data, which are available online in the World Economic Forum and World Bank Report for 2016, were used in the analysis.

2. Review of Related Literature and Studies

Review of related literature and studies give an overview of the role of foreign direct investment in the development of a country as well as the factors that attract foreign direct investment.

2.1 Role of FDI in the development of a country

2.1.1 Provision of Employment

FDI inflows play an important role in the local market of the host country. The theory of FDI postulates that it has a positive impact on unemployment vis-a-vis employment. Investments increase jobs, thus, declining unemployment. Researches have explored this accepted claim, however, results vary. Green field investment possesses positive impact of FDI inflows, unlike in the case of privatization where there is a negative impact of FDI on employment (Brincikova & Darmo, 2014). But different aspects of FDI's effects on the host countries have always been considered.

According to Axarloglou and Pournarakis (2007), FDI inflows shifts the labor demand, thereby influencing employment and wages (at least in the short-run). Higher employment and wages are expected at the plant level due to the establishment or expansion of foreign subsidiary (Doms, Jensen & Bradford, 1998). Economic literature has also explored the impact of FDI inflows on growth and development, particularly in the labor market. Though, impacts of FDI on the employment and wage are controversial. Most researches inferred that the impact on economic growth of the investments of foreign companies are basically in terms of wage, technology, trade, and employment (Floyd, 2003; Dicken, 2007).

The U.S. offered strong economic incentives to attract FDI inflows. This strategy was implemented with the anticipation that local economies would be stimulated by FDI. Researchers tried to assess the performance of foreign-owned subsidiaries operating in the US to evaluate the effects of FDIs on local economies (World Economy, 2007). Hownstein and Zeile's (1994) assessment, which was supported by Globerman, Ries, and Vertinsky (1994), found that higher wages are paid by foreign affiliates in the US than the domestic plants.

However, despite FDIs' impact on local economic development in the host US states, very few evaluated how local labor markets are affected by the FDI Inflows. Figlio and Blonigen (1999) evaluated the impact of manufacturing employment by foreign plants in South Carolina using country-level data. They found that country- and industry-specific wages were strongly and positively impacted by such employment. Furthermore, there is an increase in all workers' real wages due to the addition of an averaged-sized foreign subsidiary in the specific county and industry.

Hence, FDI inflows' impact on local labor markets varies, depending on the industry. As explained by Axarloglou and Pournarakis (2007), the variances in the effects of FDI on the labor market are primarily because of industry composition of the FDI inflows. Hence, policymakers should focus on attracting FDI inflows on strategic group of industries such as printing and publishing and transportation equipment (Axarloglou & Pournarakis, 2007).

Vacaflores (2011) also examined 11 countries in Latin America using 1980–2006 data on FDI and employment generation. Results revealed that effects on employment generation is positive and significant in host countries, which is driven by its effect on the male labor force. However, this is only important for less developed economies with low inflation periods. Benefits from FDI inflows are only accrued to the host countries with high level of informality and attracting low average inflows of FDI.

Moreover, employment caused by FDIs increased the country's per-capita income as found out by the Spieza (2004) study on 49 countries, though, for low-income developing countries, the effects is not significant. Vacaflores and Mogab (2012) also found that compared to other regions, the subsidiaries in Asia possess the largest additions in employment due to the increase in FDI followed by those in Americas, but, statistically, significant influence is present in the manufacturing and service sectors.

Furthermore, effects of FDI on labor productivity on host countries is through THE transfer of technology and proficiency in marketing and management. These enable technological progress and economic growth in the long term (Boghean & State, 2015).

2.1.2 Technology Transfer

Technology transfer is one of the FDI inflows' benefits accrued to the host country. Wang and Blomstrom (1992) and Gunther (2002) said that there are four main channels of technology spillovers. These spillovers flow from foreign to local firms by means of imitations, competition, skills, and linkage. Learning by watching effect is what imitation is all about. Local firms are imitating the technology of foreign companies to improve its productivity. Also, with the presence of new entrants, foreign firms, competition is created with local firms. Thus, companies in the host countries are forced to maximize the potential of existing resources and by using it more efficiently and adopting modern technologies (Wang & Blomstrom, 1992; De Mello, 1997, 1999).

The introduction or the transfer of new and modern technologies is one of the benefits that host countries can get from FDI promotion based on the empirical work studying FLGH. (Belloumi, 2014). It supports the findings of Borensztein, De Gregorio, and Lee (1998) who inferred that transfer of modern technology is channeled through FDI. However, the effectiveness of such transfer of technology depends on the host country's stock of human capital.

Also, according to (Chisăgiu, 2015), new production capacities are generated by subsidiaries of transnational companies as well as realized consumer goods. However, it also means high standard capital which made them technological leaders in the industry as well as posting significant impact at occupational level.

2.1.3. Promotion of Trade

Enhanced production capacities of host countries brought by investments of foreign companies bring ripple effect in terms of trade (local and international). More opportunities for trade are being opened. In the case of Tunisia, it needs partners that will provide them technology and other inputs of production. Hence, it needs trade partners. In addition, Tunisia can have the chance to improve its own stock of knowledge by forging linkages and inviting trade partners especially from developed countries where they can import capital equipment and intermediate products (Belloumi, 2014).

Baliamoune-Lutz (2004) found a bidirectional relationship between FDI and exports in Morocco. His study also revealed that FDI has a positive impact on economic growth. It implied that exports can be promoted through FDI and vice-versa. Moreover, Yao (2006) assessed 28

Chinese provinces employing Arellano and Bond's dynamic panel data estimating technique in the dataset over the period of 1987-2000. Yao (2006) found out that there is a positive effect of export trade and FDI on economic growth.

2.1.4 Enhancement of Human Capital

FDI inflows causes spillovers of many forms. One spillover effect of FDI is the transfer of knowledge, which occurs from foreign firms to domestic firms by means of well-trained workers and managers' mobility (Kaufmann, 1997; Haaker, 1999; Fosfuri, Motta, & Rønde, 2001; Glass & Saggi, 2002). Linkages also create spillovers when productivity of foreign companies flows to local firms of the same industry, which is called horizontal spillovers, and upstream and downstream industries or the so-called vertical spillovers. This happen when the range and quality of goods (intermediate) are increased (Borensztein et al., 1998).

In addition, according to Abbes, Mostéfa, Seghir, and Zakarya, (2015), skills levels in the host economy is raised because of FDI inflows. Labor resources' quality is also enhanced because of the development of performing management skills, which is based on the imposed standards of corporate leading systems. In addition, the populations' training levels and its technological development adaptation plays an important role in the enhancement of human resource quality of the host economy (Boghean & State, 2015).

As pointed out by Kokko (2002), educational level and human capital need to be improved to such extent that the labor force's adaptation of foreign technology is quick and easy. These variables can have an effect in the long run on sustained economic growth. Also, as the demand for highly skilled labor force increased in the field of natural sciences, management, and engineering, MNC's may encourage the government to invest in higher education, which in fact helps improve the quality of human resource. In addition, MNC's prospecting to invest in a particular economy plays an important role in tertiary education enhancement by helping universities and institutions through academe-industry partnership alongside imparting scholarships for education.

Moreover, benefits of spillovers of investments in higher education can only be realized when foreign technology can be absorbed by local firms, there is basic level of workforce, and barriers are not high (Kokko, 2002).

2.2. Factors that Attract Foreign Direct Investment

2.2.1. Institutional Quality

Institutional quality is about social, financial and economic policies, governance, and political stability of the host country which could lead to the success of development projects or investments. The literature on FDIs acknowledge the role that institutional quality plays in attracting FDI inflows. Several reasons were pointed on the different ways on how institutions matter in attracting FDI inflows.

FDI is stimulated by the level of productivity of the host country, which is improved through the presence of institutional quality. However, there are requisites for productivity enhancement which ran from the availability of research and development system, financial institutions, flexible labor market, and a stable political government. Hence, an institution's

evolution is related to the development of productivity (Nelson, 2008; Hodgson & Stoelhorst, 2014).

Efficient institutions lower transaction costs and protect property rights. Transaction cost is important in projecting for the revenue, which foreign investors consider before making investment decisions. It includes costs associated with production, logistics, information, and risk monitoring. Without institutional system that is properly regulated, policies on property rights and financial markets that support large-scale financing, as well as the prevalence of corruption and weak incentive structure, costs of doing business may arise (Dunning, 2004).

