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Impact of FDI on Economic Growth: The Key Drivers

Peter Nderitu Githaiga
Moi University, School of Business and Economic Department of Accounting and Finance, Po BOX 3900-30100 Eldoret, Kenya

Abstract
To achieve Millennium Development Goals (MDGs) by 2015 there is need for enhanced global partnerships in areas such as trade, health, security and education. Owing to these initiatives FDI, official foreign development assistance and other external capital flows are gradually becoming economic stimulants in many developing countries. In 2000 FDIs received by developing countries was estimated at 19% of total global FDIs compared to 52% in 2010. FDIs accounts for 11% of global GDP and creates close to 80 million jobs globally. Global FDI totaled to US$ 1.2 trillion in 2010, US$ 1.4 2011 and US$ 1.8 in 2012 equally the developing countries received half of the FDI and invested a quarter of the FDI out flow. FDI contributes to economic growth though through intervening variables. This paper sought to explain the effect of FDI on the determinants of economic growth Human Capital development, Financial Sector Development and Health Care and Trade openness. A sample of 30 countries was used. Data was collected from UNCTAD and World Bank for the period 1980-2012 and analyzed using fixed effect regression. The results of the study show that FDI had a positive impact on measures of financial sector development and trade openness. However the effect of FDI on human capital development was negative. The study recommend the need for favorable monetary policies that elicit more FDI for enhanced economic growth. Finally the study recommends that additional FDIs should be directed towards drivers of human capital development.
Keywords: FDI, Economic Growth, Human Capital Development, Financial Sector Development, Trade Openness

1. INTRODUCTION

In view of the need for global partnerships in areas such as trade, health, education and security in order to achieve Millennium Development Goals (MDGs) by the year 2015 FDIs, Official Development Assistance (ODAs) and other foreign capital flows are gradually becoming economic stimulants for many countries. This is true for Africa that has being receiving a smaller portion of FDI inflows compared to developed countries (Asiedu, 2003). There is unprecedented increase in FDIs flowing to developing countries for instance in 2000 FDIs sent to developing countries was estimated at 19% of total global FDIs compared to 52% in 2010. FDIs accounts for 11% of global GDP and creates close to 80 million jobs globally (UNCTAD 2010). Global FDI totaled to US$ 1.2 trillion in 2010, US$ 1.4 2011 and US$ 1.8 in 2012 notably the developing countries received half of the FDI and invested only a quarter of the FDI out flow (UNCTAD 2012).It should also be noted that FDIs have potentially desirable elements that affect the quality of growth which in the long run effect on poverty reduction, diffusion of technology, capital and managerial transfer and human capital accumulation. FDIs also absorbs adverse shocks emanating from inefficiencies in the financial systems that adversely affect the poor population. Besides FDIs support corporate governance through the creation of sound institutional frameworks. Studies show that revenue generated from FDI support the development of safety nets for the underprivileged (Klein, Aaron and Hadji Michael, 2001). Owing to the importance of FDI on economic growth, studies are focusing on the determinants of FDI in developing countries identify supportive infrastructures, technical and managerial skills, macroeconomic stability and sound institutions as the key pull factors of FDI. With globalization interconnectivity ICT has been documented in empirical work (Addison and Heshmati, 2003). Other determinants include lower borrowing costs, economic reforms, and commitments to macro-economic discipline Dabla-Norris *et al* (2010). FDI and other foreign capital flows such as remittances remain significant external sources of finance for developing countries are face serious credit constraints. Another branch of studies concentrate on the impact of FDIs on the recipient countries economic growth (Alfaro and Chanda 2006,) and technological advancement through a spillover effect associated with transnational interaction. Important to note today is a growing relationship between China and African countries in areas such as trade and infrastructural development as noted by Judith (2006).

2. LITERATURE REVIEW.

The impact of FDIs and other foreign capital flows on human capital development, technology transfer and economic growth (through spillover effect) is extensively debated in literature. Economic theory identifies financial sector development, political stability and human capital development as the key drivers of a sound and sustainable economic growth. The effect of FDIs on economic growth is both direct and indirect. The direct effect is manifested by infrastructural development, new businesses, job creation and portfolio investments.

