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## **Extended Abstract of Diploma Thesis**

**The effect of Foreign Direct Investments on both  
the Unemployment Rate and GDP in Egypt**

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# **The effect of Foreign Direct Investments on both the Unemployment Rate and GDP in Egypt**

## **Abstract**

The low GDP and high rate of unemployment are two of the macroeconomic problems for most developing countries, and have a great influence on the economy of Egypt which is on the emerging Lower-middle income economy. Developing countries face several challenges when it comes to generating income and creating jobs. There are two methods to address such critical issues, borrowing money, which is a costly option or encourages foreign direct investment. For the past few years, the Egyptian government is striving to grow the economy and compete on a global scale. This study examined the effect of Foreign Direct Investment (FDI) on the GDP and the rate of unemployment in Egypt over the period 2010-2019. The most essential goal of this thesis is to quantify the inflow of foreign direct investment and their influence on the Egyptian rate of unemployment and GDP.

**Keywords:** Egypt, Foreign Direct Investment, Unemployment, GDP.

# **Vliv přímých zahraničních investic na obojí míra nezaměstnanost a HDP v Egyptě**

## **Abstrakt**

Nízký HDP a vysoká míra nezaměstnanosti jsou dva z makroekonomických problémů většiny rozvojových zemí, a mají velký vliv na ekonomiku Egypta, která je na vznikající ekonomice s nižšími středními příjmy.

Rozvojové země čelí několika výzvám, pokud jde o vytváření příjmů a vytváření pracovních míst. Existují dva způsoby, jak řešit takové kritické problémy, Půjčování peněz. Což je nákladná možnost, nebo Podporuje přímé zahraniční investice. V posledních několika letech se egyptská vláda snaží o růst ekonomiky a konkurenceschopnost v celosvětovém měřítku. Tato studie zkoumala vliv přímých zahraničních investic (FDI) na HDP a míru nezaměstnanosti v Egyptě v období 2010–2019. Nejdůležitějším cílem této práce je kvantifikovat příliv přímých zahraničních investic a jejich vliv na egyptskou míru nezaměstnanosti a HDP.

**Klíčová slova:** Egypta, míra nezaměstnanosti, HDP, přímé zahraniční investice.

## **Objectives and methodology**

### **Objectives:**

The main objective of this thesis is to examine the impact and results of foreign direct investments on both the unemployment rate and GDP in the Egyptian economy and to achieve this objective we need to identify and analyse the trends and patterns of foreign direct investment and, to identify the primary variables that influence the growth of employment, and the factors influence the GDP in the Egyptian economy.

### **Methodology:**

The study uses both econometric and descriptive methods of data analysis. Descriptive statistical methods are used to investigate and analyse the significant indicators of the Egyptian economy, highlight most of the workers in the economy, as well as current policy efforts aimed at lowering unemployment and increasing GDP. The econometrics analysis uses OLS regression analysis to model the linear relationship between unemployment and FDI, and the relationship between GDP and FDI.

This regression analysis was followed by statistical verifications.

The econometrics study is to investigate the following assumptions:

1. The FDI has a positive effect on the GDP of Egypt.
2. The FDI has a negative effect on the unemployment rate of Egypt.

## **Practical Part**

### **An overview of Egypt economy**

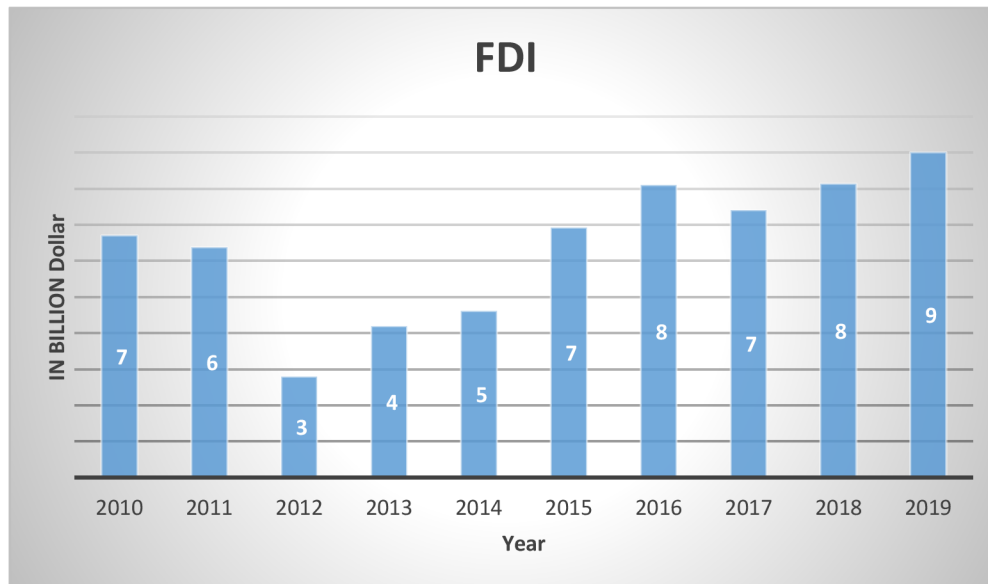
Egypt, which occupies the northeast corner of the African continent, is divided by the very fertile Nile valley which is the centre of commercial activity. Egypt's economy was heavily controlled during former President Gamal Abdel NASSER's tenure, but it opened significantly under former Presidents Anwar EL-SADAT and Mohamed Hosni MUBARAK. Agriculture, energy, industry, tourism, and other service industries supported the country's diversified economic activities.

