Drivers of Foreign Direct Investment in Egypt

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Abstract: This article set out to analyse the occurrence of foreign direct investment (FDI) in the North African country of Egypt. Various macroeconomic variables were examined to determine their effect on attracting FDI inflows towards Egypt. Using OLS, we sought to identify key determinants of FDI in Egypt. Despite natural resource endowment in gas, oil and alternative energy – there was no evidence that foreign investors were flocking to Egypt for the natural resources. On the other hand, it was established that financial market development plays a pivotal role in harnessing inward FDI. It is recommended that the Egyptian government removes barriers to trade, strengthens institutions, and continues the momentum of providing an investor-friendly environment for foreign investors so as to improve its attractiveness and increase its potential to harness more FDI to push its economic growth agenda as a developing African country.

Keywords: FDI; natural resources; financial market development; Egypt

JEL Classification: E60

1 Introduction

International capital flows have been enjoying growing attention from policy-makers, central banks, international institutions, investors and academia, mainly because the volume of flows has grown at a phenomenal rate since the beginning of the 1990s (De Santis & Ehling, 2007). However, this growth has not been enjoyed by all economies, with some emerging countries performing poorly insofar as attracting FDI is concerned. In 1999, the UNCTAD argued that FDI is a reliable source of stable funding as it gives recipient countries the confidence to adopt long-term views towards their economic growth plans. Also, foreign investment plays the significant role of plugging gaps in funding where there is a mismatch between domestic savings and investment needs (Ndoricimpa, 2009). Therefore, any futuristic government would act to ensure that its investment policies provide a conducive environment to foreign investors.

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An assessment of FDI inflows to Africa revealed that most source countries are in the European Union (United Kingdom, Netherlands, Italy and France), as well as the United States. The economic sectoral beneficiaries are mainly financial services, petroleum and mining, as well as manufacturing (UNCTAD, 2014). In recent years however, foreign investors have upped their stakes and shown greater interest in real estate, oil, gas, and alternative or renewable energy. As a result, this has seen increased FDI inflows directed to smaller economies such as Egypt and Morocco in North Africa, as well as Ghana, Angola and Mozambique. Morocco has started enjoying FDI inflows to its automotive sector, with greenfield investment in 2016 alone amounting to US$1.3 billion, made particularly by PSA Peugeot-Citroen, Renault (France) and Ford (United States) (African Economic Outlook, 2017).

Table 1. Top FDI destinations in Africa by value of investment (2016)

Destination country	**Value (US$ billion)**	**Main recipient sectors in 2016**
Egypt	10.1	Real estate, oil, gas, alternative/ renewable energy
Morocco	4.9	Alternative/ renewable energy, real estate, automotive
Angola	4.4	Oil, gas, communication, transportation
Ghana	3.6	Oil, financial services, construction
Mozambique	3.4	Transport, coal, gas, real estate
Ethiopia	2.7	Chemicals, real estate, textiles
South Africa	2.8	Coal, oil, gas, transportation, automotive

According to the African Economic Outlook (2017), FDI investment by companies in Africa for the 2015/2016 period were primarily driven by location-based motives. It can be assessed from Table I above that Egypt was the leading destination of preference by foreign investors. This could be attributed to the country's growing natural resources discoveries in oil, gas and renewable energy, as well as interest in real estate. Part of the attraction of foreign investors to Egypt is attributable to the country's adoption of the automatic authorisation for priority investments, which have greatly enhanced the country's institutional quality. This includes the provision of guarantees against expropriation and nationalisation; the right to own land, the right to maintain foreign currency back accounts, freedom from administrative attachment, the right to repatriate capital and profits, and equal treatment regardless of nationality (Alessandrini, 2000).

Table II gives a snapshot of FDI inflows to selected African economies from 2007 to 2014. Earlier work by Makoni (2015) revealed that in general, there was an upward trend in FDI inflows to most of the surveyed countries. Small economies such as Egypt, Tunisia and Mauritius have emerged and taken over traditional recipients of foreign direct investment such as oil-producing Nigeria. Nigeria lost substantial volumes of FDI primarily as a result of fluctuating global oil prices, as well as its own political instability, which shook investor confidence.

Table 2. FDI inflows to selected African economies (% FDI to GDP)

	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**1980-2014 AVG**
BWA	4.52	4.76	1.25	1.06	6.97	0.99	1.26	2.31	3.19
CIV	2.18	1.93	1.63	1.44	1.19	1.19	1.19	1.33	1.27
EGY	8.87	5.83	3.55	2.92	-0.20	1.06	1.54	1.67	2.40
KEN	2.28	0.27	0.31	0.45	0.33	0.32	0.68	1.55	0.54
MAUR	4.37	3.92	2.91	4.42	3.85	5.15	2.17	220.00	7.71
MORO	3.76	2.77	2.17	1.37	2.54	2.96	3.23	2.45	1.28
NGA	3.63	3.94	5.05	1.64	2.15	1.54	1.09	2.29	3.00
RSA	2.20	3.45	2.58	0.98	0.99	1.16	2.25	1.64	0.93
TUN	3.89	5.80	3.51	3.00	0.94	3.44	2.25	2.63	2.53

Source: World Development Indicators (2015)

As indicated in Table II above, Mauritius has been receiving significant FDI inflows, equivalent to as much as 220% of its GDP in 2014. In 2007, the top 3 FDI-recipient countries in terms of FDI to GDP were Egypt (8.87%), Botswana (4.52%) and Mauritius (4.37%). Shortly after the global economic meltdown, the top 3 FDI-recipient countries were Botswana (6.97%), Mauritius (3.85%) and Morocco (2.54%), while in 2014, Mauritius remained leading the pack (220%), followed by Tunisia (2.63%) and Morocco (2.45%), respectively. Of all the countries under review, Mauritius harnessed the highest average of 7.71% of FDI to GDP over the period 1980 to 2014, followed by Botswana at 3.19% and Nigeria at 3%. This was significant compared to Kenya's 0.54%.

