

The Relationship between Gross Domestic Product and Foreign Direct Investment: The Case of Cambodia

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ABSTRACT

Foreign Direct Investment (FDI) is widely believed to have positive effects on economic growth; yet for Cambodia, over 19 years (1993-2011) of attracting FDI inflows, the growth rate of Gross Domestic Product (GDP) has averaged at 7%, which demand a modest attempt to study their relationship whether FDI drives growth of Cambodia's economic output. This paper aims to examine the relationship between foreign direct investment and gross domestic product of Cambodia in long run over the period of 1993-2011 by using simple regression analysis, Augmented Dickey-Fuller test, Durbin-Watson test, Breusch-Godfrey Serial Correlation LM test, Breusch-Pagan-Godfrey test, and Jarque-Bera test. The result from regression found that there is a positive relationship between FDI and GDP in the long run in Cambodia, which is also supported by qualitative studies that is based on the collection of existing studies from recognized domestic and international institutions, people in senior positions, and researchers. All of the qualitative studies presented in this paper claim that FDI positively affects GDP, and most significantly, to the employment opportunities generated for local people, which in the long run help unemployment and poverty reduction in Cambodia. However, GDP growth rate has averaged at 7% over 19 years although the influx of FDI inflows dramatic increase probably because of the internal factors of Cambodia, particularly the limited absorptive capability of the advanced technology.

JEL.Classification: E220; F23; O3; F210; E27

Keywords: FDI, GDP, Foreign Investment, Domestic Investment, Growth

1. INTRODUCTION

The analysis of an economic growth of one country is complex as its determinant is the combination of many involved variables according to their contribution to the growth rate of Gross Domestic Product (GDP). However, the study of the main variable can be very essential, particularly to the policy makers, to promote further growth from that one variable. Among the many determinants identified to explain an economic growth, Foreign Direct Investment (FDI) has become one significant element in this rising trend of globalization and integration in this world economy although the question as to how, and to what extent, FDI affects economic growth is relatively conflicted from one study to another. Moreover, in developing countries, FDI is often seen as an important contribution for economic growth, and some development economists have long argued that countries pursuing outward-oriented development strategies are more likely to achieve higher rates of economic growth than those that are internally focused (Sethi and Sucharita 2011).

Foreign direct investment plays a vital role to make substantial contribution to the economic growth by investing in sectors and bringing along with other indirect positive impacts including transfer of technology, training, skills, employment, to name just a few, which all contribute to the long term development of the recipient countries. In addition, the outstanding increase in FDI inflows demands the analysis of their relationship because the positive relationship between FDI inflows and economic growth cannot be universally agreed and the

certainty whether FDI cause economic growth can be varied, yet the critical importance of FDI inflow to one economy cannot be denied. Such an essential issue deserves further investigation for one specific country to clearly identify their linkage, and this is no exclusion for Cambodia. Hence, this paper aims to identify the relationship between FDI inflows and GDP of Cambodia over 1993 to 2011.

Foreign direct investment has begun to flow into Cambodia in 1993 and has dramatically increased from 54 million US dollar in 1993 to 902 million in 2011, yet gross domestic product of Cambodia during these 19 years has averaged at 7%, which seems not to grow as much as it is supposed to be from the contribution of FDI.¹ This phenomenon is critical because the reason needs to be found, whether FDI does not contribute to GDP of Cambodia or whether Cambodia has not fully benefitted from FDI.

2. LITERATURE REVIEW

The vast impact of FDI on economic growth may directly affect the growth by contributing to capital accumulation and the transfer of new technologies to the recipient countries or indirectly by augmenting the stock knowledge of the recipient countries (De Mello 1999). These theoretical foundations on FDI and growth derive from either neoclassical model of growth or endogenous model of growth. Solow (1957) stated that the neoclassical models emphasized technical progress while Romer (1986; 1987) and Lucas (1988) introduced the endogenous growth theory emphasizing the role of science and technology, human capital and externalities in economic development (as cited in Yao and Wei 2006).

According to Solow-type standard neoclassical growth model, Brems (1970) added that FDI had been traditionally considered as an addition to the capital stock of the host country and thus augment the growth (as cited in Kotrajaras 2010). However, in the neoclassical growth model, Solow (1956) considered technological progress and labor force as exogenous, and thus FDI increases level of income only, but it has no long run growth effect if it does not augment technology because long run growth can only be increased through technological and population growth, and that means if FDI positively influences technology, then it will be growth advancing (cited in Miankhel, Thangavelu and Kalirajan 2009). Hoang, Wiboonchutikula and Tubtimtong (2010) also clarified that FDI can only affect the level of income under its contribution to capital accumulation without influencing the long-term growth rate because under the assumption of diminishing returns to capital from a neoclassical perspective.

