

# Effective Comparison of Global Financial Crisis (2007) on Inflation of OPEC Countries and Selected Countries of G8

Yazdan Naghdi<sup>1</sup>  
Soheila Kaghazian  
Nasibeh Kakoei

*This study has attempted to examine and compare the effects of 2007 financial crisis on inflation in OPEC countries and selected countries of G8, based on a panel data regression model during 2000-2010. It should be noted that the selected countries of G8 group are 5 industrial countries member of this group, including: America, Italy, Britain, France and Japan, that crisis has been seen faster in them than other countries. Growth economic variables (real sector of the economy), oil price and stock price index (i.e. financial market) have been considered as affected shared variables of the financial crisis in both countries group. According to the obtained results, the only affected variable by the crisis in OPEC countries, is oil price which has positive and significant effect on inflation in the above mentioned countries so that one percent increase in oil price lead to about 0.08 percent increase on inflation, on the other hand, according to survey results there is no relationship between output and inflation in OPEC countries, so it reflects weak manufacturing structure sector (real sector of the economy) in these countries*

*Keywords: Inflation, Financial Crisis, OPEC, Panel Data, G8*

*JEL Classifications: C23, E31, G01*

---

<sup>1</sup> **Yazdan Naghdi**, Assistant Professor of Economics at Islamic Azad University-Firoozkooh Branch, e-mail: [y\\_naghdi@yahoo.com](mailto:y_naghdi@yahoo.com)

## 1. Introduction

The crisis phenomenon is not a novel and new phenomenon in the world, sometime a single economic structure encountered with it or a set of economic structures. With regards to this matter that nowadays the economy excessively are interdependent and intertwined together, economic evolution in one country have influence on other countries' economic issues and this manipulating rate depends highly on economic dependency rate to each other. Thus if an evolution occurs in a country which has the greater share in the global economic, the impact of this evolution will be greater on other countries' economy (Khezry, 2009). The current financial crisis in U.S.A also can be considered as one of these evolutions that due to the high dependency of global economy to U.S.A economy, quickly spread to other countries. Member countries of G8 are among these countries which are industrial and have very close relationship with America so the financial crisis in America's economy has occurred faster in them than other countries and so the detriment of crisis affects economies of these countries and the economies of other countries they were in relation with them. Therefore, in order to identify and control the effects of the crisis we need to examine the effects of financial crisis in these countries.

On the other hand, the financial crisis spread to global markets, including energy market within a short time. The impact of crisis on oil price can be divided into two categories: 1) after crisis occurrence and before its globalization: following the crisis occurrence and reduction in dollar value, the oil price in global market increased. 2) After crisis globalization: following the crisis expansion in Europe and rising in Euro value against dollar, oil price reduced. On the other hand the crisis caused reduction in demands and thus originated the reduction in production and consequently unemployment rate increased. Reduction in demand and consuming services caused reduction in investment as a result the more reduction in total

demands happens so the demand for energy declines and this matter made oil price lessen.

With regarding to this matter that most countries which are as a OPEC member are developing and their economy is excessively dependent on oil revenues, thus reduction in oil price makes oil revenues decline and consequently some major economic problems will occur in these countries. Nevertheless the dependency rate of countries in OPEC member is not identical, so the impact of oil crisis on the economic condition of these countries is not identical as well. Some of these countries are more sensitive to oil price reduction than others.

OPEC for dealing with crisis employs two strategies: 1) acceptance of oil price reduction consequently production maintenance 2) reducing in production consequently rising in oil price. Evidences show that OPEC after crisis and consequently oil price reduction, placed the second strategy on its agenda, this action from OPEC, caused a relative improvement in oil price from the middling of year 2008 (Naghdi, Kaghazian and Kakoei ,2012).

In view of undetermined impact of crisis on countries' inflation in OPEC member, namely from one hand, financial crisis increased inflation rate (as one of the dire effects of crisis) and from the other hand, it can origin the reduction in inflation rate (we can state reduction in liquidity along with the oil price reduction, oil revenues reduction and at last reduction in the government consumption expenditure as the major reason for this inflation rate reducing in countries in OPEC member), hence, we quantitatively investigated the impact of crisis on inflation of countries in OPEC member and then obtained results compared with the effects of the crisis on the selected countries of G8 in this respect with comprehensive understanding of crisis effects, a way for the appropriate decisions will be provided.