Indirectly, FDI contributes to improved technical knowhow, transfer of managerial practices and concepts and technology spillovers. FDIs contributes to capital accumulation through initiating domestic demand and consumption of goods and services (Feenstra and Markusen, 1994). Studies by De Mello (1997 and 1999) show that FDIs contributes to new job opportunities, enhancement of technology transfer, and boosts overall economic growth in recipient countries. FDI are classified FDIs as either horizontal or vertical Beugelsdijk et al. (2008). The two types of FDIs have different impacts and these difference arises from the type of FDIs and the type of countries. The type of the countries is a grouping of countries and regions based on the existing economic, political institutions which determine a country's affinity for FDIs. For instance, developed countries enjoy solid institutional framework which make horizontal FDIs have a higher impact on economic growth than vertical FDIs. Vertical FDIs stimulate demand for labour. There is vast literature on the FDI – human capital – economic growth triangle. The impact of FDI solely depends on a country's capacity to absorb the embodied technologies. This absorptive capacity depends on the level of human capital development. They estimate that 0.45 years of secondary school education is necessary to benefit from an infusion of foreign technology. The impact of FDIs on human capital development is illuminated by Lucas and Romer endogenous growth model. This theory argue that endogenously accumulated human capital has a direct impact on productivity of labour because human capital development is specific to individuals thereby leaving innovation as a stock of knowledge as an exogenous factor. Human capital development is an important source of long term growth due to its direct input into scientific knowledge (Romer, 1990; Aghion and Howitt, 1992) or due to its positive externalities. Lucas (1988) notes that growth differentials among countries originate from transnational variations in human capital development. The key constituents of human capital development are education and health care. FDIs can be classified based on the motive behind such capital flows; natural resources FDIs (access to natural resources), market seeking FDIs (increase market share), efficiencies Seeking FDIs (reduction of production cost) and Strategic Asset Seeking FDIs (technological transfers) USAID (2005). Notably FDIs and other foreign capital flows continue being important sources of capital for developing and emerging economies and this has prompted numerous studies by scholar, development agencies and partners and governments focusing on the key drivers of FDIs specifically on policy issues that create an enabling business climate. Studies show that real GDP, inflation and political stability as the primary determinants of FDI. Other determinants of FDI include; macro-economic conditions of the recipient country Blonigen (2005); push factor in the source country and pull factor in the recipient country (Fernandez–Arias, Eduordo, 1996); GDP and bi-directional causality, Chowdhury and Mavrotas(2006) whose findings are premised on economic soundness as a precondition for external capital inflows and vice versa; Trade protection, exchange rates, taxes and institutions (Blonigen 2005); financial markets development (Alfaro *et al*, 2003); skilled labour (Waldkrich 2010); Superior plant and management expertise (Miyamoto 2003); financial sophistication (Adeniyi *et al* 2012). Several theories have attempted to explain the magnitude and direction of FDIs and other foreign capital transfers. Production Cycle Theory (Vernon 1966) maintain that a production cycle has four stages: innovation, growth, maturity and decline. According to the theory, a product was created for developed and high income markets and as the market matures competition and imitation begins the product is standardized and this pushes the product to lower income markets in developing countries. Subsequently, FDI will flow alongside the product life cycle. Another theory is "The Theory of Exchange Rates on Imperfect Capital Markets" by Itagaki (1981) and Cushman (1985). This theory identifies exchange rate uncertainty as the determinant of FDI. Cushman found that an appreciation in real exchange rate spurred FDI made by US$ while an appreciation in foreign currency reduced American FDI (Denisia 2010). Based on the theory of exchange rates speculative behaviour on exchange rates therefore determine the magnitude and the direction of FDIs. The Internalization Theory by Buckley and Casson, (1976) modified by Hennart (1982) later revised by Casson, (1983) postulate that multinational corporations capitalize on their own internal capabilities accordingly will organize their internal processes in a manner that maximize specific foreign advantages in production and distribution. Multinational Corporation enjoy certain economies through direct foreign investment compared to other entry strategies to foreign markets. Hyme (1976) found that FDI is a firm-level strategy decision rather than a capital-market financial decision. "The Eclectic Paradigm" theory by Dunning (1988) merges both industrial economics and international trade to explain the existence, activities and strategies of MNEs. The Electric Paradigm theory identifies three sources of competitive advantage which prompts the establishment of MNCs; Ownership advantage, geographical advantage and internalization advantage. Lastly is the "Transaction Cost" theory developed by Coase (1937) that suggest that cost discovering relevant to prices and cost of certainty, if high enough in market place, justifies firms' decisions to coordinate economic activities locally and globally. Since many studies have focused on the effect of FDI on economic growth; this study will shift its focus by looking at the effect of FDIs on the key determinants of economic growth. The concept of economic growth is multifaceted and it's the output of the interaction of a number of variables. Some of the determinants of economic growth are; inflation, trade openness, and current account balance Tolo (2011); demography, education, economic openness, institutions and trade policy Bhalla (2012); rule of law and international, openness, human capital (Barro 2003); human capital and foreign direct

