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## **SURVEYING THE RELATION BETWEEN THE LEVEL OF FINANCIAL MARKETS DEVELOPMENT, EXCHANGE RATE FLUCTUATIONS, AND ECONOMIC GROWTH IN SELECTED OPEC COUNTRIES**

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### **ABSTRACT**

Accelerating the economic growth is one of the main aims of many countries; and many national aims are set based on this matter. The real exchange rate is one of the issues that its fluctuations could affect the performance of macroeconomics and especially the economic growth. It could be said that one of the factors relatively ignored in different analyses regarding the relation between exchange rate fluctuations and economic growth is countries' level of financial markets development. This study has been conducted with the aim of surveying the effect of exchange rate fluctuations on economic growth based on the level of financial markets development of selected OPEC countries including Algeria, Ecuador, Iran, Nigeria and Saudi Arabia during 1981-2010. Also the effect of inflation on economic growth has been surveyed. The current research results by the use of panel data show that the effect of financial development on economic growth and also the mutual effect of exchange rate fluctuations and financial development on economic growth are positive but statistically insignificant. On the other hand, the effect of exchange rate fluctuations on economic growth is negative and significant.

**Keywords:** *Exchange Rate Fluctuations, Economic Growth, Financial Development, Panel Data*

### **INTRODUCTION**

International currency systems have confronted many ups and downs during years and they have affected the economic structure of countries. Different currency systems show how currency rate is determined in the economy. During many years and especially after the collapse of the fixed exchange rate system (end of Bretton Woods's system) the currency rate has encountered many fluctuations; on the other hand, economic growth has been one of the most important issues of developing countries after the WWII. One of the most important factors affecting the economic growth is exchange rate fluctuations. The effect of exchange rate fluctuations on economic growth is different for different countries. It could be said that one of the determinants of effect of exchange rate fluctuations on economic growth is level of financial markets development in each country.

In new theories, the high correlation between economic growth and innovation has been emphasized; and this innovation in financial markets happens by introducing new financing tools and by introducing new products in the actual part of economy. In fact, by entrance of financial intermediaries in growth models, by introducing new financing tools such as risk reduction, increased efficiency of capital through optimal allocation of resources and the mobility of savings are taken into account; and they ultimately pursue the goal of realizing long-term economic growth for the economy. Surveys show that the more developed the level of financial markets, the less the negative effect of exchange rate fluctuations on economic growth; whereas in conditions of underdevelopment of financial markets, the exchange rate fluctuations problematize the economic growth. The aim of this research is surveying the effect of exchange rate fluctuations on economic growth based on level of financial markets development in developing countries; and this article includes 6 parts. The 3<sup>rd</sup> part includes theoretical concepts, the 4<sup>th</sup> part includes research background, the 5<sup>th</sup> part includes model introduction and research methodology, the 6<sup>th</sup> part includes model estimation and the 7<sup>th</sup> part includes conclusion and suggestion. In this framework, the following questions are raised:

- 1) Does level of financial markets development have a positive effect on economic growth?
- 2) Do exchange rate fluctuations have a negative effect on economic growth?

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3) In case of development of financial markets, is the negative effect of exchange rate fluctuations on economic growth eliminated?

#### ***The Research Innovative Aspect***

In previous studies, the relation between level of financial markets development and economic growth in different countries has been surveyed; some of them have shown that the relation is positive and some of them have shown that the relation is negative. Generally the conducted researches in this field show that it is impossible to reach a comprehensive conclusion regarding the relation and effect of financial development on economic growth; and regarding the method of financial development and indicators chosen for financial development and the type of studies countries (developing or developed) different results could be achieved (Nazifi, 2004).

Despite having abundant oil resources, the OPEC countries still have low economic growth rates. In this research this issue has been studied that is there a relation between level of financial markets development and economic growth of these countries or not. On the other hand, another variable less taken into account is mutual effect of exchange rate fluctuations on economic growth; and it is used for surveying whether the level of financial markets development in OPEC countries could eliminate the negative effect of exchange rate fluctuations or not; and whether it could increase the economic growth through increasing investment or not.