## 2. Research Literature

### 2.1 The Research Theoretical Issues

The current financial crisis in U.S.A that was known as the black box or a financial tsunami of the century was one of the greatest crisis occurrence in this country's economy after crisis of decade 1930. The current financial crisis which is set in August 2007 has rooted in subprime mortgages in U.S.A housing market. After the incident of 11 September in year 2001 (invading into the world trade buildings), due to the sudden shock stricken to the financial markets (in psychic aspects and uncertainty about the future), the possibility of economic downturn and lack of foreign investment in U.S.A economy, for compensating this problem, the government and the central bank Federal Reserve of this country took into action, the Federal Reserve reduced the interest rate from 6 percent to 1 percent that consequently this policy led to raising in demand for loan (especially housing loan). Contributing of housing loan extremely increased in the way that loans with high risk conferred to those people who had low income or it was conferred to poor people with unreliable income resources. Some of the American supply funding like banks and institutions changed a major part of these mortgage loans into stocks. Moreover cheap loans raised demands for house purchasing in U.S.A. On the other hand, due to the low speed of house conferring to people, boosting in demand caused house price increased in U.S.A. when house price goes up, the lending bank is not concerned for loan repayment by house buyers and the reason is simple, if the buyer of the house were unable to repay the loan for every reason, the buyer himself, would sell the house for higher price or the lending bank would occupy his house and it does not make any difference for the lending bank that the buyer has high credit or low credit. Boosting in house price gradually and with a little delay caused increasing in housing supply in U.S.A. Building construction overloaded so far that exceeded from the housing demands (2006) as a result a lot of buildings were empty

without inhabitant. The excess of demand made a declination in house price so the house price bubble burst in U.S.A. With decreasing in house and building price and gradual increasing in interest rate, the borrowers were unable to repay loans and preferred the lending banks and institutions to occupy their houses. But this matter occurred when the house price decreased excessively and bank transactions were affected by this decline moreover due to the lack of demand the possibility of making their assets as a cash was relatively zero consequently they admitted their bankruptcy. The beginning of the year 2007 was the start of this process subsequently the validity of the stocks which were composed of housing loans encountered with a huge problem. The way for escaping from this dilemma and the risk of stocks for buyers was selling their house that naturally by questioning their validity, there is not any buyer for these assets which have unspecified risk. These groups for reducing the risk of their validity need to change their assets to liquidity, so tried to sell their interactions stocks and even their oil contracts, in this way all markets encountered with an intense reduction. Thus, although the crisis of supreme risk mortgages loans was as a regional crisis in the U.S.A, but via transforming the assets to stocks, it speeded to global markets especially energy markets (Blundell-Wignall and Atkinson and Se Hoon Les, 2008; Jickling, 2010).

## **2.2 A Review on Experimental Studies**

Molouk Kenawy and Fathy Abd-el Ghany (2012) considered the impact of the world financial crisis on employment in the Egyptian economic sectors during the post-crisis period. The results showed the negative effects of the world financial crisis on some economic sectors both productive and service (tourism, banks, and air transport, oil and chemical industries). It focused on the most affected sectors of the crisis in light of reviewing practical cases of some sectors (sectors of spinning and textile and metal and food industries). Naghdi,

Kaghazian and Kakoei (2012) examined the financial crisis of 2007 on OPEC member countries, using the inflation panel data and for the period of 2000-2010. Based on the obtained results, the only affected variable by crisis in these countries was oil price and this variable has positive and significant effect on inflation in these countries so that a percentage increase in oil prices lead to an about 0.08 percent increase on inflation in these countries. Moreover the effect of economic growth and stock index is negative on inflation in OPEC countries, but it is meaningless. In other words, according to survey results, there is no exchange between output and inflation in these countries and it indicates weak structure of the manufacturing sector (real economy sector). Ahmadzadeh Mashinchi, Yaghoubi and Amirian (2011) in a joint experimental work studied the impact of the impact of the global economic crisis on non-oil operations of ports in Iran. The study showed that the first year of crisis was quiet for the ports and no significant changes occurred in loading/unloading of berthing vessels and container operations, however, in the second year, the amount of loading/unloading non-oil goods as well as the number of input were considerably reduced. In contrary to these two variables, the number of container operations not only reduced. Although the economic crisis instantly affected on the amount of loading/unloading non-oil goods, the number of input vessels was affected by the current crisis after one year delay. In other words, since Iran's interferred demand has less influenced by the reduced global demand, the delay will be more than a year. Arieff, Weiss and Jones (2010) in a joint experimental work studied the impact of financial crisis on south of Africa desert countries, their studies showed that the crisis had destructive effects on economy-socially indices of these countries; such as increasing in unemployment rate, increasing in poverty, reduction in direct foreign investment, reduction in foreign aid, reduction in remittances by African migrant workers to outside the country, reduction in economic growth rate (in oil exporter countries with average income