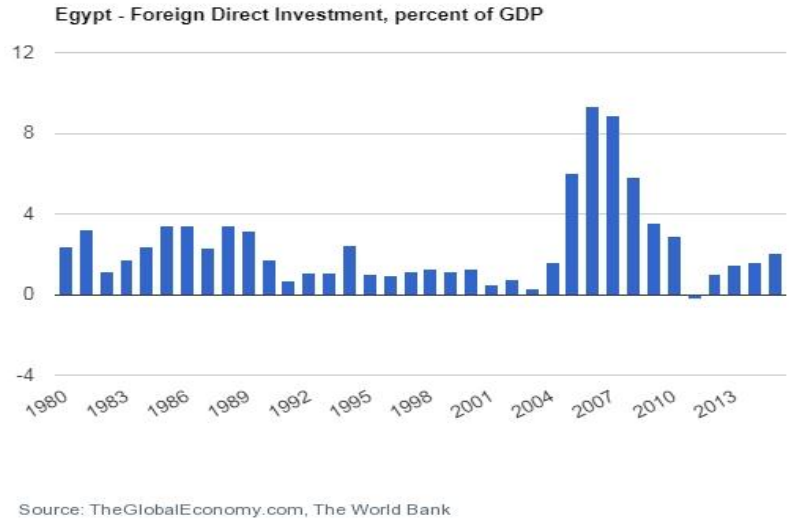

Figure 1. FDI trends, Egypt 1980 - 2015

According to the World Investment Report (WIR, 2017), FDI flows to the North African region rose by 11% to US$14.5 billion, buoyed by foreign investment reforms and new gas discoveries. Much of the investment growth can be attributed to Egypt where FDI inflows grew by 17% to US$8.1 billion, mainly due to Shell's discovery of gas reserves in Egypt's Western Desert. On the contrary, Moroccan FDI inflows fell by 29% to US$2.3 billion in 2016 as a result of a decline in European consumer demand. Using time series, country level data for Egypt for the period 1980 to 2016, the main objective of this paper is to explore factors that give rise to inward FDI flows to the country. The remainder of this paper is as follows: Section 2 gives a detailed review of literature on the determinants of FDI. Section 3 considers financial markets in Egypt, while the methodology and empirical analyses are in Section 4. The paper ends with a brief discussion of the findings in section 5, and conclusion and policy recommendations in section 6.

2 Literature Review

Foreign Direct Investment (FDI) is any international investment made by one economy's resident entity, in the business operations of an entity resident in a different economy, with the intention of establishing a lasting interest (International Monetary Fund (IMF), 1993). Several theories have been put forth

to explain patterns and motives of FDI globally. Lipsey (2004) argued that the macroeconomic view sees FDI as a flow of (foreign) capital across national borders, from home to host countries, measured in balance-of-payments statistics. He further identified macro (country)-level determinants that impact on a host country's ability to attract FDI as being market size, economic growth rate, GDP, infrastructure, natural resources, and institutional factors such as the political stability of the country, amongst others.

The theory of foreign direct investment is based on the principles of international specialisation of production and early work laid by Smith (1776) as cited in Smith (1937) and Ricardo (1817). However, Smith's theory of absolute advantage did not explain how trade arose between countries where one country was not in the business of production. Ricardo's (1817) FDI proposition was based on the theory of comparative advantage. Ricardo's (1817) theory was also flawed because it was based on the assumptions of two countries, two products and perfect factor (labour and capital) mobility, but still did not justify international capital movements (Kindelberger, 1969). Other well-known scholars to theorise FDI include Mundell (1957), Vernon (1966), Casson (1979), Rugman (1980), Calvet (1981), Kojima and Ozawa (1984), and Grosse (1985). It is however Dunning's eclectic paradigm (theory) of international production (Boddewyn, 1983) which to this day is used to explain the underpinnings of FDI.

Dunning's 1977 Eclectic Paradigm postulates that FDI occurs under different scenarios of ownership, locational and internalisation advantages (OLI). According to Dunning (2000), in order for a firm to engage in foreign direct investment, it should possess net, firm-specific ownership advantages over other firms serving particular markets such as trademarks, patents, information and technology. Furthermore, FDI location is influenced by firm behaviour insofar as the motives of its siting is concerned, that is, whether it is resource-seeking, market-seeking, efficiency-seeking or strategic asset seeking. However, the overarching decision is in fact taken on the basis of economic geography which considers country-level characteristics such as its natural resources endowment, availability of labour, local market size, infrastructure and government policy regarding these national resources (Popovici & Calin, 2014). Lastly, it must be more profitable for the firm possessing these ownership advantages to use them for itself (internalisation), rather than to sell or lease them to foreign firms through licensing or management contracts (externalisation).