In contrast to the neoclassical growth model, the endogenous growth model tends to provide us with better understanding into the growth-enhancing ability of FDI. In this model, rather focusing on the final outcome which is the economic growth contributed by FDI, a number of channels through which FDI can permanently affect the growth rate are emphasized, and those include research and development (R&D), human capital accumulation, and externalities or spillover effects, which all will promote growth in the long run. FDI primarily impacts economic growth through two channels. De Mello (1999), Dunning (1993), Blomstrom et al. (1996), and Borensztein et al. (1998) all supported that the first channel is through capital accumulation in the recipient country as FDI encourages the incorporation of new inputs and foreign technology in the production function of the recipient economy. De Mello (1996; 1997;

¹Data of FDI and GDP of Cambodia from World Development Indicators, World Bank, 2012. The average of GDP growth rate (7%) is the estimated measure by summing the GDP growth rate from 1993 to 2011 and divided by 19 years.

1999) further noted that the second channel is through knowledge transfers as FDI augments the host country's existing stock of knowledge via labor training, skill acquisition, and the introduction of alternative management practices (as cited in Toulaboe et.al, 2009). In this view, FDI-related technological spillovers offset the effects of diminishing returns to capital and keep the economy on a long-term growth path.

Characterized by non-decreasing returns to the set of reproductive factors of production, this model treats technological change as endogenously rather than exogenously determined. Technological change is therefore considered as the important determinant of long-term economic growth because it can spread to the different sectors of the recipient economy. This model emphasizes the role of the learning process as World Bank (1993) and Yao and Zhang (2003) stated that this model highlights the importance of human capital in the sense that education and human capital is the most fundamental condition for a late comer of industrialization to imitate the industrial world through 'learning by doing' and 'learning by watching' (as cited in Yao & Wei, 2006).

However, instead of claiming the view of fully supporting FDI-related growth theories, there is a claim that tends to be neutral. This claim points out that FDI and growth relationship depends on the internal factors of the recipient countries. These include institutional factors such as degree of openness and trade policies, legislative environment and law enforcement pointed out by Lee and Mansfield (1996), and the degree of economic and political stability noted by Bajorubio and Sosvilla-Rivero (1994) and Lipsey (1999). Buckley et.al, (2002) observed that countries with high rate of savings, open trade regime and high technological levels would benefit from increased FDI to their economies. Bengoa and Sanchez-Robles (2003) further argued that in order to benefit from long-term capital flows, the host country requires adequate human capital, sufficient infrastructure, economic stability and liberalized markets (as cited in Al-Iriani and Al-Shamsi 2007).

Sridharan, Vijayakumar, and Chandra (2009) examined the causal relationship between FDI and economic growth of the BRICS countries over the different periods generally from 1992 to 2007 using Industrial Production Index (IPI), Augmented Dickey Fuller (ADF) Test, Johannes co-integration test and Vector Error Correction Model (VECM). They found co-integration relationship among BRICS countries. Based on vector correction mechanism, there were bi-directional causality between FDI and GDP for Brazil, Russia and South Africa and one way Granger relationship for India and China, which means FDI caused economic growth for these two countries.

Many studies have often focused on the transfer of technology of FDI from more developed economies to less developed economies, which seems to imply that the less developed countries benefit more out of FDI, however, the United States, the developed country receives the greatest inflow of FDI, does benefit from FDI. Roy and Berg (2006) studied the impact of FDI inflows on United States applying time-series data from 1970 to 2001 to a simultaneous-equation model (SEM) that explicitly captured the bi-directional relationship between FDI and U.S economic growth. FDI had found to have a significant, positive, and economically important impact on U.S. growth. Branstetter (2000) further tested the hypothesis that FDI is a channel of knowledge spillovers for Japanese multinationals undertaking direct investments in the United States and found evidence that FDI increased the flow of knowledge spillovers both from and to the investing Japanese firms in the U.S.