the reduction in economic growth rate was in great amount), reduction in exporting due to the reduction in global demand and consequently lowness in revenues. The crisis impact on south of Africa desert was different, so that in some countries the inflation reduced and in some other countries due to the fuel high price and meal materials the inflation increased. Researchers showed that due to the heterogeneous nature in African countries, the crisis influenced more impact on some of them more than other places, for instance, those countries which imported oil and metals experienced destructive impact of this crisis rather than other places and the reason was due to the reduction in price of metal and oil. Save for those countries which importing oil, they all would benefit of this reduction in prices but they incurred a big loss for reduction in prices like cacao, cotton and coffee. Soo Khoon and Lim Mah-hui (2010) considered the crisis impact on Malaysia. The results indicate that a sudden shock from the financial crisis in the last season of 2008 from the financial and commercial channels transmitted to Malaysia and had destructive impact on this country's economy. These effects are including off; reduction in growth rate (GDP) from the 5.9 percent at the beginning of the year 2008 reached to 0.1 percent at the end of the year 2008, reduction in direct foreign investment from 49.9 (RM) billion in year 2007 reached to 8.1 (RM) (the reduction in foreign loans repayment in the official and private sectors was considered as a major reason for the reduction in investment), the deficiency balance of payments due to an increasing in the capital account and a reduction in currency account, devaluation of the national currency, annual reduction of export in 28 percent (the major reason of this reduction was through reduction of machinery and electrical equipment production that composed 40 percent of all Malaysia export volume, the export of agricultural production and natural resources will decrease due to the reduction in raw material prices), increasing in import of intermediate materials, but the important point is that the crisis impact on unemployment in

Malaysia in compare with other countries was insignificant and the unemployment rate was almost constant in this country so that in the depth of crisis (first season of 2009) had an increasing rate to 0.9 percent and from 3.1 percent reached to 4 percent.

Overseas Development Institute (ODI) institution (2010) examined the crisis impact on developing countries. The analysis of this study showed that the crisis impact influenced the developing countries in two ways; 1) Effects on stock, goods market and depreciation of assets, 2) Economy stagnation in developed countries. The crisis effects on developing countries are as following: I) Reduction of economic growth due to the reduction in exporting (especially goods and services of exporter countries to U.S.A and Europe Union like Mexico and countries that price of their export goods -influenced on demand fluctuations- have huge intense like Zambia that its most exporting goods is copper that its expense reduced approximately to 60 percent and tourism industry in Africa and increasing in importing goods. II) Increasing in inflation. III) Reduction in direct foreign investment due to the economy stagnation especially these countries that are intensely dependent to foreign investment like South Africa. IV) Reduction in annual currency revenues behalf the immigrant workers due to the high percentage of unemployment rate and rejection of migrant workers in developed countries (especially for countries that the most part of their annual budgets was prepared from the migrant laborers like India and Pakistan. V) Reduction in loans, granting credits and huge amount of aids from developed countries due to the liquidity reduction in banking network of developed countries. VI) Increasing in poverty. However the results indicate that the vulnerability rate of every country depends highly on the country's employed policy to encounter or fade out the crisis impact. The International Monetary Fund (2009)<sup>2</sup>

---

<sup>2</sup> IMF (2009). IMF Multimedia Services Division/ This paper were prepared by a staff team including Patricia Alonso Gamo and others.



examined the crisis impact on low income countries. In this study the crisis impact on 71 low incoming countries had been examined which were from Asia parts, Latin America, Middle East, Europe and countries of south of Africa desert. The results showed that crisis commenced from those countries which have accessory to the global market like Sri Lanka, Ghana, or those countries which their inside financial markets were expanding like Kenya, Nigeria, Uganda, Malawi and Zambia. The crisis effects in these countries are included as reduction in economic growth rate, reduction in revenues and increasing in expenses, reduction in profit margins of multinational corporations, reduction in direct foreign investment (for example in Laos and Mozambique, reduction in financial aid (for example in Afghanistan, Rwanda and Burundi), increasing in poverty, reduction in employment (especially in user industries like oil), devaluation of national money, increasing in foreign debt, reduction in transferring remittances by immigrant workers (for example in Honduras), reduction in exporting as a result reduction in revenues based on business taxes, increasing in the banking interest rate and intensifying banking competition for marinating their deposits (for example in Mongolia and Pakistan). The results showed that the crisis impact on LICs in countries with greater degree of financial integration, elevated due to the high dependency of these countries to commercial and reduction in global demand furthermore most of these countries are among African countries.

