CYRUS CHRONICLE JOURNAL (CCJ):

Contemporary Economic and Management Studies in Asia and Africa

An imprint of the CYRUS Institute of Knowledge (CIK)

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CYRUS CHRONICLE JOURNAL (CCJ):
Contemporary Economic and Management Studies in Asia and Africa, Vol.3
An imprint of Cyrus Institute of Knowledge
http://www.cyrusik.org
May 2018

ISSN 2573-5691

Table of Contents

Book Proposal

Announcements:

- CIK 2019 Conference – April 17th to 21st 2019, MIT, Cambridge, USA
- CIK 2018 Conference – March 4th to 7th 2018, ESCA and UM5, Casablanca and Rabat, Morocco
- CIK 2017 Conference – April 14th to 16th 2017, MIT, Cambridge, USA
- CIK 2016 Conference – March 15th to 17th 2016, The American University in Cairo, Egypt
- Guidelines for submission to CCJ - http://www.cyrusik.org/ccj/submission-guidelines/

The flagship journal of the CYRUS Institute of Knowledge

Purpose:

The CYRUS Institute of Knowledge (CIK) Journal is a refereed interdisciplinary journal. The editorial objective is to create opportunities for scholars and practitioners to share theoretical and applied knowledge. The subject fields are management sciences, economic development, sustainable growth, and related disciplines applicable to the emerging economies in Asia, Africa, and other emerging economies. Being in transitional stages, these regions can greatly benefit from applied research relevant to their development. **CCJ** provides a platform for dissemination of high quality research about these regions. We welcome contributions from researchers in academia and practitioners in broadly defined areas of management sciences, economic development, and sustainable growth. The Journal's scope includes, but is not limited to, the following:

Business Development and Governance
Entrepreneurship
Ethics and Social Responsibility
International Business and Cultural Issues
International Economics
International Finance
Innovation and Development
Institutions and Development
Leadership and Cultural Characteristics
Natural Resources and Sustainable Development
Organization and Cultural Issues
Strategy and Development
Women and Business Development

Authors are responsible for the views expressed and the accuracy of the facts provided. Authors' opinions do not necessarily reflect the position of the CYRUS Institute of Knowledge, the Editor, or the Editorial Advisory Board of **CCJ**.

Editorial Advisory Board Members:

Professor Tagi Sagafi-nejad is the editor of **CCJ**. Dr. Sagafi-nejad is ex-editor of International Trade Journal, the author, in collaboration with John Dunning of The UN and Transnational Corporations: From Codes of Conduct to Global Compact, (2008) and "The Evolution of International Business Textbooks" (2014). He was the Radcliffe Killam Distinguished Professor of International Business, founding Director of the PhD Program in International Business, and Director and Center for the Study of Western Hemispheric Trade at Texas A&M International University (2003-2013). Dr. Sagafi-nejad is well-known internationally and has outstanding credentials to develop The Cyrus Chronicle into a high quality publication.

Submission Process:

For more information on the Institute, please contact: Editor@Cyrusik.org; Sagafinejad@loyola.edu; Nasgary@Cyrusik.org. **CYRUS Institute of Knowledge (CIK), Box 380003, Cambridge, MA 02238-0003, USA**

He will be assisted by an editorial board consisting of distinguished members from world-class institutions of higher learning, practice and industry.

We invite authors to submit their papers and case studies to Editor@Cyrusik.org. We will have a quick turn-around review process of less than two months. We intend to begin with two issues per year consisting of about 5-8 papers and case studies per issue. The first issue is being planned for the fall of 2015. A selected number of papers submitted to the CIK conference will be double-blind reviewed for inclusion in **THE CCJ**. We intend to have special issues on themes that are within the scope of Journal. Also, we will have invited guest issues.