In addition, property rights are important for the international economy, which is already becoming a knowledge-based economy. Hence, the government's protection of intellectual property rights through effective enforcement of policies can entice international companies to invest in a particular economy (Wall et al., 2010). It also encourages establishments of plants in the host country rather than focusing on distribution projects. Establishment of production plants could provide FDI spillovers (Rondinelli, 2005). Therefore, low transaction costs and protecting intellectual property rights are important factors in assessing business environments in the host country, which could promote trust and commitment for both the investors and the host country as well as upgrade competitiveness that enhances quality of outputs leading to stable and developed business environments (Tomassen et al., 2009, 2012; Rondinelli, 2005).

As argued by Tun, Azman-Saini, and Law (2012), due to the reduction of business costs and in uncertainty, countries should be able to attract investment, especially those with better institutional quality. This is proven by the results of their study employing GMM estimator for assessing the FDI determinants focusing on institutional quality of over the period of 1981–2005. Results revealed that bureaucratic quality, rule of law, corruption, risk of expropriation, and government repudiation of contracts are the factors of institutional quality that determine FDI inflows of the of 77 developing countries (Tun et al., 2012).

Several studies were also conducted with emphasis on the importance of institutional quality indicators in attracting or deterring FDI inflows.

Masron and Nor (2013) found that regulatory quality control, rule of law, and corruption are impacting the FDI inflows of ASEAN member countries as shown by data over the period 2002 to 2010.

On the other hand, economic freedoms, state fragility, and political rights are the significant predictors in attracting FDI inflows in Central and Eastern Europ (CEE) for the period 1996–2009 (Tintin, 2013). This is expounded by the study of Paul, Popovici, and Calin (2014) who conducted the same study in CEE but with focus on the country's public policies for the period 2007–2010, in which the results showed that accuracy and efficiency of public administration are the institutional quality components that create the framework for encouraging FDI. He also pointed out that the role of the government in building institutional quality cannot be substituted by market forces.

Naude and Krugell (2007), upon examining Africa's FDI inflows and its determinants from 1970 to 1990, their results show that it is institutional quality, rule of law, and political stability, and not the geographic location that determine FDI inflows of Africa. Following the results is the policy implications geared toward political stability and good governance enhancement through institutions.

Mina (2012) examined the impact of institutional quality on FDI inflows in Arab countries over the period 1990–2008. The results confirm that reducing the risk of investment expropriation and increasing government stability and bilateral investment treaties have a positive influence on FDI inflows.

Furthermore, GCC countries' institutional quality affects the FDI inflows. Among the components of institutional quality that encourage FDI inflows are political stability and the absence of democracy (Gani & Al-Abri, 2013). In contrast, Helmy (2013) found that two FDI determinants, freedom and security of investments, have a positive impact. He also reported that chances of expropriation and corruption rates will lead to an unsafe business environment, hence, posing a negative influence on FDI.

Therefore, important determinants of FDI flows could include government policies, which can be in the form of taxes, subsidies, regulatory regime, and privatization policy. Evidence from the empirical investigation of Cheng and Kwan (2000) says that the government plays a vital role in inward FDI location attraction. It has also been recognized as a catalyst for economic restructuring. Henceforth, host country's institutional features and political interventions are potential for encouraging FDI.

Furthermore, Sethi, Guisinger, Phelan, and Berg (2003) argued that MNEs often evaluate potential FDI destinations at the regional level, rather than on a host country by county basis due to cultural, political, and economic similarities and significant uniformity in trade and investment policies. Based on our review, the relationship between institutional factors and FDI attractiveness in the top three regional destinations for FDI—Europe, North America, and Asia (Financial Times, 2016)—is decidedly mixed. In Europe, the evidence varies but suggests that Western Europe and Eastern Europe should be viewed as separate destinations for FDI (Disdier & Mayer, 2004). There is significant evidence of political stability having a positive effect on FDI in Hungary (Wang & Swain, 1995), but not in the whole Central and Eastern European region (Bevan & Estrin, 2004). Components of rule of law, such as property rights protections, are significant factors in Eastern Europe (Javorcik, 2004). On the deterring side, tax rates are negative but only significant at higher income levels in Southeastern Europe (Demekas, Horváth, Ribakova, & Wu, 2007). Corruption has a negative relationship in transition economies (Javorcik & Wei, 2009). Finally, cultural distance is not an important factor in Western Europe in the late 1990s (Sethi, Guisinger, Ford, & Phelan, 2002). In the United States and Canada, results follow the theoretical predictions: in Canada, policy changes, including exempting bureaucratic review and strengthening the legal environment, increase FDI attractiveness (Globerman & Shapiro, 1999). A number of scholars found strong evidence that taxation has a profound effect on FDI attractiveness in the United States (Coughlin, Terza, & Arromdee, 1991; Slemrod, 1991; Swenson, 1994). In the Asia region, studies are dominated by explaining Chinese FDI and appear stronger and more consistent in their results. Corruption and tax rates are significant deterring factors (Du, Lu, & Tao, 2008a, 2008b; Wei, 2000b), and other studies find strong evidence of political stability and rule of law in China increasing FDI attractiveness (Du et al., 2008a, 2008b; Wei, 2000b), and other studies find strong evidence of political stability and rule of law in China increasing FDI attractiveness (Du et al., 2008a, 2008b; Wang & Swain, 1995). Thus, the review combined with the arguments for levels of development would suggest that the relationship between institutional factors and FDI will be strongest in Asia (i.e. China), followed by North America, and then Europe.

2.2.2. Economic Development

FDI and economic development have a bidirectional relationship (Agiomirgianakis, Asteriou, & Papathoma, 2004). Economic development status and Investment Development Plan (IDP) of the recipient country matter in attracting FDI inflows (Barrel & Pain, 1998, as cited by Agiomirgianakis et al., 2004). FDI decisions depend on the host country's quality of market infrastructure (De Menil, 1999).

Investment development plan is sometimes measured using GDP per capita in major studies conducted (Agiomirgianakis et al., 2004). Real per capita GNP, as well as real GDP growth, impact the investment decisions (Agiomirgianakis et al., 2004; Agarwal, 1990; Mainardi, 1992). Other variables were also used, such as regional income and infrastructure factors, measured by road constructions (km/km2 of land mass) as a potential for FDI attraction (Agiomirgianakis et al., 2004; Head & Ries, 1996; Cheng & Kwan, 1999).

Moreover, in Qatar, Granger Causally related variables are inward FDI and economic growth as proven by the empirical findings of Almfraji, Almsafir, and Yao (2014), which also show that inward FDI is more sensitive to its own performance, though it can be noted that economic growth positively affected inward FDI. Therefore, government's efforts to create promising economic and investment environment must be continued (Almfraji, Almsafir, & Yao, 2014).

To attract direct investment, infrastructure development, stable and healthy political and economic environment, law and order situation, tax exemption, and curtailing external debts are important for South Asia states (Bashir, Mansha, Zulfiqar, & Riaz, 2014).

In addition, many ASEAN countries are heavily reliant on international trade and FDI because of its relatively small domestic market; thereby, FDI is important for ASEAN economies' economic growth and globalization. On the other hand, recent studies on cross-border investment indicate that FDI decisions consider domestic economic performance and institutional effectiveness of the recipient country, which is confirmed by the study of Buracom (2014), indicating that macroeconomic performance is significantly impacting FDI flows into developing countries. Moreover, macroeconomic performance of ASEAN countries are amenable to private sector and therefore attractive to FDI (Buracom, 2014).

2.2.3. Trade regime and Market Size

Trade openness and the degree of liberalization in trade were found to be potential factors in attracting FDI inflows; although, it can be noted that measurement issues are acknowledged. Despite the difficulties, liberal trade regime's relationship with FDI is still anticipated (Raines et al., 1999). Bhagwati (1978) argued that countries that implement and promote export than import substitution policy best captivate FDI. Likewise, report showed that the ratio of exports to sales and sales concentration ratio, as a proxy for trade regime, are both contributing positively to FDI (Milner & Pentecost, 1996, as cited by Agiomirgianakis et al., 2004). It was also found that export-oriented FDI positively influenced inbound FDI and recently, launching of special export processing zone outweighs the closed economies inherent disadvantage. (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Wang & Swain,1995). China, in particular, associated its FDI inflows with Chinese Economic Zones (Agiomirgianakis et al.,2004; Cheng & Kwan, 2000; Wang & Swain,1995).

Moreover, Asiedu (2002) also revealed SSA and Non-SSA countries' FDIs are promoted by openness to trade. However, there is a variance in the marginal benefit that SSA and Non-SSA countries gets from trade openness in terms of FDI inflows. SSA countries received less FDI since they are less open than other host countries in their region. This is supported by Castro, Fernandes, and Campos (2013) who noted that market seeking is the strategy of multinational companies in Brazil, which is linked to its domestic market size. On the other hand, efficiency seeking is the most dominant strategy in Mexico, which is geared toward trade liberalization to attract FDI.