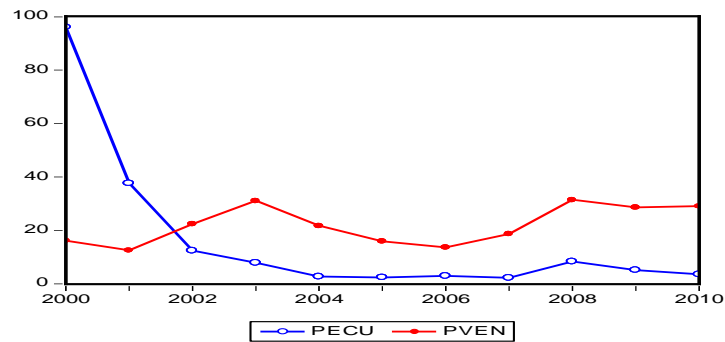
Western Asia Economic and Social Community (ESCWA) (2009) examined the global financial crisis impact on global oil markets and its consequences on Persian Gulf Cooperation Council countries. The results showed that the financial crisis impact on the Persian Gulf Cooperation Council countries was different and it depends highly on employed actions from these countries. The crisis impact on GCC are as following: reduction in economic growth from 7.3 percent in 2008 to 4.8 in 2009 (due to the oil price reduction and consequently

reduction in oil producing) and yet again its increasing in 2010 to 6 percent, reduction in inflation rate from 17.9 percent in 2008 to 10.6 percent in 2010 (due to the aroused reduction in liquidity from reduction in oil revenues, reduction in demand, reduction in goods price especially reduction in cement, agricultural productions and steel price that together caused reduction in importing inflation and due to the high openness rate of these countries, the total inflation decreased and at last reduction occurred in house price. however the inflation rate was two-digit in this area and higher than long-term average for this area. That the major reason is for increasing in public sector wages and oil subsidies, increasing in unemployment rate (due to this reason that most countries encountered reducing in consumption and demand, tried to make smaller their project and dismissed most part of their work force), reduction in budget excess and incident of deficit in Saudi Arabia and Bahrain's budget (due to the reduction in oil price as a result rapid reduction in exporting and high levels of public's expenses), reduction of current account from 25.6 percent in 2008 to 8.1 percent in 2010 so that the greatest reduction in 2009 took place in Oman and Bahrain but this reduction took place for all the current account of countries, reduction in investment, reduction in oil exporting due to the oil price reduction, reduction in interest rate and intensified reduction of assets.

### **3. The Review of the Inflation Empirical Trend**

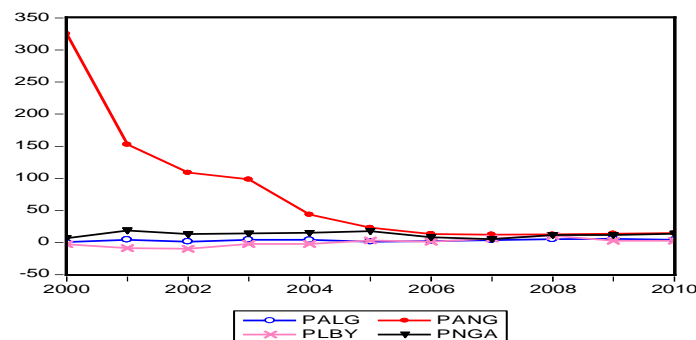
In this section the experimental trend of inflation will be considered in OPEC countries and in selected countries of G8 group during the crisis period and through graphs. Thus countries in OPEC member are divided to 3 groups in terms of their geographical area which are as followings: the Middle East countries (Iran, Iraq, Saudi Arabia, Emirates, Kuwait and Qatar), African countries (Angola, Algeria, Libya and Nigeria) and Latin America (Venezuela and Ecuador).