Several empirical studies have highlighted human capital, degree of openness and inflation as being leading determinants of FDI. Al Nasser and Gomez (2009) tested the influence of financial market development and found a positive relationship between FDI and stock market development, as well as a significant and positive correlation between FDI inflows and credit offered by banks to the

private sector. Later, Zheng (2009) found that inward FDI flows to China and India were influenced by domestic market growth, imports, cost of labour, and political risk. Similar to Zheng's (2009) survey were the findings of Leitao (2010) on Greece using data from 1998–2007, who concluded that trade openness, market size and labour costs were significant FDI determinants. Empirical evidence on Africa shows that the main FDI determinants are infrastructure, trade openness, natural resource endowment, low inflation and efficient legal systems (Anyanwu & Erhijakpor, 2004; Asiedu, 2006; Bokpin, Mensah & Asamoah, 2015). Asiedu (2003) explained that countries with a high unemployment rate may place more value on the employment creation aspect of FDI. Since economies in Africa are characterised by high unemployment rates, FDI in search of minerals and access to the abundant, low cost labour, will have to ensure job creation. Makoni (2017) in exploring the drivers of FDI and FPI in developing African countries, found that FDI inflows are influenced by past inflows of FDI, low inflation, infrastructural development, real GDP growth rate and financial market development.

From the foregoing discussions, it has been ascertained that foreign direct investment contributes to the economies of many developing countries. However, the various channels through which investors enter host countries is largely dependent on location-specific characteristics, which are often at the control of the host governments and policy-makers. With this in mind, we seek to identify the determinants of FDI and the specific role of the domestic financial markets in Egypt. The next section considers the state of financial markets in Egypt.

3 Financial Markets in Egypt

3.1. Stock Markets

Researchers have in recent years provided evidence on the growing and important role of financial market development with regard to economic growth. Some arguments that have been put forth are that financial market development enhances resource allocation efficiency. The financial markets are responsible for reducing liquidity risk, while facilitating risk management on behalf of savers. The same system also offers alternative avenues of investment (portfolio diversification), as well as acting as an information hub for would-be investors (Demirguc-Kunt & Maksimovic, 1996; King & Levine, 1993). As such, according to Allen and Ndikumana (2000), countries which have unsophisticated financial markets offer investors limited investment choices, often resulting in harnessed savings being allocated to unproductive projects.

In Africa, private capital demand is the result of a desire to use technology transfers and abundant low-cost labour. Sovereign capital demand is generated by the need to finance budget deficits and boost infrastructural development. Both

these scenarios provide opportunities for foreign investors to diversify their portfolios by venturing into other financial markets, besides their own. In considering where to place their surplus funds, foreign investors consider such matters as the higher costs of transacting in foreign securities, exchange rate risk, political risk and institutional factors and the failure of purchasing power parity.

The financial landscape in Africa is diverse. However, two main categories of financial markets can be identified, namely, the public equity (stock) market and the private debt (banking sector) market. Stock markets play a very important role in an economy. Roles that have been continually reinforced are the commonly-discussed savings mobilisation, resource allocation, liquidity, risk sharing and portfolio diversification.

The Egyptian Exchange (EGX) is one of the oldest stock markets to be established in the Middle East. Its origins can be traced back to 1883 when the Alexandria Stock Exchange was established, followed by the Cairo Stock Exchange in 1903. The Alexandria Stock Exchange was renowned for its forward cotton contracts, to the extent that up until the 1950s, most of the trading was done with the Liverpool Cotton Exchange; proof of Egypt's strong ties with the British Empire; and also Egypt's own dependency on the cotton crop. When Egypt's economy was booming, the number of listed companies on the Cairo Bourse alone reached 228, with a combined market capitalisation of ninety-one million Egyptian pounds. At one point when taken into consideration together, the Cairo and Alexandria Bourses ranked among the world's top five stock exchanges. As of July 2016, there were 222 listed companies on the EGX, with a turnover of 18.88%, the lowest over the past years. The first ETF on the Egyptian market was traded in 2016. Egypt imposes no restrictions on foreign ownership or investment, and there are also no taxes levied on capital gains, dividends nor repatriated funds, which makes foreign entry and exit simple.

3.2. Bank Credit Market

Domestic credit to the private sector by banks (PCRED) refers to financial resources provided to the private sector by the financial sector including deposit money banks and other depository corporations (deposit-taking corporations except central banks), such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable, that establish a claim for repayment (World Bank, n.d.). It measures financial intermediary activity and the efficiency of channelling savings to investors, and is considered to be a common investment vehicle in countries where the stock market is under-developed (Ghartey, 2015). A high level of credit to the private sector indicates an abundance of domestic capital, in which case, foreign investment capital (FDI and FPI) would not be necessary (Anyanwu, 2012).