Evidence from previous empirical and theoretical studies also consider market size as another mechanism playing an important role in attracting FDI (Agiomirgianakis et al., 2004). Foreign companies take advantage of bigger market size by having economies of scale and mass production, which results to decrease in costs of operation and growth thereby affecting supply side (services and inputs) positively. Domestic market and growth prospects were claimed to be indicators considered by foreign investors in selecting host country where they plan to relocate the production plant (Agiomirgianakis et al., 2004; Bhasin, Jun, & Economou, 1994; Morrissey & Rai, 1995).

Furthermore, the linkage between growth level, as measured by profitability rates, and FDI is found to be statistically significant and positive (Jeon, 1992; Wang & Swain, 1995). Foreign firms' output of sales in the host country is used as a function of FDI (Agarwal, 1980). Output of sales is usually measured by the size of the market—absolute and relative value which is measured by GDP level (Agiomirgianakis et al.,2004; Bandera & White, 1968) and growth rate of GDP of the host country (Agiomirgianakis et al., 2004)

2.2.4. Human Resource Development

Quality and availability of human capital promotes labor-intensive and export-oriented FDI (Agiomirgianakis et al.,2004). Expansion of productivity potentials of the firms and country is enabled by FDI through investing in capital stocks (Agiomirgianakis et al.,2004; De Mello, 1997).

Agbola (2014) argued that crowding-out effect is prevalent in the Philippine government investment and private investment. Thus, human capital and infrastructure development must be the direction of government investments since it is most likely to attract FDI.

However, studies show a counter-intuitive result on the educational level's impact on inbound FDI (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Cheng & Zhao, 1995). Both Cheng and Kwan (2000) and Cheng and Zhao (1995) revealed that percentage of population with primarily high education has no positive and significant effect on FDI (Agiomirgianakis et al., 2004; Cheng & Kwan, 2000; Cheng & Zhao, 1995).

Guntlach, (1995) argued that education has poor explanatory power. Hence, researches may explore the potential role of human capital augmentation instead of human capital accumulation because educations' impact is not direct. Benefits from education are seen through its spillover effect in production.

In contrast to the above findings, Aziz (2017), in his study using education as one of the independent variables which affect FDI inflows, revealed positive and significant effects of education on FDI inflows. With the nature of MNEs that are focusing on research and

development for technology development and innovation, there is a need for the host country to have the required human capital who have the capacity to understand, use, and innovate using the MNEs' newly introduced technology. Therefore, one way to attract FDI is to ensure that the host country has well-educated labor force who can easily adapt and exploit new knowledge and technologies.

Labor characteristics is also another factor in determining FDI. It is one of the considerations of foreign investors in choosing labor intensive or capital intensive investments. Though, sometimes it is inferred that China is the second largest recipient of FDI because of cheap labor. On the other hand, Branstetter and Feenstra (1999) modeled that there is a wage premium payment of multinational firms in China with the aim of attracting quality workers. Several studies were conducted on the role of labor quality in attracting FDI but the results vary. Some authors argued that labor quality has positive and significant impact on FDI (Gao, 2005; Fung, Iizaka, & Parker, 2002; Fung, Iizaka, Lin, & Siu, 2002) while an insignificant role is revealed by the study of Cheng and Kwan (2000a, 2000b). Varying results may be due to the variables used to measure education and quality of labor given that it is really difficult to look for better proxies for labor quality and characteristics.

Cleeve, Debrah, and Yiheyis (2015) showed that quality of labor significantly influences FDI, although they only used traditional variables of quality of labor employing various versions of FDI model. Moreover, it was also reported that human capital has no increasing importance on FDI over time in SSA.

Moreover, human development—which is defined by the UNDP (2012) as using the three basic dimensions: a long and healthy life (health), access to knowledge (education), and a decent standard of living (income) —is associated with FDI and economic growth, educational development, and enrollment (Moe, 2008). In addition, trade and inward investment are determined by good quality schooling of the general population in the host country; though it is also recognized that further training and upgrading of skills are necessary for continued flow of investments. The countries' participation in globalization processes is determined by the quantity and quality of education and the training it offers to its human resources. Globalization processes include value chains, fragmentation, increased migration, and trading of final products, in which human quality of human resources play an important role to better capture the benefits of FDI (Velde, 2005).

Mincenarian earning equation explains how education contributes to economic performance, which is grounded in human capital theory (Mincer, 1974). Mincenarian earnings equation correlated wage rate of an individual to its other own characteristics, which include the level of education attainment. Levels of education, in this case, is measured by the years of schooling and the type of education completed.

Though it was accepted that highly educated individuals earn more, it does not claim that all types of education could raise the growth of all countries. Hence, it is important to assess the types of education that help in creating or building science and those which are geared toward the building of absorptive capacity, thereby exploiting the benefits from best practice technology. As suggested by Borensztein et al. (1998), in order to benefit from inward FDI, education is necessary. However, it was not expanded as to how and in what level of education could the host country best capture such benefits.

In the United States, there were six US universities that were included in the top 10 Times Higher Education ranking in 2006–2007 out of 4,000 plus universities and colleges in the US. Times Higher Education also wrote that 580,000 foreign students enrolled in US universities in 2006–2007. Moreover, out of the total population, 56 million obtained bachelor's degree or higher. In order to succeed in the globalized world, US companies and foreign affiliates take full advantage of this environment because it makes US attractive for FDI. As mentioned in the paper, Sass (2003) stated that education and training are two of the very important factors that attract capital in a country aside from macroeconomic stability and infrastructure. The paper also expounded that not having a medium level of education, as well as higher education's training methods that are not at par with others, are key problems in attracting FDIs.

Moreover, several studies recommended that for an economy to attract higher inward FDI and if it wants to reap the full benefits of such investments, it is highly important to develop better secondary and higher education (Shatz, 2001; Nunnenkamp, 2002), and absorb advanced technologies through higher levels of education (Nunnenkamp, 2002),

On the other hand, Khan (2007) discussed that scarcity in knowledgeable and skilled-based workforce is unfavorable if a country wants to attract FDI. He further argued that in contrast with other South Asian countries which only focused on simple education, Singapore, Malaysia, Korea, and Ireland were successfully sustaining their FDI because of their human resource development strategy. Moreover, Khan (2007) single out Singapore as efficient and consistent in attracting FDI despite its insufficiency in natural resources because it capitalized on human resource development.

On another note, the Malaysian government exerted effort for education and training while the international chambers of commerce and Thailand government are jointly running the country's training programs. According to Michie (2001), Singapore aimed to attract FDI by pursuing national investment in education and training.

Higher education plays an important role in improving the quality of labor force of the host country. Moreover, higher education helps in R&D activities which supports production and management systems that are technology compliant. Effects of research and development can be achieved through the creation of incentive effect in foreign investments (Tolunay & Akyol, 2006). As Narin (2007) pointed out, FDI provides employment opportunity and offers new workforce qualifications of the country.

Furthermore, higher education system and innovation mobility of a country have strong link, thus, without skilled labor force, firms cannot sustain its growth. Hence, improving industrial development requires investment focus in the education sector for a period of one or two decades (Don Almeida, 2010).

2.2.5. Country's Competitiveness

Competitiveness is defined by a country's institutions, policies, and level and factors of productivity (GCR, 2012). Productivity can be measured by the level of quality of labor force and outputs a country generated in the production process. The better labor force and increase in market supply are affected by education level. Hence, it is noteworthy to mention that higher education's contribution to economic development is important. Poverty reduction through the sustainable increase in income leads to the higher living standards of the people and in the long

run bringing the country to higher competitiveness. In effect, improvement in competitiveness forces every economy to make strategic decisions in spending its resources. Higher competitiveness means an increase in spending for higher education so as to reach business sophistication and innovation level, which is considered to be the third and last stage of competitiveness (Bauk & Jusufranic, 2014). According to GCR (2012, p. #), "more competitive economy is one that is likely to sustain growth."

Moreover, the country competitiveness encouraged both inward and outward FDI (Dunning & Zhang, 2008). Level of economic prosperity, which is directly link to productivity level of a country, served as the basis for the estimating the rates of returns that investments obtained.