investment and stock market liquidity (Salahuddin 2010); terms of trade, improvements on the quality of capital, and the presence of distortions; human and physical capital accumulation Chumacero and Fuentes (2003). The impact of FDI on economic growth is intervened by the drivers of economic growth. This paper seeks to explain the effects of FDIs on the primary drivers of economic growth namely; Human capital development, Economic and Monetary Policy, Trade Openness and Financial Sector Development which also attract FDIs. For example on human capital development, a report by UNCTAD (1994:218) note MNCs' "demand for highly trained graduates manifests itself in the form of financial support, particularly to business schools and science facilities, the provision of assistance and advice through membership of advisory boards, curriculum review committees, councils and senates"

3.0 Data and Measurement of variables

The data used was for period 1980-2012 and collected and stored by World Bank's (World Development Indicator Database) (2014) and UNCTAD (2014). FDI was measured as a percentage of the recipient country GDP. This will help control for country size and population. Economic and monetary policies was indexed by the rate of inflation and exchange rates. Trade openness with be measured by the volume of exports as a percentage of GDP while the financial sector development was indexed by domestic credit to Private Sector as a percentage of GDP and bank deposit as a percentage of GDP. Human Capital Development (HCD) is measured by health component indexed by infant mortality rate. The study controlled for monetary policies, GDP per capita income (initial state) and other foreign capital flows and local investment. A country's monetary policy attracts or discourages local and foreign investor. The attractiveness of monetary policies is measured by exchange rates (EXCH) and the level of inflation (INF). The determinants of economic growth was influenced by government and private citizens' investments. Gross capital formation (local investment denoted by LI) controls for the aggregate improvement in a country's capital stock. Apart from FDI a country benefits from other external capital flows such as remittances and foreign aid which also have an impact on economic growth. The effect of these foreign capital inflows on the determinants of economic growth was controlled for by personal remittance received as a percentage of GDP (REM). The research model is shown below;

$DEG_{it}=\beta 0_i+\beta_1 FDI_{it}+\beta_2 MP_{it}+\beta 3GDP_{it}+\beta 4LI_{it}+\beta_5 REM_{it}+\mu_{it}$.

DEG denotes the dependent variable measured by three determinants of FDI-economic growth relationship. FDI represent Foreign Direct Investments (explanatory variable). MP represents monetary policy, GDP denote Gross Domestic Product, REM represents other foreign capital flows and LI local investment both (government and private investment). μt denotes an error term