A survey of selected African countries revealed that the average amount of domestic credit to the private sector by banks was below 50% of GDP for the period 1980 to 2014, with the exception of South Africa (108%), Tunisia (62%) and Mauritius (54%). Countries such as Botswana, Nigeria, Cote d'Ivoire and Kenya recorded domestic credit to the private sector by banks below 30% of GDP. This trend of stagnated levels of domestic credit to the private sector by banks portrays the depressed state of alternative financing options for development projects in the selected African countries.

Table 3. Domestic credit to the private sector by banks (PCRED)

	2000–2004 Average	**2005–2009 average**	**2010**	**2011**	**2012**	**2013**	**2014**
BWA	18.50	20.79	27.19	26.84	31.03	31.63	31.88
CIV	13.91	14.40	16.59	17.13	16.70	18.30	20.33
EGY	53.90	49.84	33.07	31.15	29.11	27.82	27.30
KEN	26.18	25.37	27.23	30.57	29.54	31.81	34.42
MAUR	64.04	70.35	87.86	91.42	100.81	108.10	100.24
MORO	44.79	49.97	68.67	71.99	73.40	70.17	70.59
NGA	13.78	18.77	15.42	12.48	11.80	12.59	14.61
RSA	124.52	135.34	148.98	139.54	146.09	149.47	67.22
TUN	60.70	59.98	68.53	76.26	75.93	75.74	71.74

Source: World Development Indicators (2015)

The second banking sector development measurement variable was LIQLI. Liquid liabilities of the financial system (M3) as a ratio of GDP (LIQLI) is an indicator that shows the general size of the banking sector by measuring the sector's realisable obligations, relative to the economy of the country, (Levine, 2002). Ghartey (2015) further added that these are essentially financial resources set aside for investment to boost production for future consumption, and consequently promote economic growth. As was assessed from Table IV, the overall size of the financial system in each of the surveyed economies was measured using liquid liabilities (M3) scaled by GDP. It was found that the largest financial systems were in Egypt, Mauritius and Morocco, respectively, while the smallest were in Nigeria, Cote d'Ivoire and Botswana. Again this confirms that the Egyptian economy is able to sustain itself with just domestic investments.

Table 4. Liquid liabilities of the financial system (LIQLI)

	2000-2004 average	2005-2009 average	2010	2011	2012	2013	2014
BWA	25.97	32.81	43.53	40.36	45.59	46.26	45.95
CIV	22.62	24.42	33.54	41.24	32.16	33.09	33.98
EGY	82.60	85.04	76.62	73.99	81.53	80.22	78.59
KEN	38.22	39.18	45.10	47.37	43.13	43.80	44.09
MAUR	78.41	88.89	96.76	96.43	95.45	96.37	96.70
MORO	75.90	84.16	104.95	109.13	102.11	103.08	103.86
NGA	19.74	22.05	36.49	32.99	31.97	33.85	34.60
RSA	44.96	44.39	41.49	40.23	43.46	43.46	42.91
TUN	57.75	56.54	62.21	67.17	59.85	60.95	61.93

Source: World Development Indicators (2015)

It can hence be concluded that the trends of foreign investments closely mimic the level of banking sector and stock market development, thereby underpinning the relative importance of financial market development in African economies in general.

4 Methodology

This section considers the research data, data sources and model specification of the study. This paper considers determinants of foreign direct investment in Egypt from 1980 to 2016. A regression analysis is used to ascertain the relationship between FDI and selected macroeconomic variables.

4.1. Data and Variables

This paper employed annual financial, economic and institutional quality data drawn from the World Bank's Development Indicators and Kuncic's (2014) databases. Table VIII below summarises the variables used in this study, and where they were also applied in similar studies.

Table 5. Indicators of FDI, FPI and FMD variables

Variable	Indicator	Similar Studies (Sources)
FDI and FPI inflow variables		
FDIGDP	Ratio of net FDI inflows to GDP	Alfaro et al. (2004); Asiedu (2006); Otchere, Soumaré & Yourougou (2015)
FPIGDP	Ratio of net FPI inflows to GDP	Agbloyor et al. (2014); Otchere et al. (2015)
Financial market development variables		
SMCAP	Stock market capitalisation of listed companies as % of GDP	Demirguc-Kunt & Levine (1996); Chinn & Ito (2006); Agbloyor et al. (2013)
SMTVT	Stock market value traded (total value as % of GDP)	Demirguc-Kunt & Levine (1996); Chinn & Ito (2006); Soumaré & Tchana (2015)
PCRED	Domestic credit to the private sector by deposit banks as a share of GDP	Demirguc-Kunt & Levine (1996); Agbloyor et al. (2014); Soumaré & Tchana (2015)
LIQLI	Liquid liabilities of the financial system (M3) divided by GDP	Demirguc-Kunt & Levine (1996); Alfaro et al. (2004); Soumaré & Tchana (2015)
Economic and other control variables		
RGDPG	Real GDP growth rate	Ekeocha, Ekeocha, Victor & Oduh (2012); Otchere et al. (2015)
INFL	% change in GDP deflator	Asiedu (2006); Otchere et al. (2015)
INFRAS	Log(telephone lines per 1,000 people)	Asiedu (2006); Agbloyor et al. (2013)
TRDOPN	Sum of imports and exports to GDP	Allen & Ndikumana (2000); Agbloyor et al. (2013); Otchere et al. (2015)
INTR	The real interest rate as measured by the lending interest rate, adjusted for inflation by the GDP deflator	Agbloyor et al. (2013); Otchere et al. (2015)
NATRES	Total natural resources rent to GDP	Agbloyor, Gyeke-Dako, Kuipo & Abor (2016)
INSTQ	Institutional quality, measured by the average of Kuncic's institutional quality variables	Kuncic (2014)

A times series data set for Egypt as a developing African country for the period 1980 to 2016 was used for our econometric analysis.