The association of competitiveness and productivity, as well as higher education, led to more interesting inquiries that expands competitiveness' link with FDI, especially for countries which are highly reliant on capital investments by foreign countries. However, studies utilizing Global Competitiveness Index published by World Economic Forum have been investigated but with more focus on governance and quality of formal institutions. Among those studies are of Outreville (2008) which revealed that local policies and regulation were among the governance aspect that organizations seek when looking for an international location of their investment. Consequently, Seyoum's (2009) study also found a positive influence of strong formal institutions on FDI inflows.

However, few studies dealt with the importance of higher education/tertiary education. Among those few is the correlational study of Usman (2014) examining the relationship of FDI, higher education, and infrastructure using the World Economic Forum Global Competitiveness Index, which revealed that FDI inflows in selected countries have a significant correlation with higher education and infrastructure. Results of Usman's (2014) study are in conformity with the results of Tien (2010) who found that higher education is a better predictor in attracting FDI. It is also in accordance with the results obtained by Sjöholm (2010) with which he determined the factors that affect the multinational corporations' locational decision. He found out that higher education is one of the factors aside from better institutions and liberal trade policies. Salehizadeh (2005) also found that multinational companies' are significantly attracted to states with highly educated employees and managers. Hence, attracting FDI inflows for economic development can be achieved if the government (Pakistan) will give more attention to developing higher education (Usman, 2014).

3. Research Gap

Reviewed literature and studies are geared toward the role of direct investment in the development of a country and the factors that attract FDI inflows in general. Impacts of FDI in economic growth are prevalent as well as its contribution in technology transfer, knowledge enhancement, labor productivity, infrastructure development, and human capital development. It can be noted from the studies reviewed the there are varying and sometimes conflicting effects depending on the region, economy, and industry which the FDI flows. In terms of the factors

attracting FDI inflows, researches have discussed institutional quality as determinants of FDI which pertains to governance, policy framework, political stability, taxation, and law and order situation. On the other hand, most of the economic determinants of FDI being studies are focused on infrastructure, trade regime, and market size. There are a few articles which discussed the connection between human resource developments in terms of education quality, higher education in particular. Most of the studies related to human capital are labor force, wages, enrollment in primary and secondary education, as well as government expenditures in education, in general. In addition, literatures have acknowledged that global competitiveness of the host country influenced FDI inflows, however, studies did not include all pillars of GCI as an independent variable. It only focused on the governance. Though, Usman (2014) discussed higher education's impact in FDI inflows, it only focused on the relationship but not on the extent of contribution of higher education in attracting FDI inflows. Hence, this study bridges the gap by providing new inputs as a result of this study on the Global Competitiveness Indices influence on FDI inflows.

4 Research Framework of the study

4.1 Operational framework

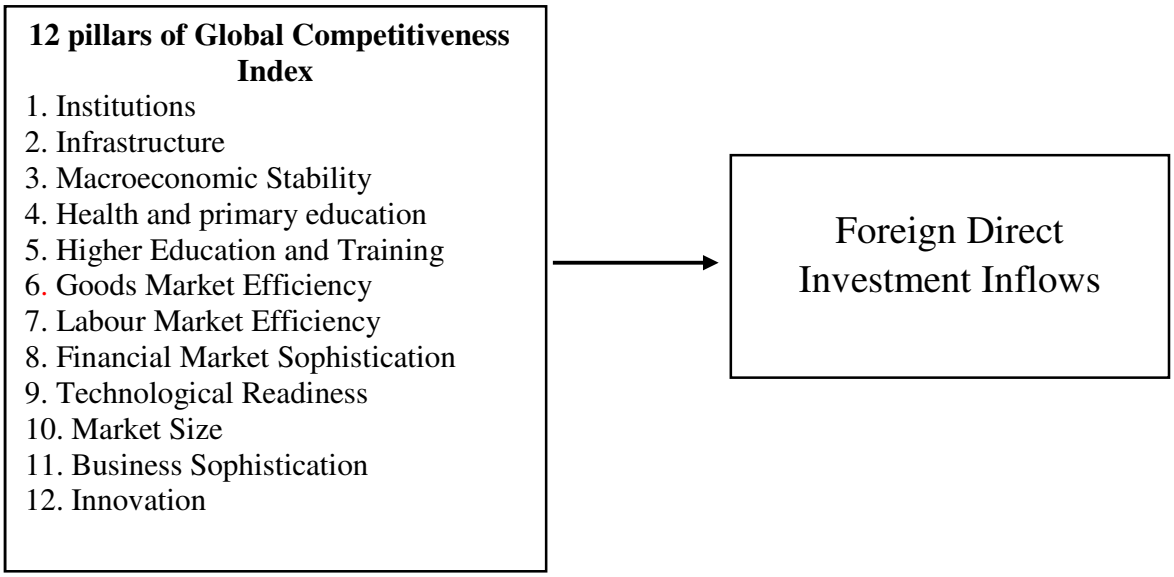

Figure 1. Operational Framework

5. Methodology

Descriptive and causal explanatory were used as research designs of the study. Descriptive research design was used to present the summary of dependent and independent variables in terms of mean, minimum, maximum, and standard deviation. In addition, causal explanatory was employed to measure the extent of relationship of the GCI and FDI as well as to determine the extent of impact of GCI on FDI inflows.

Quantitative data were processed and analyzed using Stata 13.0 program. For the descriptive research, descriptive analysis such as absolute and percentage frequencies, average weights (M), and standard deviation (SD) were employed. For causal explanatory research, multiple regression analysis was utilized to test the degree of impact of GCI on FDI inflows as well as the extent of influence of higher education and training indices on FDI inflows.

A total of 137 countries was considered for this study out of 152 and 264 countries included in the Global Competitiveness Index for 2016 and World Bank Report 2016. The criteria for selection of those 137 countries were based on the completeness of data for both GCI ratings and FDI inflows. Also, countries were classified into four groups: low income group, lower middle income, upper middle income, and high income. This is based on the new classification of countries by the World Bank.

6. Results and Discussion

6.1 Descriptive Analyses

Countries were classified by income and by regions as shown in Table 1. Based on the descriptive analysis of the data, 36% of the countries belong to high income group with which 28 are from Europe and Central Asia Region, 25% and 26% belong to lower middle income group and upper middle income group respectively, while 13% belong to low income group, 17 of which are from Sub-Saharan Africa Region. Lower Middle Income Countries are relatively dispersed among the six regions while upper middle income economies reside in Latin America & Caribbean and Europe & Central Asia Regions comprised of 16 and 11 countries respectively.

Table 1. Income and Regional Classification of Countries

Region	Income Group				Total	%
	Low Income	Lower Middle Income	Upper Middle Income	High Income		
East Asia & Pacific	0	6	3	7	16	12%
Europe & Central Asia	0	5	11	28	44	32%
Latin America & Caribbean	0	8	16	13	37	27%
North America	0	1	0	1	2	1%
South Asia	1	5	0	0	6	4%
Sub-Saharan Africa	17	9	6	0	32	23%
Total	18	34	36	49	137	
%	13%	25%	26%	36%		

It can also be noted based on Table 1 that countries in Sub-Saharan Africa and South Asia belong to Low Income to Upper Middle Income economy. On the other hand, countries in East Asia & Pacific, Europe & Central Asia, Latin America & Caribbean, and North America belong to Lower Middle Income to High Income economy.

Table 2. Summary of Foreign Direct Investment net Inflows (BoP Current US$) by Income Group

Income Group	**Stat**	**Foreign Direct Investment net Inflows (BoP Current US$)**
Low Income	mean	7.32E+08

	min	-1526519
	max	3.20E+09
Lower Middle Income	mean	1.71E+10
	min	-4.16E+09
	max	4.79E+11
Upper Middle Income	mean	1.18E+10
	min	2.27E+08
	max	1.71E+11
High Income	mean	2.02E+10
	min	-2.77E+10
	max	3.00E+11

Table 2 presents the summary of statistics of FDI net inflows per income group. Based on the results, high income group has an average FDI net inflows of US$2.02E+10, upper middle income group have US$1.18E+10, lower middle income group FDI net inflows average is US$1.71E+10, while low income group economies only have US$7.32E+08 for the year 2016.

Table 3. Descriptive Analysis of Foreign Direct Investment net Inflows (BoP Current US$) and Global Competitiveness Indices

Variable	**Mean**	**Std. Dev.**	**Min**	**Max**
Foreign Direct Investment net Inflows (BoP Current US$)	1.47E+10	5.25E+10	-2.77E+10	4.79E+11
Institutions	4.090153	0.8725155	2.155379	6.1273
Infrastructure	4.042862	1.209798	1.720788	6.687211
Macroeconomic Environment	4.673436	0.9880632	1.998103	6.840427
Health and Primary Education	5.547172	0.8861671	2.845082	6.891468
Higher Education and Training	4.304176	1.01809	1.90129	6.293697
Goods Market Efficiency	4.371413	0.5518213	2.857347	5.775369
Labor Market Efficiency	4.244629	0.5965396	2.75254	5.948719
Financial Market Development	3.994615	0.7452509	2.071768	5.785618
Technological Readiness	4.167972	1.231171	1.934808	6.413285
Market Size	3.847705	1.180054	1.34072	7
Business Sophistication	4.054105	0.7194535	2.555229	5.802793
Innovation	3.554551	0.8413481	2.156658	5.802447

Note: N=137 Obs.