Anowar and Mohammad (2012) examined co-integration and the causal relationship between FDI and GDP in both short and long run of Bangladesh, Pakistan and India over the period of 1972-2008. The econometric models, ADF test, Engle-Granger two-step co-integration test, VECM, and Granger Causality (GC) to find the directional relationship between FDI and GDP. The result found that there is significant relationship for both long run and short run of Pakistan. GC results suggested that there is one way or unidirectional relationship found for Pakistan and India, which means FDI caused economic output and was the vital contributor as well as a significant driver for the economic growth of Pakistan and India.

Miankhel et.al (2009) adopted a time series framework of the VECM to study the dynamic relationship between export, FDI and GDP for six emerging countries of Chile, India, Mexico, Malaysia, Pakistan and Thailand covering a period of 1970 to 2005. For Asia two specific cases, it was the GDP growth in the long-run that attracted FDI in India. In Thailand, there was a bidirectional relationship between GDP and FDI under a block exogeneity test. This means that growth of GDP attracted FDI and the inflow of FDI further stimulated the growth of GDP.

Hoang et.al (2010) tried to examine the effect of FDI inflow on economic growth in Vietnam by using panel data of sixty-one provinces over the 1995 to 2006 period. They also include the degree of trade openness, the level of human capital and the domestic investment in Vietnam, the interaction terms between FDI with trade, human capital and domestic investment. Their study result of the significant and positive coefficient of FDI suggested that FDI has a positive effect on Vietnamese economic growth. The results further presented that all regions of Vietnam have positive effects on the economic growth of the country. The authors believe that the more FDI inflows are in the region, the better the economic growth in Vietnam.

Kotrajaras, Tubtimtong, and Wiboonchutikula (2011) examined the impacts of FDI in groups of 15 East Asian countries classified by level of economic development, using panel data analysis together with co-integration methods. The results showed that favorable impacts of FDI on East Asian countries depend on complementary factors, particularly each host countries' economic conditions such as levels of financial market development, institutional development, better governance, and appropriate macroeconomic policies. The results showed that FDI has a positive relationship with economic growth in high-income (Hong Kong, Japan, South Korea, Singapore, and Taiwan) and middle-income countries (China, India, Indonesia, Malaysia, the Philippines, and Thailand), and the high-income countries will benefit more than middle-income countries. Low-income economies (Cambodia, Laos, Myanmar, and Vietnam) tended to benefit less from FDI because the low-income countries do not have appropriate facilities from government investment, low degree of trade openness, low level of public investment on education, low level of financial development, and high level of corruption. They concluded that the low-income economies are not capable of absorbing the benefit of FDI.

Borensztein, Gregorio and Lee (1998) tested the effect of FDI on economic growth in a cross-country regression framework, utilizing data on FDI flows from industrial countries to 69 developing countries from 1970 to 1989. Their results suggested that FDI is an important vehicle for the transfer of technology, contributing relatively more to growth than domestic investment. However, the higher productivity of FDI holds only when the host country has a minimum threshold stock of human capital. Thus, FDI contributed to economic growth only when a sufficient absorptive capability of the advanced technologies is available in the host economy.

3. METHODOLOGY

The scope of this study covers from 1993 to 2011 because FDI has started entering into Cambodia since 1993 but at the time of this study, the available data of FDI inflows into Cambodia from WDI of World Bank has not included the data of 2012 yet. As this study is a modest attempt to examine the relationship between FDI and economic growth in Cambodia, both qualitative and quantitative approaches are used.

Qualitative approach is carried out by collecting the exiting available studies on the impacts of FDI on Cambodia from recognized domestic and international institutions, people in senior positions, and researchers – United Nations Development Program (UNDP), Cambodia Development Resource Institute (CDRI), Asian Development Bank (ADB), Council Development of Cambodia (CDC), and officials from US Ambassadorial on Cambodia, from Ministry of Economy and Finance, and from Cambodian Economic Association (CEA). The main focus of this study is on the direct impact of FDI, which is the economic growth of Cambodia, but there are limited studies reporting about the direct impacts of FDI inflows on Cambodia's economy, which is the growth rate of GDP contributed by FDI. Most reports have discussed only the indirect impacts of FDI, so indirect impacts are briefly covered in qualitative approach but not in quantitative approach.