4.0 Empirical analysis

4.1 Summary Statistics and Pairwise Correlation

Appendix 1, 2, 3 and 4 shows the period averages and summary statistics for the research variables for the period 1980-2012. The mean FDI net inflows was estimated at 3.520% of the GDP of the receiving countries with a minimum value of -6.897 and maximum value of 35.24. Appendix 1 shows a great improvement in FDI in the last decade up from 1.4% in 1980 to 3.2% in 2012. The average domestic credit to private sector was estimated at 36.5% of GDP. Credit to private sector almost double from the beginning of the period to the end as shown by an average value of 2.6% in 1980 and 4.8% in 2012. The mean remittances received in the period was 5.38% of GDP. There was a slight improvement in these transfers of 0.6. What is worth noting is the fact that remittances are a larger component of the receiving countries GDP compared to GDP. While the combined effect of remittances and foreign direct investment is approximated at 7.6% of GDP compared to an average local investments of 23.26% of GDP (approximately one-third of local investments) suggesting that foreign capital flows are important external sources of finance if well harnessed. The high exchange rate of 90.71% and inflation of 28.49% indicate ineffective monetary policies that discourage investment both local and foreign. The table further shows high infant mortality rate averaged at 45 deaths per 1000 of the population which is a deterrence to human capital development.

The correlation matrix represented in table show that FDIs are positively correlated with other foreign capital flows, GDP, trade openness (export), investments and domestic credit to private sector investment. The positive link between FDIs and other foreign transfers could be due to similarities of push and pull factors. FDIs and local investments have a dual causality. The existing state of infrastructure attract foreign investors or still foreign investors and donors would be willing to invest on infrastructural development where locals are not willing to invest due to the huge capital outlays, lack of expertise or risks involved. The relationship between FDIs and bank credit is likely to be duo. Availability of credit locally attracts foreign investors, likewise foreign investor interested in lending or interesting in securities can help alleviate credit constraints affecting households. The relationship between FDI and exchange rates, inflation and human capital development is negative. Unfavorable monetary regime inhibit foreign investors. Foreign capital flows are on the other hand associated with the Dutch Disease.

4.2 Results of panel regression

The study predict that 1% increase in FDI stimulates 1.4% growth in domestic credit to private sector and 0.4% expansion in bank deposits. However it's only the link between FDI and domestic credit to private sector that was found as statistically significant as confirmed by t=8.39 and p=0.000 t=1.47 and p=0.141 for domestic credit and bank deposits respectively. The study further established a significant and negative relationship between FDIs and human capital development (infant mortality rate) as reported by t= - 5.71 and p= 0.000. The beta coefficient suggest that 1% increase in FDI contributes to 0.87% deterioration in health care in the receiving country. On trade openness FDI had a statistically and positive effect on trade openness (t=3.8, p=0.000). One point improvement in FDI is accompanied by 0.35 point improvement in trade openness. It's therefore logical to conclude that foreign capital flows be it official development assistance, portfolio investments or altruistic transfers such as personal remittances will open up a country's economy.

5.0 Conclusion and Recommendations

The study concludes that FDIs stimulates financial sector development. FDIs enhances the availability of capital for investment purposes either through direct investments by the foreign investors or indirectly through investment vehicles such us investment banks, money markets or capital markets. The study also established that foreign direct investments boost trade openness. Trade openness could be as a result of market drive FDIs or spillover effect arising from cross border transactions. In the study FDI was found as having undesirable effect on health care replicating Peter and Nunnenkamp (2012) and Wilkinson (2000) who maintain that FDIs contributes to unequal societies that are described by relative deficiency and prolonged stress considered the main channels through which inequality ruins health. This observation is informed by the argument that FDIs are market driven unlike official development assistance and remittances. Many studies shows that FDI have a positive effect on economic growth. This study sought to establish the direct impact of FDIs on the primary drivers of economic growth. The study recommends the need for monetary regimes that attracts foreign investments. Favorable monetary regime would promote financial sector development and trade eventually economic growth. The study further propose the need for foreign direct investment directed towards human capital development in areas such as health care and education.

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Appendix 1: Summary Statistic for the Average Research Variables from 1980-2012