**Figure 1**  
**Inflation trend in Latin America countries in OPEC member**  
**(2000-2010)**



According to the diagram (1), the inflation rate in both countries (Venezuela and Ecuador) increased during 2007-2008 period and during 2008-2010 period the inflation rate decreased in Ecuador but in Venezuela during 2008-2009 period the inflation rate decreased and during 2008-2010 period the inflation rate was almost constant.

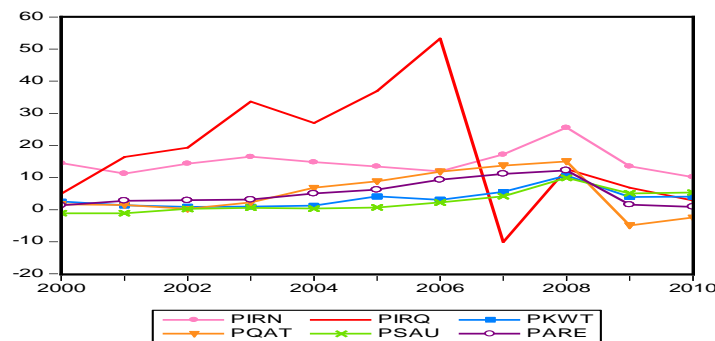
**Figure 2**  
**Inflation trend in African countries in OPEC member (2000-**  
**2010)**



According to the diagram (2), the inflation rate in both countries (Angola and Nigeria) increased during 2007-2008 period. In Algeria the inflation rate increased during 2007-2009 period and decreased

during 2009-2010 period. And in Libya the inflation rate increased during 2007-2008 period and decreased the inflation rate during 2008-2010 periods.

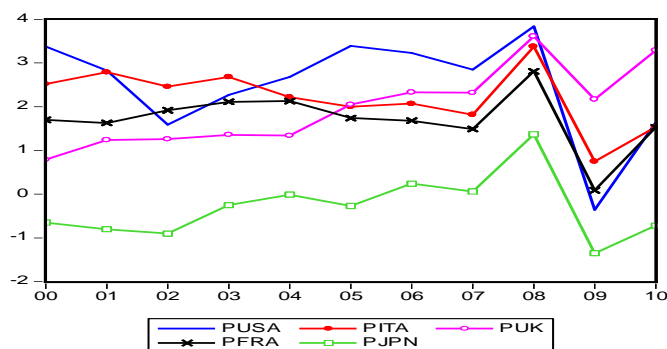
**Figure 3**  
**Inflation trend in Middle East countries in OPEC member**  
**(2000-2010)**



According to the diagram (3), the inflation rate in countries such as Iran, Iraq, Emirates, and Qatar increased during 2007-2008 period and decreased during 2008-2010 period. However in Kuwait and Saudi Arabia the inflation rate increased during 2007-2008 period and decreased during 2008-2009 periods and almost it was constant during 2009-2010 periods.

In general and with regards to above diagrams it can be stated that crisis in all the countries in OPEC member caused inflation during 2007-2008 period.

**Figure 4**  
**Inflation trend in selected countries of G8 (2000-2010)**



In general and according to the diagram (4) it can be stated that the crisis lead to increase of inflation in selected countries of G8 during the period of 2008-2009.

#### 4. Model estimation

##### 4.1 Methodology and Data Issues

This research examined the financial crisis effects on inflation of the petroleum exporting countries (countries in OPEC member) and selected countries of G8 by using of panel data model and annual data during 2000-2010 periods. The useful variables in this research are as: inflation, lag inflation (expected inflation), growth rate GDP, growth rate of oil price, growth rate of liquidity and the growth rate of stock.

It should be noted that all of the variables are in U.S.A dollar term and their data is extracted from WB<sup>3</sup>, IMF<sup>4</sup> and trading Economics in 2011.

<sup>3</sup> World Bank ([www.World Bank.org](http://www.World Bank.org))

<sup>4</sup> International Monetary Fund ([www.IMF.org](http://www.IMF.org))

## 2-4 Presentation of model

The patterns that here we estimated them via panel data and pool methods are as following:

$$\text{Pattern (1): } \text{INF}_{it} = \alpha_i + \beta_1 \text{GP}_{(-1)} + \beta_2 \text{GY} + \beta_3 \text{GOP} + \varepsilon_{it}$$

$$\text{Pattern (2): } \text{INF}_{it} = \alpha_i + \beta_1 \text{GP}_{(-1)} + \beta_2 \text{GY} + \beta_3 \text{GOP} + \beta_4 \text{GM}_2 + \varepsilon_{it}$$

$$\text{Pattern (3): } \text{INF}_{it} = \alpha_i + \beta_1 \text{GP}_{(-1)} + \beta_2 \text{GY} + \beta_3 \text{GOP} + \beta_4 \text{GM}_2 + \beta_5 \text{GSV} + \varepsilon_{it}$$

In these patterns INF as inflation rate, GP (-1) as lag inflation (expected inflation), GY as growth rate GDP, GOP as growth rate of oil price, GM2 as growth rate of liquidity and GSV as growth rate in stock value.