THE CCJ: An imprint of the CYRUS Institute of Knowledge (CIK)

Background:

This is a historical time for the mentioned regions, and The Cyrus Chronicle intends to offer what is most urgently needed. There is no question that organizations and businesses that are capable of analyzing and applying advanced knowledge in management sciences and development are in high demand, and especially during transitional periods. It is an unusual time in the target regions and the world, a time which requires active intellectual participation and contributions. It is the era of revolution in terms of communication, technology and minds for billions of people. It is a time for intellectuals, entrepreneurs, and philanthropists to help enlighten minds and therefore enrich the quality of life for millions. It is a time to focus intensely on the regions' historical characteristics, achievements, human and natural resources, and its significant deficit in development, management sciences, and democracy. CIK's vision, "to cultivate the discourse on human capital potentials for better living," is the appropriate response to current challenges, and the journal is a platform for sharing the perspectives of scholars and practitioner with a wider audience.

CIK associates tend to have a foot in two worlds. First, most of the associates possess a wealth of intellectual and experiential knowledge which is enhanced by their active involvement in business, consulting and scholarly research and collegiate teaching. Second, some associates are sons and daughters of the affirmation regions and possess an ethnic identity, language skills, and the insights only embraced by insiders. Third, most of the CIK board of directors' members and associates are well-known scholars, members of editorial boards of journals, and even editors. CIK possesses depth, breadth, and a competitive edge to successfully manage chronicle.

CIK is committed to developing knowledge that positively contributes to the life of the world citizens, especially, the target regions. CIK is a charitable, educational, and scientific organization that has been in operation since 2011. It is a secular and nonpartisan organization that has many scholars and practitioner as member.

Editor's Introduction

Since inception in 2012, the Cyrus Institute of Knowledge has held five annual meetings. Two years ago, we published the first volume of Cyrus Chronicle Journal (CCJ): Contemporary Economic and Management Studies in Asia and Africa in conjunction with the 2016 annual conference.

CYRUS Institute of Knowledge (CIK) has had two successful international conferences since. Between the CIK March 2016 conference at the American University of Cairo and the April 2018 at Morocco, we have accepted 54 abstracts and 10 complete papers from 12 countries and 35 institutions, organizations, and companies. Please see CIK website for detail information in this regard. For some plenary sessions we had up to 150 participants.

The acceptance rate for this issue of CCJ is less than 20% considering many papers that were submitted for review and full papers for the conference. Our aim is to publish the highest quality papers that pass through multiple review process. CIK colleagues and conference participants have proposed and suggested special issues of the journal which is based on core topics (i.e., entrepreneurship, innovation, ethics, and sustainable development) and/or country specific. Therefore, we welcome your articles which meet these characteristics. We already have several papers about Iran.

Now we welcome you to the third issue (CCJ.V3). The journal intends to cover scholarship pertaining to emerging economies in Asia, Africa, and other emerging economies. Scholarship dealing with these regions tend to be either ignored or misunderstood, and there are limited outlets for scholars who work in these countries to share their scholarly outputs. Focusing on these two continents will help researchers from both developed countries as well as these two continents - which together account for the largest portion of the world population and growth. The CCJ intends to fill these gaps. An examination of our mission may shed some light on this question. The primary purpose of the journal is four-fold:

1. To share and promote knowledge of economic, management, and development issues facing countries of Asia and Africa and other emerging markets. Focusing on assessment, evaluation, and possible solutions help advance countries in this which has the largest world habitats. Development challenges are global; virtually every country faces problems concerning economic development, sustainability, food and water, population and environmental degradation. Yet no country gains by shunning opportunities that globalization can provide, with the possible exception of a few countries whose leaders lack a full understanding of the opportunities that globalization can offer. To take advantage of such opportunities, knowledge is the primary requisite. And this journal aspires to make a contribution to this body of knowledge.
2. To encourage the generation and dissemination of knowledge by local scholars whose access to mainstream academic outlets may be limited? We know many scholars from academic, public and private sector organizations whose first-hand knowledge of problems and solutions isn't being shared for lack of an appropriate outlet for dissemination. The CCJ may provide an opportunity for spreading such knowledge.
3. To focus on countries that span the northern band of Asia – from China to Turkey – to the northern tier of Africa, areas that have not previously been the subject of much attention. In the past, these countries have tended to gain the attention of scholars and the media only in times of man-made or natural crises. But in fact, these nations have many challenges similar to those of others. They wrestle with shortages of food and water and the growth of population and pollution. Although they have educated their own citizens, especially in countries that had been under the shackles of dictatorship for decades, now they have become freer to express ideas in journals such as this.
4. Academic scholarship emanating from the region under the journal's coverage tend to get lost in the academic jungle where the pressure of "publish or perish" leaves behind the younger and less experienced members. This journal will give an opportunity to the scholars with first-hand knowledge of these areas to publish their research and thereby make important contributions to the management and development body of scholarship on which the journal will concentrate. We need to know more about these topics in countries such as Afghanistan, Kazakhstan, Morocco and Tunisia as well as other countries covered by this journal. The CCJ will provide a platform for established as well as younger scholars who might collaborate with them in their research.

In this third issue of the Cyrus Chronic Journal, we include four articles and one request for book chapters and cases. Scholarly articles, from established scholars and policymakers, cover the gamut from US-China relations and anomie and dysfunction in the Middle East to direct investment in the MENA countries, inclusive business in supply chain and, finally, barriers that Western educational entrepreneurs face in pursuit of educational initiatives. As part of our mission to advance knowledge about the region and subjects of our coverage, we will continue to include reviews of major scholarly books relevant to the Journal readers.

On the journal's operational side, we want to make the publication more accessible to a wide audience across the world, and so, consistent with the 21st -century trend toward electronic media, we will publish this journal online. To maintain rigor and originality, articles submitted to the journal will undergo the standard blind review process. Reviewers' anonymous comments are shared with authors, as appropriate. Submission guidelines and procedures are delineated on the journal's website: http://www.cyrusik.org/research/the-cyrus-chronicle

As the first editor of the journal, I am pleased and proud to accept this challenge. I bring some experience; my first editorial assignment was as an undergraduate at the then Pahlavi University in Shiraz, Iran, a top-ranking institution in the region. A few students and I founded and published Danesh-Pajouh (knowledge seeker). In those days when freedom of expression was severely limited, we managed to publish one issue in March 1965 before the censors put a stop to the enterprise.

Years later, while directing a doctoral program in international business in Texas in the early 2000's, I also was the co-editor - and eventually editor - of the International Trade Journal (ITJ) until my retirement in 2013. Under my leadership, the ITJ acceptance rate fell below 10%.

Publishing an academic journal is simply a labor of love. The rewards are many-fold and include working alongside a dedicated team of colleagues – Nader Asgary, Alf, Nancy Black Sagafi-nejad, and the entire editorial Board. In addition, of course, we thank our contributors who have trusted their work of scholarship is being published in a new but growing and promising publication. They have spent many hours working to polish and prepare for the journal for publication.

In this third issue, we have already reached a threshold of about 20% in acceptance. Still, CCJ needs your support and so I ask for your help in the following ways:

- We are interested to offer special issues based on themes and country case studies. Your support, suggestions, and contributions are welcomed;
- Contribute articles, case studies, and book reviews and commentaries;
- Encourage your colleagues to do the same;
- Spread the word, especially in countries where CCJ can be most effective;
- Cite the articles published in this journal in your own research when applicable;
- Attend the annual conferences of the CIK (http://www.Cyrusik.org), physical platforms that serve every year as spawning ground for articles that may ultimately be published in this journal;
- Give us your feedback by telling us how we can further promote and improve the journal.

Welcome and thank you.
Tagi Sagafi-nejad, Editor

Does Energy Subsidy Affect FDI: The Case of Egypt

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Abstract

This paper examines whether energy subsidies determine the foreign direct investment of a country by using the data collected in Egypt. The model investigating this relation will also highlight the main determinants that derive FDI in the Egyptian economy. The results provided are crucial for public policy decision making with the continuous effort to attract FDI and decrease energy subsidy.