YEAR	REM	DEPOSIT	CREDIT	GDP	EXCH	INF	FDI	HCD	EXPORT	LI
1980	4.8373913	32.106953	26.346041	2346.6842	44.108804	24.896628	1.4023247	68.46	27.420668	24.838412
1981	5.1219316	31.896724	27.397724	2489.6549	52.927799	20.491845	1.5516166	66.183333	27.380491	25.962771
1982	6.3326341	29.494288	29.171549	2441.3626	60.827197	24.508462	0.7063788	63.93	26.130475	24.286687
1983	6.5620542	25.407765	29.814045	2402.2454	68.234204	33.242177	0.6343656	61.676667	25.507435	22.451249
1984	6.5453884	55.64518	30.220774	2500.5505	75.336121	75.312246	0.7755848	59.47	26.288321	22.565929
1985	6.011869	384.70806	29.752532	2462.9111	79.655033	435.76042	0.9231917	57.336667	26.059326	21.905615
1986	5.5943083	18.441946	29.227953	2718.6472	69.886036	23.370045	0.9575758	55.323333	25.081233	20.477343
1987	5.8665408	16.34205	29.766401	3083.7397	63.378667	15.494707	1.335014	53.47	25.717568	21.132387
1988	5.6018931	14.106608	29.964096	3398.6975	60.504107	20.488998	1.3289194	51.813333	27.081333	21.867346
1989	5.4975972	20.397479	31.781708	3555.541	61.528175	14.995977	1.1522858	50.336667	28.416457	22.721975
1990	5.1582546	15.050803	31.324681	3869.2591	58.677235	18.939832	1.2704726	49.07	27.994425	23.744276
1991	4.847053	14.716519	30.725325	4013.8515	61.78114	21.778474	0.9544542	47.963333	28.024748	23.574203
1992	4.9398319	10.712014	29.879631	4163.8466	62.474893	15.918371	1.3283511	47.023333	27.659801	23.948565
1993	4.5519595	12.710967	30.833721	4166.0746	66.759769	16.073089	1.0621329	46.2	27.518283	24.245108
1994	4.2117634	14.227364	31.958765	4323.4939	94.931883	20.338461	1.3605587	45.493333	29.403984	23.68895
1995	4.5261392	13.083235	32.396359	4753.987	88.652822	18.321928	2.4554004	44.846667	30.27502	24.262338
1996	4.5425836	13.741961	32.899335	5011.228	92.093716	14.221496	2.4209652	44.19	30.586815	23.376671
1997	4.5727029	16.796004	35.3058	5142.7863	105.04922	11.973388	2.7904012	43.493333	30.762897	23.088038
1998	4.17294	11.819911	35.702124	5106.3023	121.78554	12.257685	3.9075691	42.746667	31.06257	23.53103
1999	4.2252928	11.158275	36.324183	5292.369	118.35523	7.3670202	3.1301784	41.936667	30.749073	22.940485
2000	5.3027514	13.025004	37.170832	5522.8841	127.42095	9.1298687	2.951397	41.026667	33.831962	23.091423
2001	5.4791619	8.615711	38.13689	5277.3707	136.60064	6.5734524	2.3902465	39.993333	34.420151	22.721087
2002	6.0231248	9.9234521	40.061074	5467.359	131.93907	5.9459883	2.9983517	38.936667	34.993387	22.172524
2003	6.315514	10.471877	41.085798	6061.3553	118.11425	6.7968535	2.4718943	37.783333	35.647612	22.316267
2004	6.2947744	12.167891	42.85011	6907.704	111.4274	8.0448195	3.2434448	36.596667	36.440035	23.35613
2005	5.9433189	16.919441	47.644625	7764.2006	106.78351	6.1732956	3.3947748	35.483333	36.655897	23.979985
2006	6.1439972	17.271657	51.178348	8246.7062	104.51241	9.8279852	5.5754556	34.386667	36.618951	23.968821
2007	6.1813345	10.766266	51.161439	9269.8494	98.702589	6.1052568	5.5087324	33.406667	36.798111	24.439408
2008	5.8050201	5.9454882	47.578486	9479.8995	102.59982	9.9014757	4.8045228	32.526667	37.779581	24.83099
2009	5.4811812	4.1946487	46.84042	8345.4246	113.91019	4.7379824	3.1384052	31.413333	33.383379	22.245278
2010	5.1636593	7.4857897	46.639753	9342.9404	112.11009	7.060936	3.0248112	30.3	34.379772	22.755876
2011	4.9027651	9.1659854	47.336288	10333.156	108.40144	7.9859798	3.4482189	29.28	37.009167	23.499514
2012	4.9503394	8.7077475	48.403336	10580.573	114.25414	6.1514748	3.2038513	28.533333	36.626261	23.885893
	5.3850628	**27.188638**	**36.572126**	**5328.5653**	**90.718911**	**28.490504**	**2.3515711**	**45.170606**	**31.021369**	**23.268866**

Appendix 2: The average values of the research variable per country under study.