FDI net inflows (BoP Current US$) range from a minimum of –US$2.77E+10 to a maximum of US$4.79E+11 with an average of US$1.47E+10. It can be noted that some countries have negative net inflows for the year 2016.

Based from the results presented in Tables 1, 2, and 3, it can be inferred that despite the high number of economies belonging in high income group, still, experts viewed the competitiveness of countries in general as relatively below average. In addition, SSA countries, which are under low income group, have also lower FDI net inflows. Likewise, countries in Europe & Central Asia consequently have higher FDI net inflows compared with those economies in the low income, lower middle income, and upper middle income group.

In terms of the Global Competitiveness Index comprising of 12 pillars of competitiveness, ratings range from as lows as 1.34072 to as high as 7; both are for Pillar 10

which is Market Size, though it is not the pillar that got the highest rating. Among the 12 pillars of competitiveness, experts rated Health and Primary Education the highest, with an average of 5.547172 and Innovation as lowest with an average rating of 3.554551. Over-all Global Competitiveness of the economies gained an average of 4.266029 from the experts for 2016, which range from 2.739177 to 5.807662.

Table 4. Descriptive Analysis of the Components of Higher Education and Training Indices

Variable	Mean	Std. Dev.	Min	Max
Secondary Education Enrolment Rate	85.97937	27.84528	22.40279	164.8117
Tertiary Education Enrolment Rate	41.7352	27.33894	0.79773	110.1627
Quality of Education System	3.807149	0.9192579	2.001713	6.160064
Quality of Math and Science Education	4.05972	0.9389971	2.208421	6.388875
Quality of Management Schools	4.294401	0.8241222	2.530363	6.306078
Internet Access in Schools	4.307229	1.019309	1.671292	6.30487
Availability of Research and Training Services	4.417591	0.8358547	2.498298	6.624842
Extent of Staff Training	4.029365	0.6939243	2.203271	5.710925

Note: N=137 Obs.

The 5th pillar of competitiveness, which is Higher Education and Training, is further analyzed. It is composed of eight sub-components which are classified into three major areas as shown in Table 4.

First major area is Quantity of Education, which pertains to the Secondary Education and Tertiary Education Enrolment rates. As presented in Table 4, Secondary Education average enrolment rate was 85.97937% ranging from 22.40279% to 164.8117% while Tertiary Education average enrolment rate is only 41.7352% ranging from 0.79773% to 110.1627%. This means that there are fewer secondary education graduates who are pushing through with Higher Education.

The second major area is Quality of Education, which refers to the quality of education system, quality of math and science education, quality of management schools, and internet access in schools. Ratings for the sub-components of Quality of Education range from 1.671292 to 6.388875. Quality of Education System got the lowest average rating from the experts having 3.807149 rating while internet access in schools got the highest average rating of 4.307229. It can be noted that internet access in schools got the minimum rating of 1.671292, which the lowest among all the components.

Third, On-the-Job training is only composed of two sub-components: Availability of Research and Training Services and Extent of Staff Training. Both sub-components earned 4.417591 and 4.029365 average rating, respectively.

6.2 Correlation Analyses

Global Competitiveness Indices and FDI net inflows (BoP Current US$) relationships vary among the income groups. Table 5 presents the summary of correlation results.

Table 5. Summary of Correlation Tables (by Income Group)

Variables		Income Group			
		Low Income	**Lower Middle Income**	**Upper Middle Income**	**High Income**
2	Institutions	0.1195	0.4424*	0.0851	0.264
		0.6261	0.0088	0.6219	0.0698
3	Infrastructure	0.7945*	0.6180*	0.2979	0.4443*
		0	0.0001	0.0777	0.0016
4	Macroeconomic Environment	0.5698*	0.0915	0.1677	-0.0253
		0.0109	0.6066	0.3282	0.8647
5	Health and Primary Education	0.4653*	0.2463	0.1603	0.2192
		0.0447	0.1602	0.3504	0.1345
6	Secondary Education Enrolment Rate	0.6028*	0.2226	0.1578	0.2599
		0.0063	0.2058	0.358	0.0745
7	Tertiary Education Enrolment Rate	0.9070*	0.5272*	0.0052	0.0671
		0	0.0014	0.9759	0.6505
8	Quality of Education System	0.0794	0.3828*	0.0913	0.1933
		0.7465	0.0254	0.5963	0.1881
9	Quality of Math and Science Education	0.3494	0.2418	0.0535	0.1391
		0.1426	0.1683	0.7565	0.3459
10	Quality of Management Schools	0.1077	0.4724*	0.0198	0.3890*
		0.6608	0.0048	0.9088	0.0063
11	Internet Access in Schools	0.5528*	0.4494*	0.1644	0.2084
		0.0141	0.0077	0.3381	0.1552
12	Availability of Research and Training Services	0.1857	0.4413*	0.0412	0.2997*
		0.4464	0.009	0.8115	0.0385
13	Extent of Staff Training	0.443	0.4479*	0.2037	0.1723
		0.0575	0.0079	0.2334	0.2416
14	Higher Education and Training	0.7179*	0.4960*	0.1457	0.2352
		0.0005	0.0028	0.3965	0.1076
15	Goods Market Efficiency	0.5456*	0.5693*	0.0228	0.3867*
		0.0157	0.0004	0.8951	0.0066
16	Labor Market Efficiency	-0.0495	0.4910*	0.1538	0.3565*
		0.8405	0.0032	0.3706	0.0129
17	Financial Market Development	0.1457	0.5059*	0.0346	0.2124
		0.5518	0.0023	0.8412	0.1473
18	Technological Readiness	0.8091*	0.6867*	0.0791	0.3497*
		0	0	0.6467	0.0148
19	Market Size	0.7935*	0.4990*	0.6368*	0.4246*
		0.0001	0.0027	0	0.0026
20	Business Sophistication	0.6818*	0.6914*	0.2735	0.3704*
		0.0013	0	0.1065	0.0096
21	Innovation	0.7577*	0.7200*	0.3287	0.2763
		0.0002	0	0.0503	0.0573

Note: All variables are correlated with 1. Foreign Direct Investment net Inflows (BoP Current US$)

For Low Income Countries, there are 12 GCI indices which have significant relationship with FDI net inflows. These are infrastructures, macroeconomic environment, health and primary education, secondary education enrolment rate, tertiary education enrolment rate, internet access

in schools, higher education and training (in general), good market efficiency, technological readiness, market size, business sophistication, and innovation. Three of which are the sub-components of higher education and training.

On the other hand, Lower Middle Income Economies showed a significant relationships of FDI net inflows to majority of the GCI indices, except for macroeconomic environment, health and primary education, secondary education enrolment rate, and quality of math and science education.

Furthermore, Upper Middle Income economies showed only one significant relationship between market size and FDI net inflows. High Income countries showed significant relationships among the eight GCI indices and FDI net inflows. These are infrastructure, quality of management schools, availability of research and training services, good market efficiency, labor market efficiency, technological readiness, market size, and business sophistication.

Results indicate that foreign investors, when making investment decisions in low income and lower middle income economies, are concerned with the basic requirements that a country should have, which include quality of institutions, infrastructures, macro-environment and health, and primary education. Multinational companies may have taken these as considerations because policies, regulations, and infrastructures are basics in establishing businesses. It also entails that the host country needs to have healthy and stable macro environment that will entice foreign firms to put up plants rather than just make the host country an export-distribution outlet of their outputs. MNCs also look at the societal skills and health of the workforce. It is important for companies to ensure that people in the host country are healthy for them to perform in their maximum potential. Unhealthy workforce may lead to less productive economy.

On another note, for countries under upper middle income, only market size have a significant relationship with FDI net inflows. Market size is important for foreign companies in selecting the location of their investment because it allows them to take advantage of economies of scale. Upper middle income group of economies tends to make the most out of their investments. Foreign firms are aiming to efficiently exploit the opportunities at hand.

The first four pillars of competitiveness is important for economies to perform their basic functions and for them to achieve economic development. However, it is also important to note that for a country to attain sustainable social and economic growth and development, countries must pursue higher level of competitiveness.