#### ***Theoretical Concepts***

##### ***The Real Exchange Rate & Economic Growth***

Economic growth is one of the main aims of making economic policies and decisions. Among economic variables, the variable having the most direct and close relation with the foreign sector of the economy and could provide the base for economic growth more than any other variable is the variable of real exchange rate; because fluctuations in real exchange rate could produce huge fluctuations in foreign trade sector and also balance of payments. Nowadays due to deep changes of currency systems, the exchange rate variable is considered as the key factor and main factor of economic policy more than ever. On the other hand, one of the factors affecting choosing the appropriate currency system in developing countries is the relation between real exchange rate and economic growth. Choosing an inefficient currency system and inappropriate currency policies in many countries have resulted in negative effects on their economic growth.

The real exchange rate from (deviation) and (instability) is one of the most important issues of currency discussion and also two issues of balanced values and their relation with economic growth. Real exchange rate fluctuations indicating instability and uncertainty in the relative price trend among countries results in creating an instable and uncertain environment in the economy. With disturbance of stability of the real exchange rate, savings and investments become irrational and optimal resource allocation will be impossible. In an international system, the value of the national currency has an important role in determining the economic costs related to investment, import, export and effect on economic growth.

Repeated fluctuations in the real exchange rate could create an uncertain and unstable condition for profits made by international transactions and could result in decreased trade and also immobility of investment through decreasing investment in foreign activities and disturbing the financial portfolio. Increased fluctuations of the real exchange rate results in increased price of tradable goods and increased risk of unforeseen changes of the real exchange rate.

The real exchange rate fluctuations in flexible currency system make many changes in investment and international business and ultimately the economic growth.

For preventing from exchange rate fluctuations, many countries stabilize the value of their money against currencies having the highest importance; however it is observed that some other countries resist against fixed exchange rate and accept the floating exchange rate and exchange rate fluctuations. It is remarkable that observations have shown that creation of problems such as negative effects on economic growth following the dominance of floating exchange rate system and exchange rate fluctuations caused by it happen to some countries; whereas in many other countries and mostly developed countries this is vice versa and negative effects are not observed. This contradiction shows that the effect of exchange rate

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fluctuations on important variables such as economic growth depends on a third factor called financial development.

#### *Level of Financial Markets Development & Economic Growth*

Since capital accumulation is considered as one of the most important resources for continuous growth of a country, through financial markets the process of capital formation could be accelerated. Assuming that transaction costs are zero, and markets such as capital market are complete, conventional neoclassical models survey and analyze the household and business decision-making processes with two static and dynamic models. In static model, households maximize their desirability based on budget constraint and regardless of payment systems and choose a basket of goods for consumption. Business also regardless of their financing methods, choose an optimal level of inputs and outputs with the aim of maximizing their profit. In dynamic analyses also the same procedure is followed by providing mid-term decision making models.

Also in Keynesian growth models since Keynes introduces investment function as the inverse function of the interest rates and savings as the direct function of income, thus decreased interest rate is suggested. McKinnon & Shaw rejected Polly-Keynes, Keynesians' and structuralism models and believed that important hypotheses of these approaches were inconsistent with conditions of developing countries of that time. They emphasized on the key role of financial liberalization and development in economic growth and showed that financial repression which is fixing the nominal interest rate in a level lower than the equilibrium real interest rate results in constraining real investment and savings and decreased economic growth.

Neo-structuralism introduced by Edward (1984), Akira (1984), Lance (1983) and Sweder (1983a & 1983b) challenged McKinnon-Shaw school in early 1980's. According to these neostructuralists, in practice, financial liberalization, most likely is due to reduced real granting of credits available to businesses, reduces economic growth.

Neostructuralists assume that financial resources are freely flowing between banking system and the unorganized markets, and any increase in unorganized market interest rates, increases the prices level. In their analysis, eliminating interest rate ceilings will increase deposits interest rate and through increasing unorganized market interest rates may reduce total supply of circulating capital, thereby decrease economic growth. Patrick (1996) argues that in the early stages of economic development, the financial sector causes economic growth by expanding and providing capital and in the next stages it results in financial development.