ID NO	COUNTRY	REM	DEPOSIT	CREDIT	GDP	EXCH	INF	FDI	HCD	EXPORT	LI
1	Algeria	1.2404788	4.8762423	28.346475	2548.7683	42.504265	13.223633	0.6756709	42.066667	31.46651	32.251818
2	Botswana	1.8893713	8.9538688	15.696763	3319.3971	3.7355239	9.6995389	3.2431529	45.324242	53.463108	30.733999
3	Cameroon	0.3697561	5.1058356	16.1208	876.46899	453.9039	4.8312216	1.1958139	86.421212	24.756418	18.638732
4	Costa Rica	0.8689498	16.024436	24.76129	3771.359	453.9039	17.965285	3.2516267	13.057576	38.586669	20.313983
5	Dominican Rep	5.9442583	18.34603	25.335619	2445.9102	17.209554	16.286407	2.6538484	40.118182	30.422758	19.860354
6	Egypt	7.2504552	6.705319	35.955397	1236.0078	3.2908158	10.540574	2.4475417	51.784848	22.732069	22.326899
7	Guatemala	4.4556129	10.871012	20.074538	1681.1513	5.3099065	10.298748	1.4188233	50.539394	20.326875	15.822152
8	India	2.0782066	10.102502	30.256654	569.02556	31.308445	7.5853858	0.7469452	76.121212	12.142738	26.688204
9	Israel	0.9152477	55.359326	73.655736	16203.105	2.7926187	43.68608	2.0452159	7.8090909	36.159038	21.081474
10	Jamaica	9.3795246	9.1375249	25.231594	2866.6025	36.320378	17.823227	3.1128539	22.418182	42.601577	24.84035
11	Kenya	2.1300018	10.385585	24.016638	465.44662	49.6933	10.272596	0.5490015	63.509091	26.408595	19.838293
12	Jordan	18.679374	6.9216026	67.533571	2255.9957	0.6040712	5.0214767	4.4010451	26.99697	46.803545	27.993761
13	Korea	0.8487154	21.647816	76.574572	11112.821	945.79782	5.3126808	0.6160441	6.0393939	34.607671	31.047029
14	Lesotho	59.63634	6.1767197	15.03325	501.23509	4.7208017	10.327131	7.8857528	78.057576	33.240376	43.131758
15	Mexico	1.4668888	20.96128	17.403197	5272.1673	6.3499933	29.511649	1.9681261	29.757576	21.92039	21.866454
16	Pakistan	4.8365547	8.0333081	24.314495	556.88159	41.480662	9.8423267	0.9542114	95.721212	14.185421	18.09016
17	Senegal	5.1746497	6.0625885	24.45389	681.58204	453.9039	4.3988675	1.219538	68.151515	26.665795	18.177328
18	Sudan	2.8605491	12.973795	7.776193	643.32496	1.2442822	38.394396	2.0292535	72.372727	10.494147	18.760809
19	Swaziland	6.3617544	10.703384	18.524846	1623.2334	4.7205929	9.7852806	3.7514733	68.930303	69.432465	19.139987
20	Thailand	1.2161221	14.146645	94.168802	2251.9432	30.683963	3.9716069	2.3700259	25.230303	48.804963	30.26396
21	Tunisia	4.1224679	12.961903	53.386608	2315.022	1.0581946	5.7551345	2.5379283	34.066667	41.778223	26.226951
22	Turkey	1.5874112	36.283852	22.455158	4323.9083	0.5819429	46.536271	0.8642314	45.6	18.825445	20.7128
23	USA	0.0264702	4.1984431	51.650304	31498.822	1	2.9268201	1.1800833	8.4060606	9.8775701	21.889694
24	Honduras	7.1079294	14.543139	35.918312	1103.173	10.473291	10.916524	2.9505326	38.954545	41.193417	25.414635
25	Australia	0.438473	13.78245	75.411793	24992.963	1.3181226	4.6246425	2.3518897	6.4939394	17.740999	26.703184
26	Bolivia	1.731011	395.9756	36.026688	1083.9753	4.5472769	446.20291	3.279741	69.072727	26.875533	15.9876
27	Bangladesh	5.1062769	12.001454	23.566303	357.22566	46.050584	6.7051272	0.3674665	80.466667	11.641972	20.337203
28	Iceland	0.5323423	41.273867	86.522397	30176.808	65.051585	15.20538	3.7673392	4.1212121	37.801337	21.074528
29	Fiji	2.9606813	7.5732507	38.74993	2552.3865	1.5493145	5.087059	4.2550972	23.824242	54.159321	20.662545
30	Ghana	0.3360088	13.570376	8.2419515	570.24838	0.4583341	31.977125	2.4568606	73.684848	25.526135	18.189332