6.3 Multiple Regression Analyses

FDI net inflows are affected by several factors. In this study, Global Competitiveness Indices and Higher Education and Training Indices were used as independent variables affecting FDI net inflows.

Table 6. Regression Analysis of the Impact of Global Competitiveness Indices on Foreign Direct Investment net Inflows (BoPCurrent US$)

Independent Variables	Low Income[1]			Lower Middle Income[2]			Upper Middle Income[3]			High Income[4]		
	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared
Institutions	-1.86E+09	0.1880	0.8210	-2.49E+10	0.468	0.5407	3.03E+10	0.146	0.4049	-1.48E+10	0.443	0.2378
Infrastructure	3.61E+09	0.0740		4.41E+09	0.897		-1.61E+10	0.237		-8.67E+09	0.686	
Macroeconomic Environment	-6.02E+08	0.3340		1.58E+09	0.921		-1.46E+09	0.818		-2.06E+10	0.053	
Health and Primary Education	1.24E+08	0.8020		2.32E+10	0.318		2.86E+10	0.033*		-1.06E+10	0.816	
Higher Education and Training	1.28E+09	0.4890		-6.56E+10	0.041*		-1.99E+10	0.197		-1.23E+10	0.685	
Goods Market Efficiency	3.90E+09	0.2160		-5.26E+10	0.443		-3.05E+10	0.166		3.05E+10	0.428	
Labor Market Efficiency	1.02E+09	0.4120		3.14E+10	0.314		2.19E+10	0.139		4.73E+10	0.088	
Financial Market Development	-6.97E+08	0.6360		-2.37E+10	0.432		9.76E+09	0.499		2.57E+09	0.87	

Technological Readiness	-2.53E+09	0.3300	6.75E+10	0.03*	6.54E+08	0.958	2.46E+10	0.277
Market Size	1.76E+09	0.0360*	4.14E+08	0.975	2.59E+10	0.001*	2.00E+10	0.039*
Business Sophistication	-4.72E+09	0.3890	6.25E+10	0.431	7.29E+09	0.797	2.30E+10	0.524
Innovation	1.01E+09	0.7080	8.60E+10	0.138	-1.07E+10	0.707	-2.69E+10	0.29
_cons	-5.40E+09	0.2910	-3.36E+11	0.068	-2.06E+11	0.013	-2.14E+11	0.303

Note: DV= Foreign Direct Investment net Inflows (BoP Current US$)

Based on the result of regression analyses, market size is the only significant predictor of FDI net inflows for low income and high income countries; higher education and training and technological readiness are significant predictors of FDI net inflows for lower middle income group; and health and primary education and market size for upper middle income. Overall, it can be gleaned from Table 6 that market size is the common predictor for the majority of economies except for lower middle income group of economies.

Furthermore, higher education and training have a significant impact on FDI inflows only for lower middle income, however, it is counter-intuitive. This means that for every increase in higher education and training, there is a corresponding US$6.56E+10 decrease in FDI net inflows, ceteris paribus. It is also noteworthy to mention that technological readiness is an important determinant in attracting FDI inflows for lower middle income because these investors are looking for affiliates with high absorptive capacity and partners who are capable of maximizing the potential of technology to reach its high productivity level leading to higher competitiveness.

Literature that focused on competitiveness and country classification have argued that upper middle income and high income economies are more concerned with achieving business sophistication and innovation, especially if they want to attract more investors whose aims are to produce and offer innovative and high-quality products and services. However, in this study, business sophistication and innovation are not correlated with FDI. It can also be elucidated from the result of regression analysis that neither of the two has an impact in attracting FDI in all economies.

Table *7. Regression Analysis of the Influence of Higher Education and Training Indices on Foreign Direct Investment net Inflows (BoPCurrent US$)*

Dependent Variables	Low Income[1]			Lower Middle Income[2]			Upper Middle Income[3]			High Income[4]		
	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared	β	P>t	Adj R. Squared
Secondary Education Enrolment Rate	-5.55E+07	0.0530	0.8712	-1.34E+09	0.0780	0.5453	5.16E+08	0.319	-0.1143	6.13E+08	0.299	0.0789
Tertiary Education Enrolment Rate	1.40E+08	0.0000*		4.49E+09	0.0000*		6.52E+07	0.878		-4.48E+08	0.288	

Quality of Education System	4.04E+08	0.5480	4.64E+10	0.1260	9.39E+07	0.996	-2.89E+10	0.249
Quality of Math and Science Education	-3.28E+08	0.6610	-3.61E+10	0.1090	2.96E+09	0.821	2.89E+08	0.987
Quality of Management Schools	-1.23E+09	0.2680	7.36E+10	0.0400*	8.51E+08	0.963	3.98E+10	0.064
Internet Access in Schools	1.04E+09	0.1220	-4.44E+10	0.2560	4.20E+09	0.769	5.24E+09	0.737
Availability of Research and Training Services	-3.22E+08	0.6900	-2.38E+10	0.5950	-2.62E+10	0.283	1.48E+10	0.552
Extent of Staff Training	-6.61E+08	0.5110	1.53E+10	0.6870	3.19E+10	0.126	-8.41E+09	0.736
_cons	6.57E+09	0.0490	-1.15E+11	0.1230	-8.34E+10	0.224	-1.52E+11	0.043

Note: DV= Foreign Direct Investment net Inflows (BoP Current US$)

Given the counter-intuitive result of regression analysis for the 5th pillar of competitiveness, which is Higher Education and Training, this paper further the inquiry by looking in detail the effects of higher education and training sub-components on attracting FDI inflows. Results revealed that Higher Education and Training sub-indices are influencing FDI net inflows of low income and lower middle income economies only. Among the sub-indices, tertiary education enrolment rate is the only significant factor impacting FDI net inflows of low income economies.

One of the possible reasons for such result is that firms need a workforce who possesses the required qualifications, which is tertiary education. Higher enrollees in tertiary education mean more workforces can be tapped by companies in their production process. They also have more chances of selecting a better quality of human resources.

On the other hand, tertiary education enrolment rate and quality of management schools are positively and significantly influencing FDI inflows of Lower Middle Income countries. It can be inferred that aside from the quantity of higher education measured by the enrollment rate in tertiary education, quality education is also vital. Most importantly, firms are not just looking at the quality of schools offering general knowledge, rather, they are more concerned with the quality of management schools. Quality of management schools in the host country may give impression to foreign companies that the government and educational institutions in the host country are committed to upgrading not just the business operations but other institutions by producing human resources who are able to adapt to the changing environment in the global market as well as provide sound strategies that are necessary to achieve firm-level and country-level competitiveness.

On another note, the attractiveness of upper middle income and high income economies for FDI inflows may not be influenced by higher education because it is no longer on that stage where efficiency is the main goal. Rather, foreign companies in high income economies may have been aiming for business sophistication ensuring high quality and sustainability of their production processes through quality workforce, modern technology, and advanced knowledge to meet market demands for unique products and services.

1.7 Conclusions

FDI has contributed to the accumulation of capital and the improvement of the economy's productive capacity through the incorporation of new inputs and modern technologies in the production process. However, its impact varies among economies in different income groups. Sub-Saharan Africa region, having many countries with low income, has also generated lower FDI net inflows compared with the Europe & Central Asia region with economies having high income and consequently with high FDI net inflows. It can also be concluded that FDI net inflow of low income economies is significantly correlated with most of the competitiveness indices compared to upper middle income and high income economies. It was also highlighted by the findings that market size influenced majority of economies in attracting FDI inflows. In addition, higher education may have yielded a counter-intuitive result but when it was analyzed using its eight sub-components, tertiary education enrollment rate and quality of management schools have resulted to positive and significant impact on the attractiveness of a country for FDI inflows. However, none of the sub-components of higher education and training is significantly influencing FDI inflows of upper middle income and high income economies.

Hence, this implies that Global Competitiveness Index can be considered as important in making decisions of foreign firms who wished to put investments in low income and lower middle income countries. Likewise, it can be concluded that Global Competitiveness Index plays a role in investment decisions.

Additionally, there is a growing importance in understanding competitiveness and FDI in the economic growth and development of a country. It is also vital that industries are able to have a full grasp of the role that higher education plays in attracting FDI inflows as well as its involvement in ensuring that host countries reap the full benefits of FDI. Hence, in spite of the significant findings of this study, it is recommended that longitudinal research be conducted to better predict the impact of higher education competitiveness index over a longer period.