Keywords: Eclectic Paradigm Theory, Egyptian Economy, Energy Subsidy, Foreign Direct Investment(FDI), JEL codes, H25, F21

Introduction

Foreign Direct Investment (FDI) is considered as an important tool for development in emerging economies. It can fill the gap between available domestic savings and the required investment level. It is also the least vulnerable among other financial capital flows such as portfolio investment (UNDP, 2011). FDI is also a means of transferring production technology and managerial practices. Numerous scholars have investigated the positive effects of FDI and its impact on technology, competitiveness, and so forth (i.e., Atique et al., 2004; Basu, Chakraborty and Reagle, 2003; Bosworth, Collins, and Reinhart, 1999; Chang and Xu, 2008; Freckleton, Wright, and Craigwell, 2012; Hoang, Wiboonchutikula and Tubtimtong, 2010; Rizvi and Nishat, 2009; Zhao, 1998). Some scholars have concentrated on the situation in developing countries (i.e., Abu Al-Foul and Soliman, 2008; Azam and Ahmed, 2015; Blomstrom, Lipsey and Zejan, 1992; Borensztein, and Lee, 1998; Cambazoglu and Karaalp, 2014; Edwards, 1990; Smarzynska, 2005; and Rehman, 2016).

Different theoretical and empirical studies have been conducted to predict determinants of FDI. While Caves (1971, 1974) and Hymer (1976) concentrated on explaining the reason behind some determinants such as the emergence of multinational enterprises, Williamson (1981) offered the first serious discussion and analysis of FDI determinants. He showed that governance policies that accommodate less transaction cost attract higher investment levels.

One of the most influential theoretical studies is the Eclectic Paradigm Theory introduced by John Dunning in 1977. The study provided three main factors in the pursuit of international activities, namely; ownership (O) advantages, location (L) advantages, and internalization (I) advantages (Rogmans and Ebbers, 2013). The first sub paradigm of the eclectic paradigm theory –also known as OLI model- is ownership-specific advantages tangible and intangible assets exclusively owned by investing enterprises and used to generate rent. Ownership advantages are those competitive advantages gained by the enterprises themselves such as trademark, production technique, entrepreneurial skills, and economies of scale. On the other hand, location-specific factors refer to potentials and endowments captured by the host country such as wages, tax, tariffs and market size. Finally, internalization advantages are represented by cross-border returns such as facilities of buying and selling in the open market, as well as integration with intermediate product markets (Dunning, 1980; Dunning, 1998; Dunnig, 2000; Krugell, 2005; Bilgili, Tülüce, and Doğan, 2012).

Ongoing globalization waves have massively increased the flow of FDI to developing countries. Though the effect of FDI is complex in developing countries; many government policies work on creating incentives within the location-specific frame to attract higher levels of FDI. Governments use economic policies to make their economies more attractive destinations for investment.

[31] Lecturer, Economics Department, Head of MGMT & BI Advising Committee, Faculty of Management Technology, German University in Cairo, Egypt. An early version of the paper was presented in "Entrepreneurship, Responsible Management, and Economic Development" March 15-20th, 2016 CIK-AUC Conference at AUC in Cairo, Egypt, and it was awarded best paper. I acknowledge contributions of editor and reviewers of CCJ. All errors are those of the author.

This has raised research interests to investigate the determinants of FDI in an attempt to provide an explanation that would better assess the public policy.

One dominant public policy in developing countries is subsidizing energy. Subsidizing energy is a tool to boost industrial development; since it is a method of providing cheap energy that lower operational cost for all other industries. According to our literature survey, no research has been conducted in investigating whether such policy can be considered a determinant for FDI or not, in the case of Egypt. Although such investigation is of great importance.