Quantitative approach is conducted by simple regression analysis by Ordinary Least Square (OLS) to capture the long-term relationship between FDI inflows and GDP in Cambodia. The data sets are obtained from World Development Indicator (WDI) collected and developed by World Bank. Gross Domestic Product (GDP) is used as the indicator for economic growth and net FDI inflows for FDI. Both indicators are annual data set measured in million US dollar from 1993 to 2011. Limitations on regression analysis include there are only two variables used in this study – FDI and GDP. All data of both variables was in current US dollar in millions. There is only one model (OLS estimator) was used to determine the relationship between the two variables, the econometric methodology is limited to examine only the long term relation, and there are only 19 annual observations, so if the results from this study are considered to use for other purposes rather than academic purpose, a few more samples and tests should be included (i.e. Error Correction Model and Causality Test).

4. ANALYSIS AND FINDINGS

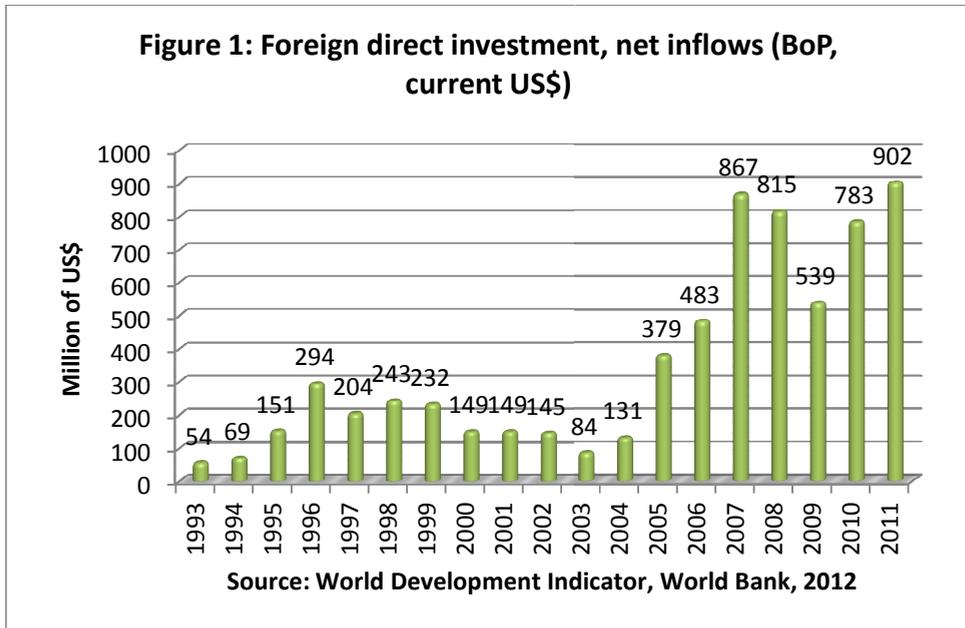
4.1 Qualitative Approach

During 1990s, noticed by Mr. Vann Ty, there have been five main time frames of Cambodia – transition's period (1993) of economy structure and government system; economy based on foreign aid (1994) results from budget deficit; strong foreign investment performance in garment industry (1995); political instability and the effect of Asian currency crisis (1997-1998); and ASEAN regional integration (1999). Undergoing all of these instability, Cambodia is probably considered to have low country competitiveness regarding weak institutional framework, corruption, and other criteria, but according to UNDP report, Cambodia's competitive rankings do improve its WEF ranking as well as its World Bank Doing Business rank by 15 places between 2007-2008 and 2008-2009 although criteria such as institutions, infrastructure, health and primary education, higher education and training, financial and business market sophistication, and innovation are still low comparing to ASEAN countries, and foreign investors and chambers of commerce suggested that a large amount of FDI is potentially lost as a result of uncertainty of the implementation of laws and regulations.

From 1998 to 2006, Ear (2008) describes the four growth engines of Cambodia’s economy include crops (13%), garments (28%), construction or real estate (20%), and hotel or transports (13%). These four main growth engines that contributed 74% of GDP probably have been mostly contributed by foreign direct investors, particularly, the garment sector which is the largest contribution to economic growth over these consecutive nine years. Since FDI inflows started to flow into Cambodia since 1993, it has taken a big part in investment in Cambodia because 51.27% of the total investment in Cambodia from 2004 to 2010 has been contributed by FDI (Tauch 2012). From 1994 to 2011, the five largest foreign investors are China, Korea, EU, Malaysia and USA, and the rest of investors are Vietnam, Taiwan, Thailand, Singapore, Hong Kong, and Japan. Those approved FDI inflows from 1994 to June 2012 have been invested on four main sectors – tourism 50%, industry 24%, service 19%, and agriculture 7% (Suon 2012).