1.7 REFRENCES

Abbes, S. M., Mostéfa, B., Seghir, G., & Zakarya, G. Y. (2015). Causal Interactions between FDI, and Economic Growth: Evidence from Dynamic Panel Co-integration. *Procedia Economics and Finance*, *23*(October 2014), 276–290. https://doi.org/10.1016/S2212-5671(15)00541-9

Agarwal, J. P., (1980), "Determinants of Foreign Direct Investment", Weltwirtschaftliches Archiv, No. 4, 116, pp. 739-73

Agbola, F. W. (2014). Modelling the impact of foreign direct investment and human capital on economic growth: empirical evidence from the Philippines. *Asia Pacific Economy*, *19*(2), 272–289. https://doi.org/10.1080/13547860.2014.880282

Agiomirgianakis, G., Asteriou, D., & Papathoma, K. (2004). The Determinants of Foreign Direct Investment: A Panel Data Study for the OECD Countries. *City University-London, …*, (3), 1–19. https://doi.org/10.1007/978-3-540-25939-8

Almfraji, M. A., & Almsafir, M. K. (2014). Foreign Direct Investment and Economic Growth Literature Review from 1994 to 2012. *Procedia - Social and Behavioral Sciences*, *129*, 206–213. https://doi.org/10.1016/j.sbspro.2014.03.668

Almfraji, M. A., Almsafir, M. K., & Yao, L. (2014). Economic Growth and Foreign Direct Investment Inflows: The Case of Qatar. *Procedia - Social and Behavioral Sciences*, *109*, 1040–1045. https://doi.org/10.1016/j.sbspro.2013.12.586

Asiedu, E. (2002). On the Determinants of Foreign Direct Investment to Developing Countries: Is Africa Di erent? *World Development*, *30*(1), 107–19. https://doi.org/10.1016/S0305-750X(01)00100-0

Axarloglou, K., & Pournarakis, M. (2007). Do all foreign direct investment inflows benefit the local economy? *World Economy*, *30*(3), 424–445. https://doi.org/10.1111/j.1467-9701.2006.00824.x

Aziz, O. (2017). Institutional Quality and FDI Inflows in Arab Economies. *Finance Research Letters*, (August 2016). https://doi.org/https://doi.org/10.1016/j.frl.2017.10.026

Baliamoune-Lutz, M., 2004. Does FDI contribute to economic growth? Business Economics 39 (2) 49–56

Bandera , V.N. and White, J.T. (1968), "U.S. Direct Investments and Domestic Markets in Europe", Economia Internazionale, Vol. 21, pp 117-133.

Bashir, T., Mansha, A., Zulfiqar, R., & Riaz, R. (2014). Impact of FDI on Economy Growth: A Comparison of SOuth Asian States & China. *European Scientific Journal, ESJ*, 446–469.

Belloumi, M. (2014). The relationship between trade, FDI and economic growth in Tunisia: An application of the autoregressive distributed lag model. *Economic Systems*, *38*(2), 269–287. https://doi.org/10.1016/j.ecosys.2013.09.002

Bevan, A. A., & Estrin, S. (2004). The determinants of foreign direct inve

Bhagwati, J. N. (1978), "Anatomy and Consequences of Exchange Rates Regimes", Studies in International Economic Relations, 1, 10, New York: NBER

Bhasin, A., Jun, K., and Economou, P. (1994), "Assessing the Sustainability of Foreign Direct Investment Flows", World Bank, International Economics Department

Boghean, C., & State, M. (2015). The Relation between Foreign Direct Investments (FDI) and Labour Productivity in the European Union Countries. *Procedia Economics and Finance*, *32*(15), 278–285. https://doi.org/10.1016/S2212-5671(15)01392-1

Borensztein, E., De Gregorio, J., Lee, J.W. (1998). How does foreign investment affect growth?. Journal of International Economics 45, pp. 115–135

Brincikova, Z., & Darmo, L. (2014). The Impact of FDI Inflows on Employment in V4 Countries. *European Scientific Journal, ESJ*, *1*(Special Issue), 245–252.

Buracom, P. (2014). ASEAN economic performance, institutional effectiveness, and foreign direct investment. *Asian Affairs: An American Review*, *41*(3), 108–126. https://doi.org/10.1080/00927678.2014.936801

Castro, P. G. de, Fernandes, E. A., & Campos, A. C. (2013). The Determinants of Foreign Direct Investment in Brazil and Mexico: An Empirical Analysis. *Procedia Economics and Finance*, *5*(13), 231–240. https://doi.org/10.1016/S2212-5671(13)00029-4

Cheng, L. K., and Kwan, Y. K. (1999), FDI Stock and its Determinants. In: Wu, Y. (Ed.), Foreign Direct Investment and Economic Growth in China, Chapter 3. Edward Elgar, Cheltenham, pp. 42-56

Cheng, L. K., & Kwan, Y. K. (2000a). What are the determinants of the location of foreign direct investment: The Chinese experience. Journal of International Economics, 51, 379–400

Cheng, L. K., & Kwan, Y. K. (2000b). The location of foreign direct investment in Chinese regions: Further analysis of labor quality. In T. Ito, & A. O. Krueger (Eds.), The role of foreign direct investment in East Asian Economic Development. Chicago: University of Chicago Pres

Cheng, L. K., and Zhao, H.(1995), "Geographical Patterns of Foreign Direct Investment in China: Location, Factor Endowments, and Policy Incentives", Department of Economics, Hong-Kong University of Science and Technology, February

Chisăgiu, L. (2015). Multi-dimensional Impact of Foreign Direct Investments on the Host-economy, Determinants and Effects, and their Contribution to Economic Growth in Romania. *Procedia Economics and Finance*, *32*(15), 721–727. https://doi.org/10.1016/S2212-5671(15)01454-9

Cleeve, E. A., Debrah, Y., & Yiheyis, Z. (2015). Human Capital and FDI Inflow: An Assessment of the African Case. *World Development*, *74*, 1–14. https://doi.org/10.1016/j.worlddev.2015.04.003

Coughlin, C. C., Terza, J. V., & Arromdee, V. (1991). State characteristics and the location of foreign direct investment within the United States. Review of Economics and Statistics, 73(4), 675–683

De Mello, L. R. (1997), "Foreign Direct Investment in Developing Countries and Growth: A Selectivity Survey", University of Kent, Working Papers Series, UK, pp. 1-46.

De Mello, L.R. (1999). FDI-led growth: evidence from time series and panel data. Oxford Economic Papers 51, pp.133–151

Demekas, D. G., Horváth, B., Ribakova, E., & Wu, Y. (2007). Foreign direct investment in European transition economies—The role of policies. Journal of Comparative Economics, 35(2), 369–386.

Disdier, A. C., & Mayer, T. (2004). How different is Eastern Europe? Structure and de- terminants of location choices by French firms in Eastern and Western Europe. Journal of Comparative Economics, 32(2), 280–296.

Doms, M. E., J. B. Jensen and J. Bradford (1998), 'Comparing Wages, Skills and Productivity between Domestic and Foreign Owned Manufacturing Establishments in the United States', Geography and Ownership as Basis for Economic Accounting, NBER Studies in Income and Wealth, 53, 235–55

Don Almeida, R. C. (2010). Government's Many Roles in Fostering Innovation. PricewaterhouseCoopers LLP.

Du, J., Lu, Y., & Tao, Z. (2008a). FDI location choice: Agglomeration vs institutions. International Journal of Finance&Economics, 13(1), 92–107

Du, J., Lu, Y., & Tao, Z. (2008b). Economic institutions and FDI location choice: Evidence from US multinationals in China. Journal of Comparative Economics, 36(3), 412–429

Dunning, J.H., and Zhang, F. (2008). Foreign direct investment and the locational competitiveness of countries. Transactional Corporations. 17(3), 1-30.

Dunning, J.H. (2004) 'Institutional reform, FDI and European transition economies', Economics and Management Discussion Paper No.14, University of Reading. Economic & Social Commission for Western Asia (ESCWA), 2013. Short- and medium-Term Economic Challenges of the Arab countries in transition: A review. United Nations, New York, USA.

Figlio, N. D. and B. A. Blonigen (1999), 'The Effects of Direct Foreign Investment on Local Communities', NBER Working Paper No. 7274

Financial Times (2016). The fDi report 2016 At http://forms.fdiintelligence.com/ report2016/files/The_fDi_Report_2016.pdf. [Accessed 13 November 2017].