#### *Financial Development & Economic Growth in Oil-Exporting Countries*

Oil-exporting countries enjoy blessings that are continuously extracted from the earth and are converted to additional income for the society. This income provides more resources for financial institutions; also since oil-exporting countries usually start several investments after the world oil prices rise and do not have the required resources for financing this huge volume of investment when the prices fall, thus financial institutions usually face with continuous high demands. In overall, more resources and high demands are factors that could reinforce the effect of financial development on economic growth in these countries; on the other hand, oil revenues could be considered as a replacement for private savings; and additionally it creates disorder in prices and non-economic decisions in choosing investment projects which weaken the effect of financial institutions on economic growth.

#### **Research Background**

Gylfason & Zoega (2001) surveyed 85 countries and by the use of Solow economic growth model showed that the more the ratio of natural capital to physical capital the less the quality and quantity of investment and savings and the less the dependency on natural resources by financial institutions and the less the economic growth.

Rioja and Valev (2002) showed that the relation between financial development and growth is not a one-to-one monotonic relation and depends on their level of financial development. Their study shows that in countries with low levels of financial development, some indices of financial development have negative effects on growth, while some others have positive but very low and negligible effects. In countries with

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intermediate levels of financial development, financial development indices have a positive effect greater than that of countries with advanced financial development on growth.

Aghion *et al.*, (2006) examined the changes in exchange rates and productivity growth with respect to the role of financial development, based on the data of 83 countries during 1960-2000. They showed that changes in exchange rates can have a significant effect on productivity growth in the long-term. However, this effect strongly depends on the country's level of financial development. For countries with relatively low financial development, exchange rate change generally reduces growth, while for countries with advanced financial development exchange rate change has no significant effect. Schnabel (2008) examined the effect of stabilization of the exchange rate on economic growth in 41 economies of the Europe Union. The findings of this study, introduces international trade, international capital flows and stabilizing the macroeconomic as major channels for transmission of exchange rate stability to economic growth. The study uses panel data approach to measure the negative effect of exchange rate fluctuations on economic growth. Using data from 33 developing countries, Toulaboe (2011) investigates the relations between the mean growth rate of per capita (GDP) and real exchange rate misalignment. He concludes that average real exchange rate misalignments are negatively correlated with economic growth. Therefore, inappropriate exchange rate policies result in poor economic performance that many developing countries have experienced. Nili and Rastad (2003) examined the relation between financial markets and economic growth and investigated the effects of four fundamental, structural and efficiency indices of financial development as well as the ratio of time or savings deposits to GDP and three economic performance indices, including economic growth, per capita capital accumulation growth and capital productivity. Based on their research findings, due to the dominant effect of government presence in Iran economy, the financial development effects on the real sector are weaker than those in other countries. Moreover, the effects have been negative in some cases.

Using the five-year means of data from a sample of 69 countries and employing a panel data model, Khataee and Mousavi (2008) examined the effect of exchange rate fluctuations on the level of economic growth considering the level of financial markets development. The results of their study show that in lower level development of financial markets, the effect of exchange rate fluctuations on economic growth is negative and in upper levels this effect can be positive. Seifipour (2010) examined the effect of financial development on economic growth using panel data for 85 countries. The results show that in countries with high-income which are financially more developed in money and investment market improving financial development leads to economic growth. In countries with low and intermediate income and low level of financial development in money and investment market improving financial development in money market has negative effect but improving financial development in investment market has positive effect on economic growth.

**MATERIALS AND METHODS**

**Model Introduction & Research Methodology**

Based on results achieved from theoretical study by Aghion et al (2006), the relation between economic growth, financial development and exchange rate fluctuations is as follows:

$$GY_t = \lambda_1 ER_t + \lambda_2 ER_t \times FD_t + \delta FD_t \tag{1}$$

In which  $GY_t$  shows the economic growth,  $ER_t$  is the real exchange rate fluctuations variable and  $FD_t$  is financial development index. On the other hand,  $ER_t \times FD_t$  indicates the mutual effect of exchange rate fluctuations and financial development on economic growth; and it shows the role of financial development in effectiveness of exchange rate fluctuations on economic growth. In some applied researches such as research conducted by Levin et al (2000) inflation has been entered as one of the factors affecting the economic growth; thus the estimated model is as follows:

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$$GY_t = \lambda_1 ER_t + \lambda_2 ER_t \times FD_t + \delta FD_t + \beta P_t + U_t \tag{2}$$

This model is a time series model; but for considering the role of intersections, which is different countries, a dynamic model with panel data is used. Thus the final estimated model would be as follows:

$$GY_t = \lambda_1 ER_t + \lambda_2 ER_t \times FD_t + \delta FD_t + \beta P_t + \mu_t + \eta_i + \varepsilon_{i,t} \tag{3}$$

In which i and t indicate country and time, respectively,  $\mu_t$  is time specific effect and  $\eta_i$  country specific effect. In this research GDP per capita growth is used as an appropriate measure for showing the economic growth based on the following relation:

Growth =  $\log GDP_{PC_t} - \log GDP_{PC_{t-1}}$  (GDP = Gross domestic product per capita)

Different indices exist for financial development; but since theoretical concepts of extracting this model are based on borrowing and financing businesses from banking system and financial institutions, the ratio of total credits extended to the private sector to GDP ( $\times 100$ ) is used as the financial development index.

$ER_{i,t}$  is the index of real exchange rate fluctuation and for the real exchange rate fluctuation, the 5-year standard deviation of effective real exchange rate is considered which means:

$$ER_{i,t} = \delta_{i,t,t+5} = stdev \left[ \ln(RER_{i,t}^{cpi}) - \ln(RER_{i,t-1}^{cpi}) \right]$$

$P_{i,t}$ , inflation as the index of economy instability. The period for estimating the model is from 1981-2010. The annual data are not used in order to eliminate the effects of short-term cycles and to avoid fluctuating annual data make a dent in the results; instead for each variable the 5-year means are used. The studied countries include selected OPEC countries including Algeria, Ecuador, Iran, Nigeria, and Saudi Arabia and the statistics of all variables are extracted from World Development Indicators (WDI) in the World Bank Website.

Regarding the type of data and existing statistical analysis method, econometric model of panel data is used for estimating model parameters and surveying hypothesis testing; because on the one hand the quantitative values of independent and dependent parameters are related to different subgroups of developing countries, and on the other hand the estimation covers the period 1986-2010. In such cases, panel data method is used for obtaining reasonable results.

Prerequisite of an accurate estimation is stationary of variables. Lin, Levin and Chu (LLC), ImPesaran and Shane (IPS) and Dickey Fuller (Fisher Chi-square) tests have been used for surveying the stationary or nonstationary of variables (Levin *et al.*, 1992; Im *et al.*, 1997; Fisher, 1932).

*Lin, Levin-Chu (LLC) Tests*

This test is considered based on ADF test as shown below:

$$\Delta X_{i,t} = \rho X_{i,t} + \delta_t + \alpha_i + \sum_{j=1}^{l_i} \theta_{ij} \Delta X_{i,t-j} + \varepsilon_{i,t} \tag{4}$$

In this relation,  $\rho_i$  is parameter for each intersection,  $l_i$  length of interruption,  $\delta$  time effect,  $\alpha_i$  constant coefficient for each intersection,  $\varepsilon_{it}$  disruption sentence having normal distribution with mean zero and variance  $\delta^2$ . Lin, Levin-Chu test is an Augmented-Dickey Fuller (ADF) test with time series that has high power in heterogeneity of intersections and inconsistency of variance of error terms. The test hypotheses are as follow:

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$$\begin{cases} H_0 : \rho_i = 0 \\ H_1 : \rho_i = \rho < 0 \end{cases}$$

*Im, Pesaran and Shane Test*

The difference between Im, Pesaran and Shane test (2003) and LLC test is more visible in the surveyed hypotheses. In EBS test hypothesis,  $\rho_i$  coefficients have different values. In other words, EBS test hypotheses are as follow:

$$H_0 : \rho_i = 0, i = 1, 2, \dots, N$$

$$H_1 : \begin{cases} \rho_i < 0, i = 1, 2, \dots, N_1, 0 < N_1 < N \\ \rho_i = 0, i = N_1 + 1, \dots, N \end{cases}$$

Based on these hypotheses some intersections could have unit root.