From 1993 to 2011, net FDI inflows have seemed to have a positive trend although it had not been increasing every year and tend to be relatively fluctuating, but it increased from 54 million in 1993 to 902 million in 2011, which is an increase by 18 folds. FDI inflows started from 54 million in 1993 and doubled within two years to 151 million in 1995 and almost doubled again in 1996 (294 million), but dropped to 204 million in 1997 and further dropped to 149 in 2000 and remained for two years. Despite a drop to 84 million in 2003, it rose to 131 million in 2004 and multiplied to 379 million the next year in 2005. It dramatically increased to 867 million in 2007 but dropped to 539 million in 2009, and continued increasing in the next year and reached its peak at 902 million in 2011.

The indirect impacts of FDI inflows on Cambodia include electricity supply from hydro-power projects, construction growth and the rise of property, and most significantly, the employment generation as stated by Mr. Chan Sophal, president of Cambodia Economic Association.



One of the most indirect impacts of FDI inflows on Cambodia that has always been raised is the employment opportunities to the local people which function as the underemployment and poverty reduction in Cambodia in the long run vision. CDRI reports in 2010 that Chinese FDI, especially those invested on garment industry, gave a huge employment opportunity to local people. This is also emphasized by ADB in 2006 that the direct employment in the garment industry increased from an estimated 19,000 in 1995 to nearly 200,000 in 2003. CDC clarifies that in 2006, the approved investments have been 88 projects with an employment potential of 154,000 people. Kubny and Voss(2010) also supported that the employment created by Chinese companies, among their samples, 98% of 26,439 employees of 27 manufacturing companies are Cambodians. However, they pointed out a very important finding that local Cambodian mostly had been offered typical or lower management positions only, whereas the higher management positions had been predominantly Chinese in the case of garment industry. The reason was found to be perceived low skills and missing experience of local candidates.

4.2 Quantitative Approach – Regression Analysis

This paper uses regression analysis to explore the relationship between GDP and FDI by computer software E-views version 7.0, which based on Ordinary Least Square (OLS) estimator, unit root test, autocorrelation test, heteroskedasticity test, and normality test. The model can be written as:

$$GDP_t = \beta_0 + \beta_1 FDI_t + \varepsilon_t \quad (1)$$

Where

GDP_t: Gross domestic product at time t, measured in million US dollar

FDI_t: Foreign direct investment at time t, measured in million US dollar

Unit Root Test

Unit root test in this study is performed by Augmented Dickey-Fuller Test. As illustrated in Table 1, in the level form with intercept, both dependent and independent variables are not stationary as their ADF statistics are 3.064011 and -0.460451 respectively, which is much higher than 1% (-3.857386), 5% (-3.040391), and 10% (-2.660551) level of significance. However, at first difference with intercept, the ADF statistics for GDP is -2.978238 and FDI is -2.888501, which is all smaller than 1%, 5%, and 10% significant level, so the null hypothesis is rejected, which means that both variables are stationary.

Table 1: ADF test for GDP and FDI, 1993-2011

	Level				First difference			
	t-statistics	1%	5%	10%	t-statistics	1%	5%	10%
GDP	3.064011 (1.0000)	-3.857386	-3.040391	-2.660551	-2.978238 (0.0573)	-3.886751	-3.052169	-2.666593
FDI	-0.460451 (0.8780)	-3.857386	-3.040391	-2.660551	-2.888501 (0.0718)	-4.004425	-3.098896	-2.690439

4.2.1 Autocorrelation, Heteroskedasticity, Normality Test

This study is based on the two tests for detecting autocorrelation errors – Durbin-Watson test and Breusch-Godfrey serial correlation LM test. From Durbin Watson table, $d_L = 1.180$, $d_U = 1.401$, $4 - d_U = 2.599$, $4 - d_L = 2.82$, the Durbin Watson d-statistic is 1.793920, which lie between d_U and 2 in the range that there is no autocorrelation problem as shown below. Moreover, the F-statistics of Breusch-Godfrey serial correlation LM test from Table 2 is 0.292111 and its p value is 0.7511, which is higher than 5% level of significance. The

hypothesis then cannot be rejected proving that there is no serial correlation problem. From these two tests, it is proved that the autocorrelation error is not detected.

From Bresch-Pagan test to detect heteroskedasticity error, the F-statistic is 0.046955 and the p value 0.8312 is higher than 5% significant level, so the null hypothesis cannot be rejected proving that there is no heteroskedasticity problem.