## 4.2 The Empirical Findings

In this section we estimated 3 patterns by panel data and pool methods in the way that in the first pattern we considered inflation as lag inflation (expected inflation) function, growth rate GDP and growth rate of oil price. With regard to this matter that significant part of liquidity in countries in OPEC member is supplied by oil exporting, in the second pattern, liquidity growth rate to investigate this matter that whether liquidity effects on these countries as an independence variable or liquidity is hidden in oil revenues and impose its effect via oil price, we add it to our model. Then we added to the previous model the growth rate of stock value in pattern (3) to study the crisis impact on inflation via financial market channel (stock) and finally we compared the results of different patterns estimating of OPEC member countries with the results of these patterns estimating for selected countries of G8.

In panel data, at first the heterogenous matter of units by F test, in the case of heterogeneous approval, examined in model through various existing methods for panel data like fixed effects method or

random affects method. Otherwise the model will be estimated through pool method (least squares combined method). In the next stage with usage of Hausman test the matter of the correlation between the disrupting components and the explanatory variables was investigated up to select the method for estimating the panel data between the fixed effects methods and the random effects methods. The results of F test and Hausman test together with Value of statistics possibility of these tests is presented for studding in table (1). According to the first statistics, the zero hypothesis of this test namely the usage necessity from the existing methods for panel data in patterns (1) and (3) is accepted by confidence level of 99 percent, however for pattern (2) the above hypothesis is rejected (in other word, for pattern 1 and 3 we used panel data method and pool method for pattern 2). While for the selected countries of G8 group number (one and two) patterns of the null hypothesis of this test that mean the necessity of using two existing methods for panel data can be accepted at the 99% confidence level, number three pattern of the above hypotheses is rejected (in other words, for patterns one and two panel data methods and for three, pool methods are used). In addition, based on the statistics of Hausman test, the zero hypothesis of this test based on this matter that there is not any correlation between explanatory variables and disrupting units (random effects method RE) is approved for both of the patterns (1) and (3). So patterns (1) and (3) is estimated by random effects method while for the selected countries of G8 group the null hypothesis for both of the (1) and (2) patterns shows that there is no correlation between disrupting components and explanatory variables (random effects method of RE) and it is rejected. So for OPEC countries both of the (1) and (3) patterns of random effects and for selected countries of G8 group both of the (1) and (2) patterns of fixed effects will be estimated.

Table 1

**The results of Hausman and F tests for OPEC member**

	The amount of F test statistics	The value of F test statistics possibility	The amount of Hausman test statistics ( $\chi^2$ )	The value of F test statistics possibility( $\chi^2$ )
Pattern (1)	2.458	0.0089	6.687	0.0826
Pattern (2)	1.206	0.293	-	-
Pattern (3)	5.500	0.0001	10.752	0.0565

*Source: research findings*

Table 2

**The results of Hausman and F tests for selected countries of G8**

	The amount of F test statistics	The value of F test statistics possibility	The amount of Hausman test statistics ( $\chi^2$ )	The value of F test statistics possibility( $\chi^2$ )
Pattern (1)	3.099	0.0253	10.681	0.0136
Pattern (2)	2.734	0.0417	10.882	0.0279
Pattern (3)	0.877	0.486	-	-

*Source: research findings*

The results of pattern estimation are presented in summary at tables (3) and (4). The first pattern evaluated with INF variable,  $p_{(-1)}$ , Y, OP. pattern (2) and (3) are evaluated by adding M2 and SV to their previous pattern.