*Fisher Test*

Another method for testing unit root of pool data is using significance level of Augmented Dickey Fuller (ADF) test. This method is designed from Fisher method (1932) which was later expanded by Chu (2001) and Maddala-Wu (1999). This test is known as MW test. This test is conducted based on usual Dickey Fuller test as follows:

$$\Delta Y_{i,t} = \alpha_i + \rho_i Y_{i,t-1} + \sum_{z=1}^{\pi_i} \beta_{i,z} \Delta Y_{i,t-z} + \varepsilon_{i,t} \tag{5}$$

In which  $Y_{i,t}$  is the surveyed variable,  $\alpha_i$  Fuller, constant coefficient in Dickey’s test  $i \square \square$  test interruption and test error. MW test hypotheses are stated the same as Im, Pesaran and Shane (EBS) test as follow:

$$H_0 : \rho = 0, i = 1, 2, \dots, N$$

$$H_1 : \begin{cases} \rho_i < 0, i = 1, 2, \dots, N_1, 0 < N_1 < N \\ \rho_i = 0, i = N_1 + 1, \dots, N \end{cases}$$

In other words, these hypotheses could be stated as:

$H_0$ = Existence of unit root for variables in all intersections.

$H_1$ = Variable is static in at least one of the intersections.

In case of stationary of some of the surveyed variables and in case some of them become stationary on one time differentiation, the co-integration test must be surveyed. Pedroni test (1999) is one of the panel co-integration tests frequently used in empirical studies. Pedroni suggested 7 co-integration tests in two general groups. The 1<sup>st</sup> group is based on within-dimension method and the 2<sup>nd</sup> group is based on between-dimension method. In both groups based on  $H_0$  there is no long-term relation between variables of model. For statistics of the 1<sup>st</sup> group  $H_0: Y_i=1$  is tested against  $H_1: Y_i < 1$ . Whereas, for statistics of the 2<sup>nd</sup> group  $H_0: Y_i=1$  is tested against  $H_1: Y_i < 1$  (Pedroni, 1997). In pool data method, Chu-test is used for using the integrated model against the model of fixed effects. The test hypotheses are as follow:

$H_0$ : pooled model

$H_1$ : Fixed effect model

The 1<sup>st</sup> hypothesis is based on bound values and the other hypothesis is based on unbound values. Chu-test statistics based on error sum of squares of bound model and unbound model is as follows:

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$$Chow = \frac{(RRSS - URSS) / N - 1}{URSS / NT - N - K} \quad (7)$$

This statistics has F frequency with N-1 and NT-N-K degrees of freedom (Seddighi *et al.*, 2000). Then to choose between fixed effects or random effects method Hausman test was used. Hausman test is designed based on the existence or inexistence of relation between estimated regression error and model independent variables. In case of existence of this relation, the random effects model is used and in case of inexistence of relation the fixed effects model is used. H<sub>0</sub> indicated lack of relation between independent variables and estimation error and H<sub>1</sub> indicated a relation.

**Model Estimation**

For correct estimation of variables of model firstly, their stationary is surveyed based on Panel-data unit root tests. Results achieved from conducting these tests for all variables of the model are shown in table 1.

**Table 1: Surveying the stationary on the level of variables**

Test Variable	Lin, Levin-Chu test (LLC)		Im, Pesaran & Shane test (IPS)		Fisher test (ADF)		Fisher test (PP-Fisher)	
	Statistic	Probabilit	Statistic	Probabilit	Statistic	Probabilit	Statistic	Probabilit
GY	-18.5424	0.00	-3.98984	0.00	29.4702	0.0010	30.9405	0.0006
FD	-4.76276	0.00	-0.71971	0.2359	14.8352	0.1382	15.2869	0.1219
ER	-21.0259	0.00	-9.03033	0.00	53.9085	0.00	66.8924	0.00
ER×FD	-7.63195	0.00	-2.21444	0.0134	23.2477	0.0099	31.6078	0.0005
P	-1.38684	0.0827	0.29599	0.6164	6.95495	0.7297	5.79892	0.8319

Source: Research computations

ER, GY and ER×FD are based on all tests and at the stationary level; but variable FD is based on IPS, ADF and PP-Fisher test and variable P is based on LLC, IPS, ADF and PP-Fisher tests and are not at the stationary level.