From Jargue-Bera to detect normality error, Jargue-Bera statistic 5.174465 and its p value 0.075228 is higher than 5% significant level, so the null hypothesis is not rejected, which means there is no normality problem, so the error terms are normally distributed (Table 2).

Table 2: Result of Equation Error Tests

Autocorrelation	Durbin-Watson Stat	1.793920	
	Breusch-Godfrey Serial Correlation LM Test	F-statistic (Prob.)	0.292111 (0.7511)
Heteroskedasticity	Breusch-Pagan-Godfrey	F-statistic (Prob.)	0.046955 (0.8312)
Normality	Jarque-Bera	Statistic (Prob.)	5.174465 (0.075228)

4.2.2. Regression Result and Hypothesis Testing

After proving that the regression is not spurious and after detecting no equation errors (autocorrelation, heteroskedasticity, and normality problem), the OLS regression is employed to determine the relationship of these two variables. ADF test for residual saved from OLS estimator is -3.481854 (p value 0.0221) is smaller than 10% level of significance (-2.666593) leading null hypothesis to be rejected, so the residual is stationary, as illustrated in Table 3. The model is then derived by OLS estimator as:

$$GDP_t = 0.077614 + 0.079888FDI_t + \varepsilon_t \quad (2)$$

Hypothesis testing on β_0 and β_1 from T-test and F-test all found slope and intercept to be significant at 10% level of significance. The probability of β_0 from T-Test for GDP is 0.0006, $P < \alpha = 0.10$ (10% of significance), so we reject the null hypothesis, so $\beta_0 \neq 0$. For FDI, the probability of β_1 is 0.0586, $P < \alpha = 0.10$ (10% of significance), so the null hypothesis is rejected and $\beta_1 \neq 0$. The probability of F-test is 0.058609, $P < \alpha = 0.10$, we reject $H_0: \beta_0 = \beta_1 = 0$, so $\beta_0 \neq \beta_1 \neq 0$. As a result, the estimated result of the regression above is unbiased.

Table 3: Ordinary Least Square (OLS) Estimator and ADF Test for Residuals

ADF Test for Residual		T-Statistic (Prob.)	1%	5%	10%
		-3.481854 (0.0221)	-3.886751	-3.052169	-2.666593
OLS Estimator	Variable	Coefficient		T-Statistic (Prob.)	
	GDP	0.077614		4.283596 (0.0006)	
	FDI	0.079888		2.036428 (0.0586)	
			F-statistic (Prob.)		4.147037 (0.058609)

5. DISCUSSION AND CONCLUSION

Kotrajaras et.al. (2011) examined the impacts of FDI in groups of 15 East Asian countries classified by level of economic development. Among their samples, Cambodia was included in “low-income economies” category. Their results concluded that Cambodia tends to benefit less from FDI because of the internal factors of the country. Compared to other countries, particularly listed in their study, Cambodia probably benefits less, yet the fact that cannot be denied is FDI plays a significant role in Cambodia’s economy because it has been 51.27% of the total investment in Cambodia from 2004 to 2010, reported by Ministry of Economy and Fianance. These over half of total investment can be explained by neoclassical growth models that FDI is an addition to the capital stock of the host country.

FDI inflows to Cambodia bring both direct and indirect impacts just as De Mello states that the impact of FDI is vast which come from both direct and indirect influences. For direct impact, foreign direct investors tend to contribute 74% of Cambodias’ economic growth from 1998 to 2006 since the approved FDI inflows from 1994 to June 2012 have been invested on tourism (50%), industry (24%), service (19%), and agriculture (7%), which are all included in the four growth engines of Cambodias’ economy. For the indirect impact, the mostsignificant one is employment opportunities, which in long term is considered as one solution to address the underemployment and poverty reduction in Cambodia, which is supported by study of CDRI, ADB, CDC, and the researchers Kubny and Voss (2013). This indirect impact is explained by endogenous model of growth, De Mello (1996, 1997, 1999), World Bank (1993) and Yao and Zhang (2003) who emphasizes the role of learning process through FDI in the host country through labor training, skill acquisition, and the introduction of alternative management practices.

However, one significant highlight from Kubny and Voss (2013) is the employment offered to local Cambodians’ mostly is the typical or lower management positions because they consider local candidates have lower skills and less experience than foreign candidates. This is consistent to a viewpoint of considering the internal factors of the recipient country as Bengoa and Sanchez-Robles (2003) argue that in order to benefit from long-term capital flows; the host country requires adequate human capital, sufficient infrastructure, and economic stability and liberalization.