According to the presented results in table (3) (for OPEC countries) the interrupting inflation coefficient in every 3 patterns are



significant and positive. With regards to the evaluated  $\beta_1$ , 1 percent increasing in  $p_{(-1)}$  depends on pattern conditions caused 0.47 increasing in pattern (1), 0.44 increasing in pattern (2) and 0.41 increasing in pattern (3) of inflation that this result indicates that in the OPEC countries the lag inflation (expected inflation) has a significant impact on inflation arousing. The output growth coefficient ( $\beta_2$ ) in every evaluated pattern was insignificant and negative. It means that due to weak structure of production section in OPEC countries, there is no trade off between inflation and production in these countries. The oil price variable coefficient OP ( $\beta_3$ ) in every evaluated pattern statistically was positive and meaningful that this matter points out that financial crisis can increase inflation rate in countries in OPEC member. With regard to the increasing in inflation, this hypothesis that crisis can increase reduction in liquidity at studied countries by reducing the oil price, is rejected. So in the pattern (2), we input liquidity variable in the model as an effective variable on inflation. Liquidity coefficient ( $\beta_4$ ) is positive and significant in this pattern which indicates the variable impact on inflation. According to some economic expert's deduction based on the crisis impact via financial market channel (market stock), in the pattern (3), we put the stock variable (SV) in the model as a variable for market stocks. The obtained results from estimation of pattern (3) showed that not only the stock value coefficient ( $\beta_5$ ) is insignificant and market channel (market stock), in the pattern (3), we put the stock variable (SV) in the model as a variable for market stocks. The obtained results from estimation of pattern (3) showed that not only the stock value coefficient ( $\beta_5$ ) is insignificant and negative but also makes insignificant the liquidity impact on inflation by putting it in the model. So it can be stated that the crisis impact via financial OPEC member, that two major reasons for this result is that; I) The relatively closed economy of these countries (without petroleum importing

inclusion) II) Lack of strong financial market in these countries on condition that it has the effective impact on inflation.

**Table 3**

**The results of economy-evaluation pattern estimation for OPEC member**

	<b>Pattern (1)</b>	<b>Pattern (2)</b>	<b>Pattern (3)</b>
$\alpha$	4.65 (4.26)	0.35 (0.26)	3.60 (2.59)
$\beta_1$	0.47 (18.23)	0.44 (13.91)	0.41 (9.54)
$\beta_2$	-0.15 (-1.48)	-0.11 (-0.77)	-0.12 (-1.21)
$\beta_3$	0.08 (2.50)	0.09 (2.41)	0.08 (3.31)
$\beta_4$	-	0.15 (3.04)	0.042 (1.08)
$\beta_5$	-	-	-0.0007 (-0.55)
R-Squared	0.85	0.84	0.58
Adjusted R- Squared	0.83	0.83	0.55
F	45.46	147.83	18.75
Prob F	0.000	0.000	0.000
D.W	2.2	1.99	1.24

*Source: research findings*  
*The digits in parenthesis are t statistics*

Based on the results in table (4) (for selected countries of G8) the coefficient of lag inflation (expected inflation) is positive and significant in all three patterns. Considering estimated  $\beta_1$  one percent increase in  $P_{(-1)}$  (depending on the circumstances of Patterns), lead to 0.39 percent increase (in the first and second pattern) and 0.73 percent increase (in the third pattern) on inflation, this results show that lag inflation (expected inflation) has a significant role in indication of inflation in the studied countries. Production growth rate of  $\beta_2$  is positive in number one and two patterns, but non-significant and, the coefficient is negative and significant in number third pattern. Coefficient variable of oil price (OP)  $\beta_3$  is statistically significant and positive in all patterns, which indicates that the financial crisis has caused a rise in inflation in the studied countries. In the second pattern liquidity variable as an influencing variable on inflation were put in the pattern. Liquidity ratio  $\beta_4$  is negative and non-sense in this pattern. According to some economists reasoning that the crisis influences through financial market channel (stock), share value variable (SV) as a measure of stock has been put in the third pattern. The third pattern estimated results indicates that the share value coefficient ( $\beta_5$ ) is negative and significant, and by considering this variable in the pattern the effect of liquidity on inflation is positive and significant. So it can be stated that the crisis influences inflation of selected countries of G8 through financial market. These results show that the G8 group countries have open and developed economic and integrated financial markets; therefore, even a little price shock influences the economy of these countries.