Fosfuri, A., Motta, M., & Rønde, T. (2001). Foreign direct investment and spillovers through workers' mobility. Journal of International Economics, 53, 205–222

Chan, M. W. L., Hou, K., Li, X., & Mountain, D. C. (2014). Foreign direct investment and its determinants: A regional panel causality analysis. Quarterly Review of Economics and Finance, 54(4), 579–589. https://doi.org/10.1016/j.qref.2013.07.004

Fung, K. C., Iizaka, H., Lin, C., & Siu, A. (2002). An econometric estimation of locational choices of

foreign direct investment: The case of Hong Kong and U.S. firms in China. manuscrip
Gao, T. (2005). Labor quality and the location of foreign direct Investment: Evidence from China. China Economic Review, 16, 274–292.
GCR (2012). The Global Competitiveness Report 2012-2013. World Economic Forum.
Glass, A., Saggi, K., 2002. Multinational firms and technology transfer. Scandinavian Journal of Economics 104 (4) 495–514
Globerman, S., C. J. Ries and I. Vertinsky (1994), 'The Economic Performance of Foreign Affili- ates in Canada', Canadian Journal of Economics, 27, 1, 143 –56.
Globerman, S., & Shapiro, D. M. (1999). The impact of government policies on foreign direct investment: The Canadian experience. Journal of International Business Studies, 30(3), 513–532
Gunther, J., 2002. FDI as a multiplier of modern technology in Hungarian industry. Intereconomics 37 (5) 263–269, ISSN: 0020- 5346
Haaker, M., 1999. Spillovers from foreign direct investment through labor turnover: the supply of management skills. Discussion Paper London School of Economics
Head, C. K., Ries, J. C., and Swenson, D. L. (1995), "Agglomeration Benefits and Locational Choice: Evidence from Japanese Manufacturing Investments in the United States", Journal of International Economics, 10, pp. 92-116
Helmy, H.E., 2013. The impact of corruption on FDI: Is MENA an exception? J.Int. Rev. Appl. Econ. 27, 491–514
Hodgson, M., Stoelhorst, W., 2014. Introduction to the special issue on the future of institutional and evolutionary economics. J. Inst. Econ. 10, 513–540
Javorcik, B. S., & Wei, S. J. (2009). Corruption and cross-border investment in emerging markets: Firm-level evidence. Journal of International Money and Finance, 28(4), 605–624
Javorcik, B. S. (2004). The composition of foreign direct investment and protection of intellectual property rights: Evidence from transition economies. European Economic Review, 48(1), 39–62
Jeon, Y.D. (1992), "The Determinants of Korean Foreign Direct Investment in Manufacturing Industries", Weltwirtschaftliches Archv, Vol. 128, pp. 527-541.
Kaufmann, L., 1997. A model of spillovers through labor recruitment. International Economic Journal 11 (3) 13–34
Khan, D. M. (2007). Role of Human Capital in Attracting Foreign Direct Investment: A South Asian Perspective. SAARC Journal of Human Resource Development, 5-25.
Kokko, M. B. (2002). FDI and Human Capital: A Research Agenda. OECD Development Centre
Mainardi, S. (1992), "Foreign Direct Investment in Latin America and Southeast Asia: Relevance of Macroeconomic and Policy-Related Factors", Giornale delgi Economisti, No. 5-8, 51 (NS), pp. 259-79
Masron, A., Nor, E., 2013. FDI in ASEAN-8: does institutional quality matter? Appl. Econ. Lett. 20, 186–189.
Miner, C., and Pentecost, E. (1996), "Locational Advantage and US Foreign Direct Investment in the UK", Applied Economics, 28, pp. 605-15
Mina, W.M., 2012. The institutional reforms debate and FDI flows to the MENA region: the "best" ensemble. World Dev. 40, 1798–1809
Mincer, J. (1974) Schooling, Experience and Earnings, NBER, New York.
Moe, T.L. (2008). An empirical investigation of relationships between official development assisstance (ODA) and human educational development. International Journal of Social Economics, 35(3), 202-221.
Morrissey, O., and Rai, Y. (1995), "The GATT Agreement on Trade-Related Investment and Their Relationship with Transactional Corporations", Journal of Development Studies, 31, pp. 702-24
Naude, W.A., Krugell, W.F., 2007. Investigating geography and institutions as determinants of foreign direct investment in Africa using panel data. J. Appl. Econ. 39, 1223–1233
Nunnenkamp, P., & Spatz, J. (2002). Determinants of FDI in developing countries: Has globalization changed the rules of the game?. Trans- national Corporations, 2(2), UNCTAD

Outreville, J.F. (2008). Foreign affiliates of the largest insurance groups: location-specific advantages. Journal of Risk and Insurance, 75(2), 463-492.

Paul, A., Popovici, C., Calin, A., 2014. The attractiveness of CEE countries for FDI: a public policy approach using the TOPSIS method. Transylvanian Rev. Administrative Sci. 42, 156–180

Rondinelli, D.A., 2005. Assessing government policies for business competitiveness in emerging market economies: an institutional approach. In: Grosse, R. (Ed.), International and Business Government Relations in the 21st Century. Cambridge University Press, Cambridge, UK, pp. 395–419

Salehizadeh, M. (2005). Foreign Direct Investment Inflows and the US Economy: An Empirical Analysis. Economic Issues, 10(2), 29-50.

Sass, M. (2003). Competitiveness and Economic Policies Related to Foreign Direct Investment . Ministry of Finance

Sethi, D., Guisinger, S. E., Phelan, S. E., & Berg, D. M. (2003). Trends in foreign direct investment flows: A theoretical and empirical analysis. Journal of International Business Studies, 34(4), 315–326.

Sethi, D., Guisinger, S. E., Ford, D. L., & Phelan, S. E. (2002). Seeking greener pastures: A theoretical and empirical investigation into the changing trend of foreign direct in- vestment flows in response to institutional and strategic factors. International Business Review, 11(6), 685–705.

Seyoum, B. (2009). Formal institutions and Foregn Direct Investment. Thunderbird International Business Review, 51(2). 165-181.

Shatz, H. J. (2001). Expanding Foreign Direct Investment in the Andean Countries. Center for International Development at Harvard University.

Sjöholm, R. E. (2010). FDI and Growth in East Asia: Lessons for Indonesia. Stockholm: Research Institute of Industrial Economics.

Slemrod, J. (1991). Taxation and Foreign Direct Investment in the United States: Evidence from a Cross-Country Comparison. In:Razin, A.

Tien, A. F. (2010). African Leaders: Their Education Abroad and FDI Flows. Institute for the Study of Labor IZA

Tintin, C., 2013. The determinants of foreign direct investment inflows in the central and eastern European countries: the importance of institutions. Communist Post- Communist Stud. 46, 287–298.

Tun, Y.-L., Azman-Saini, W, Law, S.-H., 2012. International evidence on the link between foreign direct investment and institutional quality. Eng. Econ. 23, 379–386

Wang, Z., Q., and Swain, N., J. (1995), "The Determinants of Foreign Direct Investment in Transforming Economies: Evidence from Hungary and China", Weltwirtschaftliches Archiv, 131, pp. 359-82

Wang, J.Y., Blomstrom, M., 1992. Foreign investment and technology transfer: a simple model. European Economic Review 36 (1) 137–155

Wei, S. J. (2000b). Local corruption and global capital flows. Brookings Papers on Economic Activity, 2, 303–354.

UNCTAD. (2007).World Investment Report TNCs in Extractive Industries and Development, NewYork: United Nations. World Economic Outlook (WEO) Database.

Usman, S. (2014). Higher Education, Infrastructure and Foreign Direct Investment in Pakistan. *IOSR Journal of Business and Management (IOSR-JBM)*, *15*(6), 54–59. Retrieved from http://www.iosrjournals.org/iosr-jbm/papers/Vol15-issue6/H01565459.pdf

Velde, D. W. te. (2005). Globalisation and education : what do the trade, investment and migration literatures tell us? *Working Paper (Overseas Development Institute) 254*, (August), 70. Retrieved from http://www.odi.org.uk/publications/working_papers/wp254.pdf

Yao, S. 2006. "On Economic Growth, FDI and Exports in China." Applied Economics 38 (3): 339– 351

WEF. (2016). *The Global Competitiveness Report 2016–2017. World Economic Forum Reports 2016*. https://doi.org/92-95044-35-5

World Economic Forum. Th eHlobal Competitiveness Index dataset 2007-2017. Retrieved fromehttps://www.kaggle.com/weforum/global-competitiveness/data. November 30, 2017.

WorldBank.

http://databank.worldbank.org/data/reports.aspx?Code=BN.KLT.DINV.CD&id=1ff4a498&report_name=Popular-Indicators&populartype=series&ispopular=y retrieved last