The results from Ordinary Least Square (OLS) regression found that there is long run relationship between FDI growth rate and GDP growth rate. The relationship is significantly positive. From equation (2), β_0 is 0.077614 and β_1 is 0.079888, indicating that when FDI growth rate increases by 1%, GDP will be increased by 7% (0.079888). This also means if FDI flows in 1 million US dollar, GDP might be increased by 79, 880 US dollar (0.079888 * 1million).

However, the problem statement of this study claims that FDI inflows have been dramatically increased, yet the average of GDP growth rate over these 19 years has been at 7%. This seems to be true to the neoclassical model of growth which says that the impact of FDI is limited to its output growth effects in the long run growth rate. FDI growth will be advancing only if FDI positively influences technology, otherwise, it has no long run growth effect. This is fully supported by Borensztein, Gregorio, and Lee (1998) that FDI contributes to economic growth only when a sufficient absorptive capability of the advanced technologies is available in the host economy.

This paper then concludes that FDI and growth relationship depends on internal factor of the recipient countries. These include institutional factors such as degree of openness, trade policies, legislative environment, law enforcement, and the degree of economic and political stability. Because of internal factor of Cambodia, especially the limited ability of technology, GDP growth rate of Cambodia has averaged at 7% over 19 years. According to UNDP report on country competitiveness, Cambodias' competitive rankings have improved its WEF ranking and World Bank Doing Business rank, therefore, although the rankings still remains near the bottom among ASEAN countries, Cambodia does improve her rankings, which means to this extent, the efforts from government and other cooperation have successfully implemented and achieve the development goals. Even so, we can only conclude that Cambodia does not fully absorb the full benefit from FDI inflows, yet the fact cannot be denied is that based on the finding of this paper, FDI does positively drive GDP growth rate of Cambodia.

To further improve the performance of FDI inflows and Cambodias' ability to absorb the FDI benefits, a few possible recommendations include implementing policies to further improve the countrys' competitive rankings, increasing the effectiveness of the implementation of laws and regulations, combating corruption, and maintaining/improving infrastructure & institutional frameworks. Cambodia also needs to improve the absorptive capability of technologies and improve the education and training to enhance labor productivity.

REFERENCES

- Al-Iriani, M. and F. Al-Shamsi. 2007. Foreign direct investment and economic growth in the GCC countries: A causality investigation using heterogeneous panel analysis. (Retrieved November 11, 2012, from www.luc.edu/orgs/meea/volume9/PDFS/Al-Iriani%20-%20paper.doc.)
- Asian Development Bank. 2006. Aug. The Mekong region: Foreign direct investment. (Retrieved February 04, 2013, from <http://www.adbi.org/files/book.mekong.direct.investment.pdf.>)
- Borensztein, DE, J.,B.De Gregorio.andJ-W. Lee. 1998. How does foreign direct investment affect economic 1 growth? *Journal of International Economics* 45:115–135. (Retrieved November 21, 2012, from <http://www.olemiss.edu/courses/inst310/BorenszteinDeGLee98.pdf.>)
- Branstetter, L. 2000. Nov. Is foreign direct investment a channel of knowledge spillovers? Evidence from Japan's FDI in the United States. *NBER Working Paper 8015, National Bureau of Economic Research*. (Retrieved December 07, 2012, from http://www.nber.org/papers/w8015.pdf?new_window=1.)
- Council for the Development of Cambodia. 2007. Cambodia: Recent economic development. *Presentation of the First Cambodia Development Cooperation Forum*. (Retrieved November 8, 2013, from http://www.cdc-crdb.gov.kh/cdc/first_cdcf/session1/recent_economic_development.htm)
- De Mello, Jr. L. R. 1999. Foreign direct investment-led growth: Evidence from time series and panel data. *Oxford Economic Papers*, 51:133-151. (Retrieved November 24, 2012, from http://web.ku.edu/~intecon/Courses/Econ915/papers/FDI_panel.pdf.)