4.2. Model Specification

In determining the relationship between the variables of interest, FDI inflows are specified as a function of selected macroeconomic variables.

FDI = *f(FPI, PCRED, SMCAP, SMTVT, LIQLI, TRDOPN, INFRAS, RGDPG, INFL, INTR, NATRES, INSTQ)*

The functional form of FDI highlighted above is specified as a linear function of the selected macroeconomic variables. Thus,

$$\boldsymbol{FDI_{it} = \alpha_0 FPI_{it} + \alpha_1 RGDPG_{it} + \alpha_2 INTR_{it} + \alpha_3 INFL_{it} + \alpha_4 INFRAS_{it} + \alpha_5 TRDOPN_{it} + \alpha_6 INSTQ_{it} + \alpha_7 NATRES_{it} + \alpha_8 TRDOPN_{it} + \alpha_9 SMCAP_{it} + \alpha_{10} SMTVT_{it} + \alpha_{11} LIQLI_{it} + \alpha_{12} PCRED_{it} + \varepsilon_{it}} \quad \textbf{(1)}$$

where, *i* denotes country, *t* denotes time, α_0 is a constant term, ε_{it} is a random error term and the other variables are defined as:

FDI_{it} = the inflow of FDI as a percentage of GDP into country *i* for time *t*

FPI_{it} = the inflow FPI inflows as a percentage of GDP into country *i* for time *t*

$RGDPG_{it}$ = the real GDP growth rate

$INTR_{it}$ = the lending interest rate, adjusted for inflation by the GDP deflator

$INFL_{it}$ = the annual rate of inflation

$INFRAS_{it}$ = log of fixed telephone lines per 1000 people of the population

$TRDOPN_{it}$ = the openness index proxied by total trade as a % of GDP

$INSTQ_{it}$ = the measure of legal, political and economic institutional quality

$NATRES_{it}$ = total natural resources scaled by GDP

$SMCAP_{it}$ = stock market capitalisation as a % of GDP

$SMTVT_{it}$ = stock market total value traded as a % of GDP

$LIQLI_{it}$ = liquid liabilities of the financial system (M3) divided by GDP

$PCRED_{it}$ = domestic credit by banks to the private sector as a % of GDP.

Diagnostic tests were applied to the above linear model before it was estimated. To avoid spurious results of the regression analysis, the data were tested for serial

correlation, multicollinearity and heteroskedasticity. The Breusch-Pagan test was used to test for heterokcedasticity. A correlation matrix was used to detect any multicollinearity amongst the variables.

The Ordinary Least Squares (OLS) model was applied on the multiple regression to determine the nature of the relationship between the dependent and independent variables. The next section presents the results of the regression analysis and a discussion of the empirical findings.

4.3. Results

As a preliminary to our econometrics, we ran descriptive statistics for the variables identified. Table VI summarises the descriptive statistics for Egypt for the period 1980 - 2016. The descriptive statistics indicate that the FDI inflows to Egypt as a percentage of GDP were significantly low. The mean of net FDI inflows for the period under review was 2.39% of GDP, with a standard deviation of 2.11. With regard to FPI inflows, the average was 0.02% of GDP, with a standard deviation of 0.51. The minimum FPI as a percentage of GDP was -2.45%, while the maximum was 0.81%. In both cases of international capital flows, FDI and FPI disinvestment is deemed to have occurred in Egypt where the flow values were negative, thereby implying that outflows occurred during that period. The low FPI inflows could be attributed to the regulatory framework governing foreign investments into the country. Stock market capitalization peaked at 106.75, indicating that the domestic financial markets in Egypt are able to sustain the economy without a need to necessarily depend on external funding sources such as FDI.

Table 4. Summary statistics for variables used in the pooled estimation (1980 – 2016)

Variable	Obs	Mean	Std. Dev.	Min	Max
YEAR	37	1998	10.82436	1980	2016
FDIGDP	37	2.391485	2.113088	-.2045323	9.343527
FPIGDP	37	.0208698	.5053239	-2.45166	.813284
PCRED	37	35.19249	11.33044	13.18058	54.93114
SMCAP	37	26.1454	25.15778	4.080647	106.7521
SMTVT	37	9.353066	12.62908	.1712102	44.15637
CCBA	37	68.26444	10.85261	50.59142	82.13815
LIQLI	37	79.0993	6.488059	58.37586	92.03516
TRDOPN	37	52.05704	11.31654	35.325	82.17668
INFRAS	37	69.03045	47.9683	9.358883	157.0041
RGDPG	37	4.688932	2.066811	1.078838	10.01134
GOVSP	37	12.72803	2.473031	10.28571	19.01848
GCFGDP	37	21.54585	5.287532	14.04686	34.91937
INFL	37	10.54832	5.771394	.8699564	31.13814
HUMCA	37	96.86624	13.803	67.32982	114.8487
REXCR	37	3.656928	2.205031	.7000007	7.077609
INTR	37	14.35468	2.325408	11.00833	20.32833
NATRES	37	15.82075	7.942653	4.87787	35.4223
INSTQ	37	.4350013	.0203982	.380764	.4616895