This lack of research is the main motivation behind this study, which attempts to examine the role of energy subsidies in attracting FDI to Egypt. However, little literature tried to examine how far energy sources would affect FDI inflows such as; Shamsuddin (1994) investigating the impact the availability of energy in the host country, Kok, and Acikgoz Ersoy (2009) examining the impact of electric power consumption and Rogmans and Ebbers (2013) testing the role of natural resource endowments such as oil and gas.

This study employs variables addressed in literature as determinants of FDI and, additionally, incorporates energy subsidies as a government fiscal policy incentive for FDI in a multiple regression model that defines the relationship between foreign direct investment and energy subsidies. Energy subsidy variable is included in the model by two indices: first, energy subsidy cost which is estimated by the Egyptian Petroleum Ministry and the second, pump price of gasoline provided by World Bank database. The result would be of great importance in understanding the effect of current energy reform on FDI and respectively, guiding public policy for better decisions. The paper starts explaining the rationale behind energy subsidy as a determinant of FDI. This is then followed by a regression model that empirically tests the relation between FDI and Energy Subsidy.

FDI And Energy Subsidy: Is There A Relationship?

A number of developing countries – such as Egypt, Iran, and Jordan- have provided domestic producers with energy subsidy as a kind of financial support and incentive for investment. Energy subsidies can also protect industries and in the process promote jobs opportunities. This is especially true for products – such as cement, fertilizers, and petrochemicals – which are day-to-day essentials but could be rendered unprofitable without government financial support.

Thus, subsidizing energy can result in lower prices for essential products; Doing so can protect both low-income families and control inflation (Abdelrahim, 2014; Moor 2001; Koplow, 2004; Fattouh, & El-Katiri, 2012;Salehi, Qeidari, and Asgari, 2017). The effect of energy subsidy on production is summarized in Figure 1. In general, the main contribution of energy subsidy is lower production costs. Lower production costs act as a determinant for foreign direct investment as demonstrated by the following flowchart.

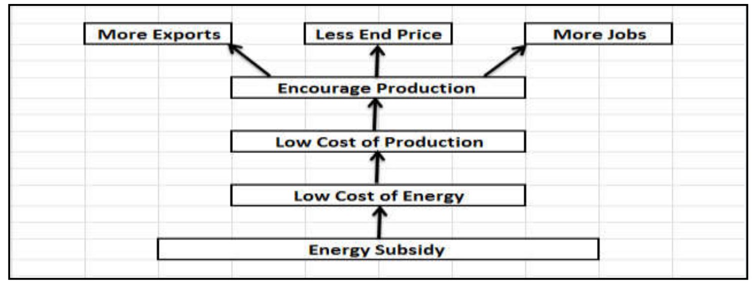

Figure 1: Effect of Energy Subsidy on Production

Source: Constructed by Author

Foreign investors, of course, seek low cost of production as credible opportunities in developing countries. Some studies (i.e., Aqeel, Nishat and Bilquees, 2004; Çevis and Çamurdan, 2007; Ramasamy and Yeung, 2010) have shown that cheap factors of production such as low wages, greatly influence the cost of labor-intensive products and low cost of borrowing also positively impacts FDI (Çevis and Çamurdan, 2007; Liu, Song, H., Wei, & Romilly, 1997), The qualification and cost of input production factors play a significant determinate of where to locate and invest (Bilgili, et al., (2012; Dua & Garg, 2015). Of course, investors consider other factors both as political and social when they make the decision to which country to invest.

It is not a matter of cheap energy that investors only seek but the efficient atmosphere for a business that guarantees at the end, a large profit. The role of energy subsidy in attracting FDI is complex. On one hand, low energy costs can lower production costs; on the other, its impact is not sufficiently known since the energy subsidy creates sector distortion that potentially protects inefficient production. Perhaps the example of Egypt can provide useful insights regarding the pros and cons of subsidizing energy costs.