- Ear, S. 2008. Sep 15. *Cambodia's economy*. (Retrieved January 27, 2013, from <http://www.csua.berkeley.edu/~sophal/state.pdf>.)
- Hoang, T. T., P. Wiboonchutikula and B. Tubtintong 2010. Does foreign direct investment promote economic growth in Vietnam? *ASEAN Economic Bulletin*.27:295-311. (Retrieved November 25, 2012, from http://muse.jhu.edu/login?auth=0&type=summary&url=/journals/asean_economic_bulletin/v027/27.3.hoang.pdf.)
- Hossain, A. and M. K. Hossain. 2012, Jan. Empirical relationship between foreign direct investment and economic output in South Asian countries: A study on Bangladesh, Pakistan and India. *International Business Research*,5(1). (Retrieved January 19, 2013, from <http://ccsenet.org/journal/index.php/ibr/article/download/13843/9497>.)
- Kotrajaras, P. 2010. Foreign direct investment and economic growth: A comparative study among East Asian countries. *Applied Economics Journal*.17:12-26. (Retrieved November 25, 2012, from <http://www.journal.eco.ku.ac.th/upload/document/thai/20110932121332.pdf>.)
- Kotrajaras, P., B. Tubtintong, and P. Wiboonchutikula. 2011. Does FDI enhance economic growth?: New evidence from East Asia. *ASEAN Economic Bulletin*28:183-202. (Retrieved November 22, 2012, from http://muse.jhu.edu/login?auth=0&type=summary&url=/journals/asean_economic_bulletin/v028/28.2.kotrajaras.pdf.)
- Kubny, J. and H. Voss,. 2013. China's FDI in ASEAN: Trends and impact on host countries. (Retrieved February 04, 2013, from http://gdex.dk/ofdi10/Kubny%20Voss_Chinas%20FDI%20in%20ASEAN.pdf.)
- Miankhel, A. K., S. M. Thangavelu, and K. Kalirajan. 2009. Aug. Foreign direct investment, exports, and economic growth in South Asia and selected emerging countries: A multivariate VAR analysis. *CCAS Working Paper No.23, Center for Contemporary Asian Studies, Doshisha University*. (Retrieved November 12, 2012, from <http://ccas.doshisha.ac.jp/japanese/publications/WP23MiankhelShandre.pdf>.)
- Roy, A. G. and H. F. Berg. 2006. Foreign direct investment and economic growth: A time-series approach. *Economic Department Faculty Publication, paper 32, The University of Nebraska-Lincoln*. (Retrieved December 07, 2012, from <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1031&context=econfacpub>.)
- Sethi, N. and S. Sucharita. 2010. Effect of FDI on economic growth in Bangladesh and India: An empirical investigation. *Journal of Social and Economic Policy*.7:2. (Retrieved November 11, 2012, from <http://www.serialspublications.com/contentnormal.asp?jid=383>.)
- Suon, S. 2012. *Cambodia: FDI and government policy*. (Retrieved January 12, 2012, from <http://www.adbi.org/files/2012.10.09.cpp.sess3.3.suon.cambodia.fdi.pdf>.)

- Sridharan, P, N. Vijayakumarand and K. Rao. 2009, Oct. Causal relationship between foreign direct investment and growth: Evidence from BRICS countries. *International Business Research*, 2:4. (Retrieved December 02, 2012, from <http://ccsenet.org/journal/index.php/ibr/article/viewFile/3660/3442>.)
- Tauch, C. K. 2012. Green growth in Cambodia: A brief analysis of economic trends and future prospects. *Ministry of Economy and Finance*.(Retrieved January 27, 2013, from http://lcs-rnet.org/meetings_locarnet/2012/pdf/S1_5%20Tauch.pdf.)
- Toulaboe, D, R. Terryand and T. Johansen. 2009. Foreign direct investment and economic growth in developing countries. (Retrieved November 25, 2012, from <http://www.ser.tcu.edu/2009/SER2009%20Toulaboe%20et%20al%20155-170.pdf>.)
- United Nations Development Program Cambodia. 2009. Cambodia country competitiveness: Driving economic growth and poverty reduction. *UNDP Discussion Paper No.7*.(Retrieved January 27, 2013, from http://www.un.org.kh/undp/media/files/DiscussionPaper7_CambodiaCountryCompetitiveness.pdf.)
- World Development Indicators. 2013. World Bank. (Retrieved October 13, 2012, from <http://databank.worldbank.org/ddp/home.do>.)
- Yao, S. and K. Wei. 2006. Economic growth in the presence of FDI: The perspective of newly industrialising economies. Research paper series.The University of Nottingham.(Retrieved November 21, 2012, from <http://128.243.80.167/gep/documents/papers/2006/06-33.pdf>)

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