Correlation amongst the identified variables was tested at the 1% level of significance. It was found that the individual financial market variables of stock market capitalization, stock market value traded and liquidity have a positive and highly significant correlation with both foreign direct investment and institutional quality. A highly significant and positive relationship was also established between FDI and trade openness. This is because an investor-friendly policy framework as well as a developed financial system attract foreign investment into the market. High lending interest rates on the other hand were found to shun FDI, as investors would rather borrow in their own home markets which provided lower costs on loans. This was found to be the case in Egypt. These findings in turn reiterate the importance of foreign direct investment in further spurring the development of domestic financial markets, as well as improving government investment policies.

Table 7. Correlation results

	FDIGDP	FPIGDP	PCRED	SMCAP	SMTVT	LIQLI	TRDOPN
FDIGDP	1.0000						
FPIGDP	-0.2859	1.0000					
PCRED	0.1725	0.0028	1.0000				
SMCAP	0.6836*	-0.2650	0.6243*	1.0000			
SMTVT	0.7469*	-0.2406	0.3980	0.8912*	1.0000		
LIQLI	0.4593*	-0.1767	0.4957*	0.6108*	0.5173*	1.0000	
TRDOPN	0.4329*	-0.1656	-0.2841	0.1028	0.1753	0.0045	1.0000
INFRAS	0.3885	-0.1777	0.6878*	0.8563*	0.7932*	0.6235*	-0.0746
RGDPG	0.3797	-0.0288	-0.0575	0.0969	0.1616	-0.2955	0.5135*
INFL	0.0590	-0.1393	-0.5380*	-0.2527	-0.1316	-0.0016	0.0148
INTR	-0.1841	0.0627	-0.4229*	-0.5685*	-0.5844*	-0.0886	0.1682
NATRES	0.4160	-0.1105	-0.3200	0.0204	0.1133	-0.1128	0.8611*
INSTQ	0.3318	-0.0542	0.2631	0.5987*	0.6969*	0.1232	-0.1094

	INFRAS	RGDPG	INFL	INTR	NATRES	INSTQ
INFRAS	1.0000					
RGDPG	-0.1339	1.0000				
INFL	-0.2754	-0.0032	1.0000			
INTR	-0.6622*	-0.0045	0.3979	1.0000		
NATRES	-0.1720	0.5835*	0.1008	0.0201	1.0000	
INSTQ	0.5575*	0.0347	-0.0642	-0.6246*	-0.0429	1.0000

We conducted various diagnostic tests on our data variables. Using the Jacque-Bera normality test, we failed to reject the null hypothesis as our data was found to be normally distributed. We tested our variables for the presence of multicollinearity using the Variance Inflation Factor (VIF). There was no serial correlation between any of our variables as the VIFs were below the 10-point cutoff. Lastly, we examined our data for heteroskedasticity using the Breusch-Pagan test. Again, we failed to reject the null hypothesis as our probability is above 0.05, hence we concluded that our data is free of heteroskedasticity.