Regression Analysis

The pros and cons of fuel subsidies in Egypt is constantly discussed. Figure 2 below provides an overview of gasoline price prices in the region. Until 2006 gasoline price in Egypt were nearly equal (or even less) than OPEC countries in the region such as Algeria, Libya, and Oman. It was always less than the average in high-income OECD countries and Latin American developing countries. Significant changes occurred in 2014 as the pump price of gasoline increased from $0.45 to $0.88 compared to 2012. This period is associated with a significant increase in the USA Dollar value against Egyptian currency as well as a decrease in energy subsidies. Similar changes occurred in the price of diesel fuel although they are more stagnant in comparison to gasoline.

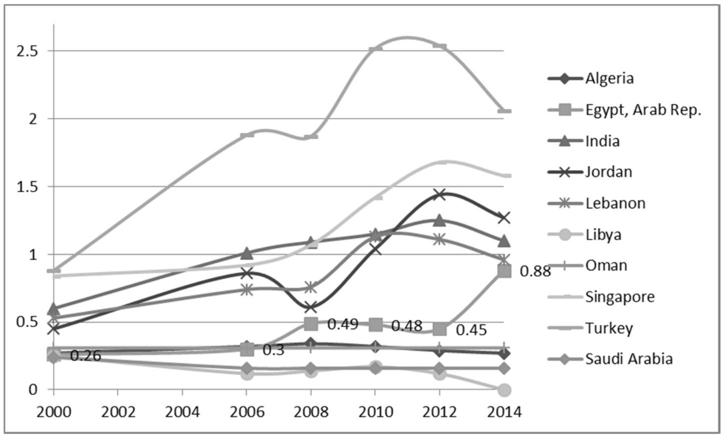

Figure 2: Pump Gasoline Price for Egypt in comparison to other countries:

Source: Based on the World Bank, World Development Indicators (2016)

Respectively, Egypt has always been dominated by low energy prices, which could be an incentive for foreign investors. Elshamy (2015) has concluded that Chinese FDI to Egypt is purely on projects that seek natural resource. This implies the important role of natural resources such as fuel in attracting FDI. Energy subsidy is part of the fuel production system in Egypt, respectively it's important to investigate its effect. The researcher was interested to investigate how far energy subsidy has been attracting FDI. His paper uses regression analysis to investigate whether energy subsidy was successful in attracting foreign investment, respectively as well as the corollary "Will removing subsidies negatively affect FDI inflows.

In order to answer this question, research depended on the location determinants that are addressed in OLI model. Based on empirical literature several variables can be used to characterize the determinants of FDI in a host country, which are presented in the empirical overview of data (Table 1).

Table 1: List of Variables used as Determinants for FDI in Empirical Literature:

Determinants	Articles	Variables
Macroeconomic Condition	Anyanwu and Yamenogo (2003) Çevis, and Camurdan (2007) Goldar and Ishigami (1999) Nasir and Hassan (2009) Omanwa (2013) Xaypanya, Rangkakulnuwat, and Paweenawat (2015)	• Real GDP growth rate • Inflation rate • Interest rate • Growth Capital formulation • Exchange rate • Annual Inflation Rate
Political and Institutional Variables	Anyanwu and Yamenogo (2003) Nasir and Hassan (2009) Xaypanya *et al*. (2015)	• Levels of both democracy and autocracy • Economic Freedom • Political Stability Index
Trade openness	Anyanwu and Yamenogo (2003) Çevis, and Camurdan (2007) Seetanah and Rojid (2011) Omanwa (2013) Xaypanya *et al*. (2015) Rogmans and Ebbers (2013)	• Total trade as a share of GDP • Total trade as a share of GNP • Sum of Imports and Exports • The ratio of the value of export (or import) to GDP
Resource endowment	Anyanwu and Yamenogo (2003) Çevis, and Camurdan (2007) Seetanah and Rojid (2011) Omanwa (2013) Rogmans and Ebbers (2013)	• Indicating whether or not a country is an oil/mineral producer and exporter (cross-sectional data). • Wages • Labor cost
Market size:	Anyanwu and Yamenogo (2003) Çevis, and Camurdan (2007) Goldar and Ishigami (1999) Seetanah and Rojid (2011) Nasir and Hassan (2009) Omanwa (2013) Rogmans and Ebbers (2013)	• Real GDP per capita • GDP Growth rate • lagged level of GNP • Real GDP
Human capital	Anyanwu and Yamenogo (2003) Seetanah and Rojid (2011)	• Life expectancy. • Tertiary education completion rate
Foreign aid	Anyanwu and Yamenogo (2003)	• Net official development assistance as a share of GDP
Economic Integration	Anyanwu and Yamenogo (2003)	• Dummy variable