Appendix 3: Summary Statistic of the Research Variable

```
. summarize FDI DEPOSIT CREDIT HCD EXPORT GDP EXCH INF LI REM
```

Variable	Obs	Mean	Std. Dev.	Min	Max
FDI	990	2.351571	3.520934	-6.897609	35.23495
DEPOSIT	990	27.18864	353.0369	-128.9158	11046.93
CREDIT	990	36.57213	30.61217	1.542268	319.4609
HCD	990	45.17061	30.49665	1.7	133.5
EXPORT	990	31.02137	16.61088	3.279997	100.949
GDP	990	5328.565	9819.106	168.7364	67435.95
EXCH	990	90.71891	215.3887	.0000245	1401.437
INF	990	28.4905	395.1565	-11.16159	12338.66
LI	990	23.26887	7.992249	3.377636	74.82202
REM	990	5.385063	11.88878	.0014116	106.4789

Appendix 4: Pairwise Correlation of the Research Variables

	FDI	DEPOSIT	CREDIT	REM	GDP	EXCH	INF	HCD	EXPORT	LI
FDI	1.0000									
DEPOSIT	-0.0229	1.0000								
CREDIT	0.2362	-0.0088	1.0000							
REM	0.2304	-0.0226	-0.1113	1.0000						
GDP	0.1138	-0.0120	0.6043	-0.1726	1.0000					
EXCH	-0.0862	-0.0159	0.1277	-0.1145	0.0375	1.0000				
INF	-0.0281	0.9972	-0.0313	-0.0201	-0.0235	-0.0226	1.0000			
HCD	-0.1335	0.0553	-0.5388	0.1599	-0.5503	-0.1281	0.0687	1.0000		
EXPORT	0.2837	-0.0245	0.2017	0.0732	-0.0676	0.0382	-0.0308	-0.3182	1.0000	
LI	0.3083	-0.0153	0.2074	0.4520	0.0225	0.0291	-0.0248	-0.1691	0.1661	1.0000

Appendix 5: Regression of FDI on Domestic Credit to private sector

```
Fixed-effects (within) regression               Number of obs      =       990
Group variable: ID                              Number of groups   =        30

R-sq:  within  = 0.4435                         Obs per group: min =        33
       between = 0.4011                                        avg =      33.0
       overall = 0.4131                                        max =        33

                                                F(6,954)           =    126.72
corr(u_i, Xb)  = -0.1643                        Prob > F           =    0.0000
```

CREDIT	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
FDI	1.37113	.1634504	8.39	0.000	1.050366	1.691894
GDP	.0021414	.0001013	21.14	0.000	.0019426	.0023402
EXCH	.0191303	.0078497	2.44	0.015	.0037256	.034535
INF	-.0011974	.0012009	-1.00	0.319	-.0035542	.0011593
LI	.2572714	.090674	2.84	0.005	.0793278	.435215
REM	.1376739	.0946409	1.45	0.146	-.0480544	.3234023
_cons	13.50807	2.222182	6.08	0.000	9.14714	17.869
sigma_u	19.12529					
sigma_e	14.600278					
rho	.63179893	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(29, 954) =    50.88                 Prob > F = 0.0000
```


Appendix 6: Regression of FDI on Human Capital Development