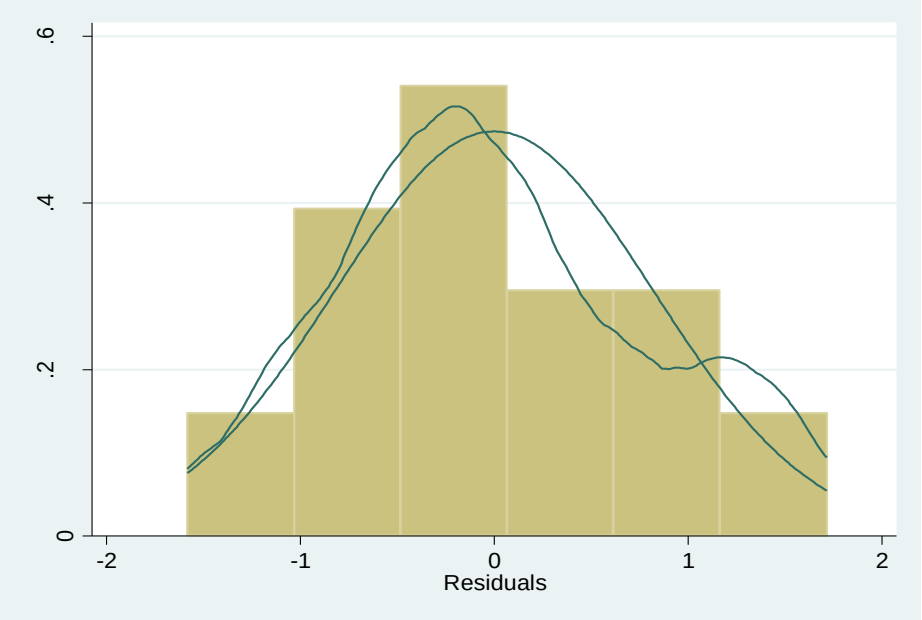

Figure 2. Histogram and normal distribution curve

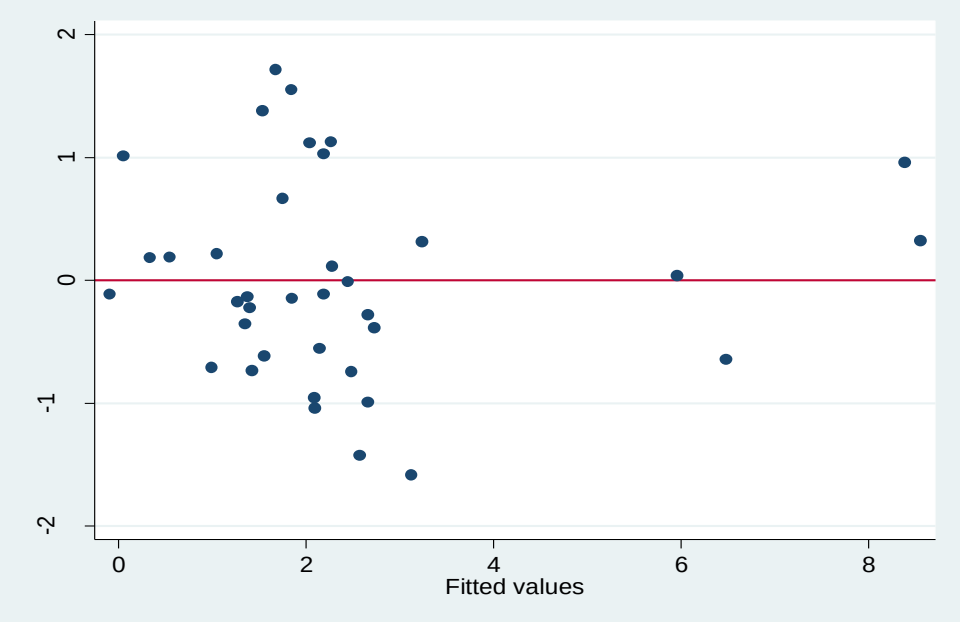

Figure 3. Residual-versus-fixed (RVF) plot graph

Using Ordinary Least Squares (OLS) regression, we set out to identify and examine the relationships between FDI and various determining factors in Egypt.

Table 8. OLS results

Source	SS	df	MS	Number of obs =	37
				F(12, 24) =	11.25
Model	136.483991	12	11.3736659	Prob > F =	0.0000
Residual	24.2610547	24	1.01087728	R-squared =	0.8491
				Adj R-squared =	0.7736
Total	160.745046	36	4.46514017	Root MSE =	1.0054

FDIGDP	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
FPIGDP	-.0703417	.3657978	-0.19	0.849	-.8253112	.6846278
PCRED	.022535	.036616	0.62	0.544	-.0530368	.0981068
SMCAP	.0417848	.0210605	1.98	0.059	-.001682	.0852515
SMTVT	.1568599	.0426751	3.68	0.001	.0687828	.244937
LIQLI	.0323457	.053625	0.60	0.552	-.0783308	.1430223
TRDOPN	-.0169004	.0450116	-0.38	0.711	-.1097998	.0759989
INFRAS	-.0295527	.0114365	-2.58	0.016	-.0531565	-.0059489
RGDPG	.0206592	.1377161	0.15	0.882	-.2635728	.3048912
INFL	.0405208	.0486971	0.83	0.414	-.0599851	.1410266
INTR	.0787901	.1700477	0.46	0.647	-.2721711	.4297513
NATRES	.0733505	.0598776	1.23	0.232	-.0502307	.1969318
INSTQ	-23.60168	14.68598	-1.61	0.121	-53.91205	6.7087
_cons	6.852585	8.831052	0.78	0.445	-11.37381	25.07898

4.4. Discussion

The results from our OLS estimation for FDI are reported in Table VII above. We find that financial market development proxied by stock market capitalization and stock market value traded are positive and statistically significant in the OLS estimation. Schumpeter (1912), Goldsmith (1969), McKinnon (1973) and Shaw (1973) theoretically advocated that well-functioning financial markets, by reducing transaction costs, facilitated capital allocation to projects that yield the highest returns and therefore enhanced growth rates. Errunza (2001) studied the role of capital markets in economic development, and the relationship between market development and economic growth. By conceptually extending the Shaw-McKinnon framework, Errunza (1974; 1979) argued that as markets develop, specialised institutions and instruments, improved liquidity and further opportunities for diversification would result in increased savings rates and capital accumulation. He reached the conclusion that a well-functioning local market is a pre-condition for attracting foreign investment capital into emerging markets. This confirms the important role played by the presence and sophistication of domestic financial markets in developing countries such as Egypt, as a driver of FDI inflows.

The stock market helps explain FDI because it produces signals that are relevant for firm investors, as well as provides an avenue to raise additional capital for growth and expansion of foreign-owned firms in the future.