Infrastructure	Omanwa (2013) Xaypanya *et al*. (2015)	• Number of fixed telephone lines/1,000 people

However, based on available data the used variables in this paper are demonstrated in Table 2. Furthermore, the main focus of this paper is testing whether energy subsidy is significant in attracting FDI, thus, energy subsidy is represented by energy subsidy cost and pump price of gasoline. Also, a dummy variable will be added to highlight the years of massive reforms in the energy sector such as the year 2004, 2008 and 2014. Since these are the years of massive increases in the price of petrol.

Table 2: Description of the Model Variables

Determinates	**Independent Variables Used**	**Explanation of the Variable**	**Expected Relation**	**Source of Data**
Market size	GDP: GDP growth	Annual percentage increase in GDP	Positive	World Bank data bank
Macroeconomic instability	INFL: Inflation	reflects the annual percentage change in prices	Negative	World bank data bank
Political Instability	POLI: political risk	Index of political rights calculated on scale 1-7. Where 1 represents the highest degree of freedom.	Negative	Freedom House
Trade Openness	TRADE: (Exports +Imports)/GDP	Total Trade as a percentage to GDP	positive	Estimated by the author based on World Bank data bank
Public Policy	ES: Energy Subsidy level	Cost of Subsidy as estimated by the ministry of petroleum	positive	Egyptian Ministry of Petroleum
	PG: Pump price of gasoline	Average of the fuel price in the country presented as liter per US dollar	Positive	World bank[32]
Reforms	REFO: Dummy Variable	Dummy Variable equal one for the year 2004, 2008 and 2014.	Negative	

[32] Missing data is calculated by the author based on announced prices for gasoline in the Egyptian market and Exchange rate.

Respectively, the following is the regression model equation:

The data used is a time series between the periods 1994 to 2015. First, an analysis of the descriptive statistics (presented in Appendix table 1) of the dependent and independent data is computed mainly to evaluate the normality condition of the data. Since FDI is positively skewed variable with Skewness parameter 1.8 and Kurtosis parameter 5.25, the author will use generalized linear model (GLM) to estimate the correlation coefficients. Also, POLI and REFO variables are skewed.

Before running the regression correlation matrix is constructed (presented in Appendix table 2) ensuring that the model is free of multicollinearity. The highest correlation coefficient was found to exist between OPEN and INFL at 0.588; however, this result falls well below the commonly accepted to indicate the presence of multicollinearity. Regression results are presented in table 3.

Table 3: E-views Regression Results Table

Dependent Variable: FDI				
Method: Generalized Linear Model (Newton-Raphson / Marquardt steps)				
Date: 06/13/17 Time: 14:27				
Sample (adjusted): 1994 2015				
Included observations: 22 after adjustments				
Family: Normal				
Link: Identity				
Dispersion computed using Pearson Chi-Square				
Convergence achieved after 0 iterations				
Coefficient covariance computed using observed Hessian				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-14.259	6.583074	-2.166	0.0303
ES	0.037421	0.006672	5.608502	0
GDP	0.800926	0.180087	4.447446	0
INFL	-0.2163	0.070784	-3.05583	0.0022
OPEN	0.188557	0.030351	6.212626	0
POLI	0.743698	1.094654	0.679391	0.4969

REFO	-1.04602	0.718398	-1.45604	0.1454

GLM (normal family and identity link function) results presented in Table 3 shows that there are 4 statistically significant variable ES, GDP, INFL, and OPEN. The goodness of fit is ensured by the significant LR test as well as very low Deviance statistic and Dispersion equals 0.9666.