**Table 4**

**The results of economy-evaluation pattern estimation for  
selected countries of G8**

	<b>Pattern (1)</b>	<b>Pattern (2)</b>	<b>Pattern (3)</b>
$\alpha$	0.59 (2.02)	0.59 (1.99)	-0.28 (-1.70)
$\beta_1$	0.39 (2.80)	0.39 (2.62)	0.73 (8.52)
$\beta_2$	0.011 (0.20)	0.011 (0.197)	-0.18 (-3.54)
$\beta_3$	0.027 (5.30)	0.027 (4.77)	0.025 (5.15)
$\beta_4$	-	-0.000004 (-0.0002)	0.039 (2.04)
$\beta_5$	-	-	-0.012 (-4.62)
R-Squared	0.77	0.77	0.80
Adjusted R- Squared	0.73	0.73	0.78
F	20.89	17.85	37.47
Prob F	0.000	0.000	0.000
D.W	1.79	1.79	2.29

*Source: research findings*

*The digits in parenthesis are t statistics*

## 5. Conclusion

This study has attempted to examine and compare the effects of 2007 financial crisis on inflation in OPEC countries and selected countries of G8, based on a panel data regression model during 2000-

2010. Growth economic variables (real sector of the economy) oil price and stock price index (financial market) have been considered as affected shared variables of the financial crisis in both countries group. The estimation results of OPEC countries suggest that production does not make a significant effect on inflation in these countries so we can say that there is no trade-off between production and inflation in the members of OPEC countries, and it's because of the weakness in the manufacturing sector and the country dependence on oil and oil revenues, and the dependency makes crisis to affect inflation in these countries so the 1% increase in oil prices leads to an increase of about 0/08 percent on inflation in these countries. Results also indicate that crisis doesn't influence inflation through financial channel (stock market) in OPEC countries because economy of countries without oil is a relatively closed economy and financial markets have weak performance in these countries. While the results showed that in G8 countries when the production increases the inflation decreases, and there is a well-established trade-off between production and inflation in these countries. In G8 Countries stock price index is a significant coefficient and this significance indicates that the financial channel (stock value) affected by the crisis, and this is because of the flexibility, open economy and integrated financial markets in these countries.

According to the findings of the study, based on study goals-which compared the impact of financial crisis on inflation in OPEC and G8 countries - it can be stated that the only affecting channel in OPEC countries is oil prices but financial crisis influence inflation through the three channels (economic growth, oil prices and stock price index) in G8 countries, it should be noted that economic growth is the most affected channels in the G8 countries. The estimates shows that lag of inflation had a significant positive effect on inflation in all three models and in both countries group (OPEC and G8). Furthermore, lag inflation (expected inflation) has the most effect, in comparison to other variables, on inflation of these

countries. So it is suggested that both group countries reduce the expectation of inflation in order to control and reduce inflation.

### References

- Arieff. A, Weiss. M.A & Jones. V.C. (2010). The Global Economic Crisis :Impact on Sub- Saharan Africa and global policy responses. CRS report for congress. [www.crs.gov](http://www.crs.gov), R40778.
- Ahmadzadeh Mashinchi. S, Yaghoubi. E & amirian.J, (2011). The impact of the global economic crisis on non-oil operations of ports in Iran. *Middle-East Journal of scientific research*, NO 9(5), pp 596-601. 2011.
- Blundell -Wignall, Adrian & Atkinson, Paul & Se Hoon Les, (2008). The current financial crisis: Causes and policy issues. ISSN 1995-2864. *Financial market trends OECD* 2008.
- IMF (2009), IMF multimedia services division, the implication of the global financial crisis for low-income countries, this paper was prepared by a staff team including Patricia Alonso Gamo and others.
- Jickling, Mark, (2010). Causes of the financial crisis. Congressional research service 7-5700. [www.gov](http://www.gov).
- Khezry, Mohammad (2009), the effects analysis of financial crisis in America's economy on Iran's economy. *Journal of strategic studies*, the twelfth year. Number first, spring 2009, sequence number 43.
- Molouk Kenway. E, Fathy Abd-el Ghany, (2012). Impact of the world financial crisis on employment in the Egyptian economic sectors. *Middle-East journal of scientific research*, NO 11(3), pp 347- 356. 2012.
- Naghdi,Y & Kaghazian,S and Kakoei,N, (2012). Global financial crisis and inflation: Evidence from OPEC. *Middle-East journal of scientific research* 11(4), pp 525-530. 2012.
- Soo Khoo, G & Lim Mah-hui, M. (2010). The impact of the global financial crisis: The case of Malaysia. TWN. [www.twenside.org.sg](http://www.twenside.org.sg)

The global financial crisis and developing countries. (2010).  
www.ODI.ORG .UK.

The implication of the global financial crisis on the world oil market  
and its implication for the GCC countries. (2009). Economic and  
Social Commission for Western Asia (ESCWA).