According to the CIA World Factbook, considering Egypt's mixed performance and economic

activities diversification are the main attracting of international investment over the last two decades.

## FDI Trends in Egypt

Figure 1: FDI Inflow in Egypt, (2010-2019)



## Econometrics analysis:

### FDI effect on GDP growth

From the OLS regression of unemployment rate, LN\_FDI on GDP Growth the following result was obtained:

#### OLS Regression table

```

Model 5: OLS, using observations 2010-2019 (T = 10)
Dependent variable: GDPGrowth

```

	coefficient	std. error	t-ratio	p-value	
const	-44.2912	8.47976	-5.223	0.0012	***
LNFDI	2.29687	0.356551	6.442	0.0004	***
UNMRate	-0.296789	0.0730323	-4.064	0.0048	***

Mean dependent var	4.092010	S.D. dependent var	1.235766
Sum squared resid	0.804702	S.E. of regression	0.339054
R-squared	0.941451	Adjusted R-squared	0.924723
F(2, 7)	56.27892	P-value(F)	0.000049
Log-likelihood	-1.590046	Akaike criterion	9.180091
Schwarz criterion	10.08785	Hannan-Quinn	8.184286
rho	-0.239759	Durbin-Watson	2.346536

### Autocorrelation test result

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Breusch-Godfrey test for first-order autocorrelation
OLS, using observations 2010-2019 (T = 10)
Dependent variable: uhat

      coefficient   std. error   t-ratio   p-value
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const    -0.865699     8.97197   -0.09649   0.9263
LNFDI     0.0306291     0.375968   0.08147   0.9377
UNMRate   0.0152730     0.0800838   0.1907    0.8550
uhat_1   -0.264167     0.416918  -0.6336    0.5497

Unadjusted R-squared = 0.062716

Test statistic: LMF = 0.401474,
with p-value = P(F(1,6) > 0.401474) = 0.55
```

### Statistical result and interpretation of the first model

From the statistical verification of this regression, we can conclude there is no multicollinearity, no heteroskedasticity, no autocorrelation, normality of random variables, and the significance of all estimated coefficients. From the result of those tests and observations, it can be concluded that the OLS coefficient estimate is BLUE (Best Linear Unbiased Estimate). The ordinary least squares (OLS) regression in this study has produced unbiased estimates that have the smallest variance of all possible linear estimators. The OLS regression led to the obtention of the following equation:  $\text{GDP Growth} = -44.2912 + 2.29687 \cdot \text{LN\_FDI} - 0.296789 \cdot \text{Unemployment rate} + \text{et}$ . It can be concluded that an increase by 1 in a year-to-year value of LN\_FDI leads on average to a 2.29% increase in a year-to-year value of GDP Growth. A 1 % increase in a year-to-year value of unemployment leads on average to a 0.29% decrease in a year-to-year value of GDP Growth.

### Conclusion:

To summarize, The Egyptian economy growth is dependent on investments, expanding assets, and improving infrastructure. Foreign Direct Investment in an economy indicates that there is a good trend of investment, which eventually results in increasing the GDP growth and decreasing the unemployment rates of the country, as we discovered in our research that the increasing trend of FDI in Egypt increases the GDP and decreases the unemployment rate. FDI positive influence on the Egyptian economy cannot be ignored. More control and improvements still needed to

achieve (2030 vision) country roadmap for a long-term sustainable economic development strategy which stated that by 2030 the Egyptian economy will be disciplined market economy that is characterized by stable macroeconomic conditions. the Egyptian economy will be an active player in the global economy, capable of adapting to global variables, maximise the added value and provide job opportunities, as well as making the real GDP per capita reach the ranks of upper middle-income countries. (Euroweek, 2020)

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