As expected, increase in economic growth and openness add to FDI inflows, while the increase in inflation decreases FDI. According to regression results, political stability is not a determinant of FDI. Checking political stability index, it is nearly not changing during the period of investigation; it has a maximum value of six and minimum five. The most important is the significant relationship between the energy subsidy and FDI. The higher the energy subsidy is, the higher the FDI inflows. However, the coefficient is only 0.037; which means one percent increase in the cost of the subsidy, will increase FDI with only 0.037%. While one percent increase in GDP increases FDI with 0.8% and one percent increase in openness increase FDI with 0.18%. Respectively, in general, the effect of energy subsidy on FDI is nearly 5% the effect of GDP on FDI, and 20% of the effect of openness. Thus, it would be better than the government direct energy subsidy cost to policies that would create massive increases in GDP and trade. In addition, the dummy variable that highlights the years of high increases in fuel price is not significant. This indicates that it cannot be proved whether increasing fuel prices had an effect on FDI inflows.

Conclusion

Although limitations exist in this preliminary investigation (such as other potential determinants besides that investigated by statistics, small sample size, how the government presents energy statistics, and so forth useful insights regarding energy subsidies were presented.

Foreign direct investment is a major source of foreign currency for developing countries. This paper focused on the determinants of FDI upon Egypt between 1990 and 2015 assessing the impact of energy subsidy on FDI. The results show the importance of market size (GDP growth), trade and controlling inflation in attracting foreign direct investment. There is also a significant effect of energy subsidy in attracting FDI; however, its impact is small in comparison to other determinants. Still, since it has an effect in attracting the FDI, the government should provide an alternative since the major reduction in energy subsidy is carried.

This creates an incentive for future research to investigate the wide range of public policies that governments use to attract FDI (including tax exemption, transparency enhancement, trade policies as well as infrastructure improvement) in an attempt to identify which policies can replace energy subsidy as a determinant of FDI.

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Appendix

Table 1: Descriptive Statistics

	ES	FDI	GDP	INFL	OPEN	POLI	REFO
Mean	43.28768	2.280689	4.224415	9.178382	49.70812	5.846154	0.115385
Median	36.6835	1.252717	4.315998	9.370273	47.44246	6	0
Maximum	126.18	9.343527	7.152051	19.74854	71.68063	6	1
Minimum	1.159	-0.20453	1.078838	2.269757	34.85472	5	0
Std. Dev.	40.67514	2.486505	1.664924	4.94838	10.12494	0.367946	0.325813
Skewness	0.642681	1.815435	0.002707	0.427383	0.442763	-1.91881	2.407717
Kurtosis	2.213178	5.250234	2.22591	2.387395	2.086129	4.681818	6.797101
Jarque-Bera	2.081972	19.76733	0.649181	1.19807	1.75426	19.01877	40.74025
Probability	0.353106	0.000051	0.722823	0.549342	0.415975	0.000074	0
Sum	952.329	59.29792	109.8348	238.6379	1292.411	152	3
Sum Sq. Dev.	34743.81	154.5677	69.29926	612.1617	2562.859	3.384615	2.653846
Observations	22	26	26	26	26	26	26

Table 2: Correlation Matrix

	ES	GDP	INFL	OPEN	POLI	REFO
ES	1	-0.32539	0.399978	-0.04996	-0.2869	0.267833
GDP		1	0.185811	0.588588	0.297506	0.035147
INFL			1	0.500984	0.04696	0.496369
OPEN				1	0.154784	0.296149
POLI					1	0.086711
REFO						1