```
. xtreg HCD FDI GDP EXCH INF LI REM, fe

Fixed-effects (within) regression               Number of obs      =       990
Group variable: ID                              Number of groups   =        30

R-sq:  within  = 0.1139                         Obs per group: min =        33
       between = 0.0282                                        avg =      33.0
       overall = 0.0433                                        max =        33

                                                F(6,954)           =     20.44
corr(u_i, Xb)  = -0.1148                        Prob > F           =    0.0000
```

HCD	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
FDI	-.8730139	.152801	-5.71	0.000	-1.172879	-.5731491
GDP	-.000244	.0000947	-2.58	0.010	-.0004299	-.0000582
EXCH	-.0289548	.0073383	-3.95	0.000	-.0433558	-.0145538
INF	.0028719	.0011227	2.56	0.011	.0006686	.0050751
LI	-.1469277	.0847663	-1.73	0.083	-.3132776	.0194222
REM	-.4430031	.0884747	-5.01	0.000	-.6166305	-.2693756
_cons	56.8733	2.077399	27.38	0.000	52.7965	60.9501
sigma_u	27.269064					
sigma_e	13.649013					
rho	.7996601	(fraction of variance due to u_i)				

F test that all u_i=0: F(29, 954) = 75.38 Prob > F = 0.0000

Appendix 7: Regression of FDI on Bank Deposits (Claims to Private Sector% GDP)

```
. xtreg DEPOSIT FDI GDP EXCH INF LI REM, fe

Fixed-effects (within) regression               Number of obs      =       990
Group variable: ID                              Number of groups   =        30

R-sq:  within  = 0.9950                         Obs per group: min =        33
       between = 0.9782                                        avg =      33.0
       overall = 0.9943                                        max =        33

                                                F(6,954)           =  31566.65
corr(u_i, Xb)  = -0.0104                        Prob > F           =    0.0000
```

DEPOSIT	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
FDI	.4115461	.279318	1.47	0.141	-.1366025	.9596947
GDP	-.0002186	.0001731	-1.26	0.207	-.0005583	.0001212
EXCH	.0084561	.0134143	0.63	0.529	-.0178688	.0347809
INF	.8914029	.0020523	434.35	0.000	.8873754	.8954304
LI	.6107197	.1549515	3.94	0.000	.3066344	.9148049
REM	.0055936	.1617304	0.03	0.972	-.3117949	.3229821
_cons	-13.01903	3.797455	-3.43	0.001	-20.47136	-5.566699
sigma_u	10.445849					
sigma_e	24.950201					
rho	.14914098	(fraction of variance due to u_i)				

F test that all u_i=0: F(29, 954) = 3.45 Prob > F = 0.0000

Appendix 8: Regression of FDI on Human Capital Development (Infant Mortality)

```
. xtreg EXPORT FDI GDP EXCH INF LI REM, fe

Fixed-effects (within) regression               Number of obs      =       990
Group variable: ID                              Number of groups   =        30

R-sq:  within  = 0.0765                         Obs per group: min =        33
       between = 0.0000                                        avg =      33.0
       overall = 0.0025                                        max =        33

                                                F(6,954)           =     13.17
corr(u_i, Xb)  = -0.3302                        Prob > F           =    0.0000
```

EXPORT	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
FDI	.3475294	.0913985	3.80	0.000	.1681641	.5268947
GDP	.0001116	.0000567	1.97	0.049	4.11e-07	.0002228
EXCH	.0240264	.0043894	5.47	0.000	.0154124	.0326404
INF	-.0005887	.0006715	-0.88	0.381	-.0019066	.0007291
LI	-.0291776	.0507033	-0.58	0.565	-.1286804	.0703252
REM	-.1613849	.0529215	-3.05	0.002	-.2652408	-.057529
_cons	28.99464	1.242604	23.33	0.000	26.55609	31.43319
sigma_u	15.64147					
sigma_e	8.1642089					
rho	.78589083	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(29, 954) =     93.65                 Prob > F = 0.0000
```