**Table 2: Surveying the stationary of variables on one time differentiation**

Test Variable	Lin, Levin-Chu test (LLC)		Im, Pesaran & Shane test (IPS)		Fisher test (ADF)		Fisher test (PP-Fisher)	
	Statistic	Probabilit	Statistic	Probabilit	Statistic	Probabilit	Statistic	Probabilit
FD	-7.86244	0.00	-2.18719	0.0144	19.4889	0.0345	22.0183	0.0150
P	-5.14824	0.00	-	-	30.0919	0.0008	30.1733	0.0008

Source: Research computations

As shown in Table 2, variables FD and P are based on LLC, IPS, ADF and PP-Fisher tests and after one time differentiation they become stationary. Given that the variables FD and P, are I (1) and other variables are I (0), panel co-integration test should be examined.

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Co-integration test results are shown in Table 3:

**Table 3: Panel co-integration test**

Test Method	Test Statistic	Prob.
Panel PP-Statistic	-8.504294	0.00
Panel ADF-Statistic	-2.652472	0.0040
Group PP-Statistic	-12.42781	0.00
Group ADF-Statistic	-5.065268	0.00

*Resource: Research computations*

As it is observable, according to Panel PP-Statistic and Panel ADF-Statistic (within-dimension statistics) and Group PP-Statistic and Group ADF-Statistic (between-dimension statistics),  $H_0$  based on lack of co-integration is rejected and co-integration and existence of long-term equilibrium relation between variables of model is accepted. Now to use panel data model against fixed effects model, Chu test is examined and its results are shown in Table 4.

**Table 4: Chu test or F**

Chu test effect	Computational statistic	Df	Prob.
F	4.687595	4.21	0.0073

*Source: Research computations*

Since the probability level of F-statistic is less than 0.05,  $H_0$  is rejected and the fixed effects are accepted; and different y-intercepts must be considered in estimation. To choose between fixed effects or random effects method Hausman test was used. Hausman test results are shown in table 5.

**Table 5: Hausman Test**

Hausman Test Effect	Chi-square Statistic	Df	Prob.
	18.750381	4	0.0009

*Source: Research computations*

Results show that  $H_0$  suggesting that the random model can be used instead of a fixed model is rejected at 95% confidence level.

So, the best estimation method is fixed effects method.

According to the Hausman test results and by choosing fixed effects method, model coefficients are estimated using generalized least squares (GLS). The results of the model estimation assuming fixed effects are shown in Table 6.

Base on table 6 results, the coefficient of financial development is positive but statistically insignificant. Also the results show that the direct effect of exchange rate fluctuations regardless of mutual effects of exchange rate fluctuations and financial development on economic growth is negative and significant. On the other hand, the mutual effects of real exchange rate fluctuations and financial development on economic growth is positive but statistically insignificant.

The coefficient of inflation variable is positive and significant at confidence level 95%. In other words, as inflation increases, the economic growth decreases. Since fixed effects model has been chosen as the best model, thus difference in countries achieved by y-intercepts is shown in table 7.



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**Table 6: Model estimation results**

<b>Dependent variable: Economic Growth (GY)</b>					
<b>Variables</b>	<b>Coefficient</b>	<b>Stand. Deviation Error</b>	<b>t-statistic</b>	<b>Prob.</b>	
Constant	0.017443	0.007636	2.844386	0.0329	
Financial development (FD)	3.72E-05	0.000280	0.132969	0.8955	
Real exchange rate fluctuations (ER)	-0.000106	2.68E-05	-3.695505	0.0007	
Mutual effects of exchange rate fluctuations & financial development on economic growth ER×FD	1.04E-06	1.05E-06	0.993422	0.3318	
Inflation (p)	-0.000322	0.000101	-3.184445	0.0045	
R <sup>2</sup>	0.76				
Adjusted R <sup>2</sup>	0.67				
Durbin-Watson statistic	2.00				
F-statistic	8.49				
Prob. (F)	0.00				

Source: Research computations

**Table 7: Y-intercept of selected countries**

<b>Y-intercept</b>	<b>Name of the Country</b>
-0.000202	Algeria
0.003138	Ecuador
0.008596	IR Iran
0.007663	Nigeria
-0.019195	Saudi Arabia

Source: research computations

Difference of y-intercept in different intersections indicates the effect of other factors in the model except for the defined explanatory variables in that model and also the effect of business, cultural and political environment of those countries.