Empirically, this finding is in line with earlier studies by Makoni (2017) who studied FDI and FPI determinants in emerging African economies. She found that FDI was spurred by financial market variables of stock market capitalisation and domestic credit to the private sector by banks. Further, Soumaré and Tchana (2015) examined the relationship between FDI and financial market development in 29 emerging market economies from 1994 – 2006, and found that FDI and stock market capitalisation have a simultaneous and positive impact on each other. This means that there exists bi-directional causality between FDI and financial market development. The stock market in Egypt features as a driver in harnessing FDI inflows by playing an efficient intermediary role of allocating excess funds' in the economy to deficient but productive sectors, while at the same time FDI further enhances the size and efficiency of the market. Liquidity and efficiency of financial markets locally are expected to boost the level of FDI inflows. The more developed the domestic financial market, the easier it becomes for multinational corporations (MNCs), which are the transmission agents of foreign capital flows, to grow and further expand their local operations by borrowing/ raising additional capital from the local financial system. Similarly, the more developed the domestic financial markets, the higher the likelihood of attracting foreign investment capital inflows. Earlier empirical studies by Law and Demetriades (2006) confirmed the notion that FMD is enhanced when a country's economy is simultaneously open to both trade and capital flows, as Rajan and Zingales (2003) hypothesised.

Contrary to FDI theory based on the eclectic paradigm, wherein locational advantages such as the presence of natural resources endowment, developed infrastructure and the absence of corrupt business practices, should be major attractions to foreign investors; we find that infrastructural development, natural resource endowment, and institutional quality are negatively related to FDI in Egypt. Generally, it was expected that the higher the quality of infrastructure, the more attractive the host country's potential to foreign investors, particularly those keen on FDI. Natural resource endowment was measured using natural resources rent scaled by GDP, as was applied by Agbloyor, Gyeke-Dako, Kuipo and Abor (2016) and Yilmaz, Tag, Ozkan and Degirmen (2014). According to the UNCTAD (1999), about 60% of Africa's FDI is allocated to oil and natural resource. There was expectation of a positive relationship between FDI and infrastructural quality, and FDI and natural resource endowment, respectively; however our study found this to not apply in the case of Egypt. This may be because of other factors such as financial market development which are stronger drivers of FDI in the country. Lastly, institutional quality is a complex explanatory variable which considers legal, political and economic institutional quality. These three forms of institutions

have a bearing on the decisions made by international investors in that they give an indication of the political stability of the country, and other such factors as expropriation risk, enforcement of contracts, respect for property rights, among others. The higher the institutional quality, the more attractive the country will be to foreign direct and foreign portfolio investors. A country's institutional strength plays a big role in the FDI game. Government fitness requires the adoption of protective regulation to manage market fitness. Popovici and Calin (2014) added that Government fitness is considered to include economic openness, a low degree of trade and exchange rate intervention, low corruption and greater transparency. If policies are hostile and unfavourable towards investors, MNCs will shy away from such countries as the political instability increases the risk burden on their investments. (Wilhelms & Witter, 1998).

Empirically, our findings go against those of Anyanwu and Erhijakpor (2004) who observed that infrastructure and trade openness had a positive influence on FDI inflows; while credit to the private sector, export processing zones and capital gains tax in fact shunned FDI away from Africa. Asiedu (2006) also examined determinants of FDI to Africa, and found that natural resource endowment, good infrastructure, low inflation and efficient legal systems attract FDI to Africa, while corruption and political instability have a negative impact. It was expected that with the recent discoveries and increased interest in gas and oil reserves, as well as alternative energy developments, a liberalized exchange rate regime and a supportive policy environment in Egypt; these three variables would positively and significantly influence FDI inflows.

5 Conclusion and Policy Recommendations

The aim of this paper was to identify key drivers of FDI to Egypt. The study confirmed that individual financial market variables responsible for the driving inward FDI flows were stock market capitalization, stock market total value traded as well as domestic credit to the private sector by banks and liquidity. Law and Habibullah (2009) affirmed that well-functioning financial markets and financial institutions should be a policy priority for governments. It is thus recommended that the Egyptian government formulates investment policies which will open up trade with other countries, as well as diversify and develop their other economic sectors such as manufacturing, real estate, tourism and even financial services, which in the long-run contribute to macro-economic policy goals, while moving away from their dependence on natural resources alone. Also, there is a growing need to enhance the attraction of domestic financial markets by improving instrument offerings so as to attract increased levels of FDI inflows.

On the other hand, and contrary to theoretical and empirical evidence, we found that FDI to Egypt was deterred by low institutional quality, infrastructural development and natural resource endowment. Our negative findings were unexpected because Egypt already has in place exemplary investment policies which serve the interests of foreign investors to the country. Such policies include the provision of guarantees against expropriation and nationalisation; the right to own land, the right to maintain foreign currency back accounts, freedom from administrative attachment, the right to repatriate capital and profits, and equal treatment regardless of nationality (Alessandrini, 2000).

We conclude that the advance development of the stock market and banking sector in Egypt is a step in the right direction for the country, and should be sustained. The poor performance of FDI to Egypt can be overcome by further removing all barriers to trade, further developing the financial markets, reducing the level of corruption and political instability, improving the policy environment and building stronger institutions. Financial market development could be further supported by a positive policy environment to ensure an increased inflow of FDI which would enable the country to grow its GDP.

There is scope for further research looking at identifying the long-run relationships and directions of causality between FDI and its various determinants, particularly financial market development factors in different emerging countries.

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