**Conclusion**

In this article the effect of exchange rate fluctuations on economic growth considering the level of financial markets development in selected OPEC countries over 198-2010 was surveyed. The current research results show that the coefficient of financial markets development is positive but statistically insignificant; this means that financial markets development in selected OPEC countries over 1981-2010 has not been effective on the economic growth of these countries. Effect of financial development on economic growth is not the same among the countries and over time. Levin (2000) and De Gregorio and Guidotti (1995) showed that effectiveness of financial development on economic growth depends on level of financial development; which means that in developing countries, this effect could be negligible or statistically insignificant.

In developing countries credits granted to the private sector include both credits granted by private financial institutions and credits allocated by the Central Bank and state-owned banks. In OPEC countries that are developing countries, the share of public monetary institutions active in the money market is higher than that of private institutions. In these public financial institutions, credits are not granted based

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on the profitability of the project but as an imposition. Also, due to the existence of financial repression in these countries, the rates of facilities granted are much lower than the market rate. Therefore projects with lower profitability rates are also accepted despite the fact that they are not economical. Thus, in developing countries paying these facilities will not necessarily increase the level of investment and economic growth. The direct effect of real exchange rate fluctuations on economic growth at 95% confidence level is negative and statistically significant. The coefficient of the mutual effects of exchange rate fluctuations and financial development on economic growth is positive but statistically insignificant. In other words, if exchange rate fluctuations exist and the financial development is considered, financial development has a relatively positive effect, but not that significant. Assuming the existence of exchange rate fluctuations, if the change of exchange rate is a loss for the business, the business will be affected and the business profit will be decrease. With the decreased profit of the business, if the liquidity absorption required for innovation from the credit market is unavailable, then no innovation will occur and a result the increased production of the business will be decreased and at the general level of economy this means less economic growth.

In contrast, in case of availability of liquidity absorption from the credit market by the businesses, they can borrow the required liquidity for the entrepreneurs, even with decreased profit resulted from exchange rate fluctuations, and they can make innovations and repay their debt by its profit and also by the positive exchange rate fluctuations in next periods (the exchange rate fluctuations are not always against the business).

Due to the method of financial markets liberalization, poor financial management system and lack of formation of integrated financial markets benefitting from rules among OPEC countries, these countries lack efficient financial markets. Thus in case of existence of negative exchange rate fluctuations, possibility of borrowing and covering risk won't be available for the businesses through financial markets. In other words, in surveyed countries the financial markets cannot effectively decrease the negative effect of exchange rate fluctuations and result in increased economic growth.

Regarding the research results the following suggestions are provided:

- 1- Usually in Iran, granting banking credits is imposed to the banking system by the government, therefore the government's dominance on granting banking facilities must be reduced; and by creating and promoting a competitive environment in the banking system, the credit transfer to inefficient enterprises and economic activities must be prevented and directed toward generating activities.
- 2- Regarding the prescribed facilities, usually there are not adequate guarantees for repaying them and as a result a huge part of these facilities is converted to outstanding claims; which result in decreased lending ability of banks. But optimal financial resource allocation maximizes the bank's profitability on the one hand and minimizes the outstanding claims of banking system from the entrepreneurs on the other hand, and as a result the lending ability of banks also increases.
- 3- Providing necessary facilities for further activities of private banks could result in promoting competition in banking affairs; thus it helps improving the performance of Iranian financial system. With the promotion of competition, banks will try to grant credit to businesses and entrepreneurs that achieve the highest returns. As result, due to high efficiency and expected profitability of the private sector, this sector could have a bigger share of the budget allocated to the banking system.

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