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Globalization of Economy and its impact on inflation in economic cooperation organization countries ECO

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ABSTRACT

Inflation is usually a concern for policy makers due to creating uncertainty. This issue has adverse effects on economic growth. Accordingly creating conditions for sustainable non-inflationary economic growth has been at the focus of macroeconomic policy makers in developing countries. Inflation rate is the percentage of change in prices indicator in each period than the previous period. Inflation reason studied in different schools of economy. Liquidity volume growth rate has definite effect on Inflation in most of these schools. This study sought to examine the effect of the degree of openness of economy as an Index of globalization of economy on Inflation rate economic cooperation organization countries (ECO) during 1996-2009 using panel data with fixed effects. The results showed that the degree of openness of the economy, money and quasi money growth and inflation in previous period in these countries has positive and meaningful effect on inflation. Also foreign direct investment has had negative impact on inflation which is not statistically meaningful. Based on results it is observed that economic cooperation organization countries are sensitive against globalization.

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INTRODUCTION

One of the most important phenomenon observed in 2 recent decades is significant reduction in inflation [27]. Inflation is usually a concern for policy makers due to creating uncertainty. This issue has adverse effects on economic growth. Accordingly creating conditions for sustainable non-inflationary economic growth has been at the focus of macroeconomic policy makers in developing countries [10]. On the other hand, One of the phenomenons emerging nowadays or even emerged in the past, and going on in all modern life fields, is a phenomenon named Globalization. The word globalization sometimes is defined as universalization. The word global has been used since 400 years ago and expressions such as globalizing, globalism and globalization have been used in Scientific and literary texts since 1960s. [18] Globalization refers to a process through which national economies are more open and more affected transnational economy. IMF defines globalization as wider and deeper integration. In other words, globalization is growth of economic mutual interdependence of countries around the world through increasing volume and variety of transactions in goods, services and capital flow beyond boundaries and also through wider and broader broadcasting of technology. Since globalization of economy has Important and effective role in economic conditions in present duration, Therefore investigating this issue about economic cooperation organization countries (ECO) has considerable importance in globalization process and international economic cooperation. So in this article the effects of economic globalization on inflation has been studied using panel data approach during 1996-2009 using data of economic cooperation organization countries including Afghanistan, Azerbaijan, Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan and Turkey. Meanwhile, Turkmenistan and Uzbekistan were not considered in this study because of absence of data.

2. Theoretical Foundations:

2.1- Definition of Globalization:

The word globalization sometimes is defined as universalization. The word global has been used since 400 years ago and expressions such as globalizing, globalism and globalization have been used in Scientific and

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2.2 - Indicator of Globalization:

Among the indicators of globalization of economy, the degree of openness of economy could be mentioned which is the proportion of total export and import to gross domestic product [12,10]. Also, we can point to the indicator of proportion of imports to total exports and imports which mostly consider extraversion aspect of business. The proportion of foreign direct investment (FDI) to gross domestic product (GDP) is used as financial freedom.

2.3 – Inflation rate and its influencing factors:

Inflation rate is the percentage of change in prices indicator in each period than the previous period [10]. Inflation reason studied in different schools of economy. Liquidity volume growth rate has definite effect on Inflation in most of these schools. In Classic and Chicago schools, liquidity growth leads to inflation [20]. The Keynesian and neo-Keynesian schools increase in wages or any other kind of income (inflation of demand pressure and led inflation) leads to inflation [13].

New Classics consider inflation depended on expected inflation and difference between natural product and actual product. Sargent using application of the rational expectations hypothesis came to the conclusion that a coordinated monetary policy has no effect on the elimination of unemployment and production increase. But temporarily reduces not-expected inflation [23]. New Keynesian school has growing up the most comprehensive hypothesis of inflation until now. In this group of economists Gordon expresses his triangular hypothesis of inflation. In his hypothesis he suggests the root of inflation in three factors including Total demand, total supply, and inertial inflation.

In the inflation of demand pressure hypothesis the reason of inflation is increase in total demand and transfer of total demand curve, which may be the result of increase in consumption and independent investment, expansionary monetary policy, reduction of independent money demand or in open economies may be the result of increase of exports and reduction of imports. If for any of the stated reasons total demand curve shifts to the right and above, prices will increase and if this demand increases, increase of prices would be permanent and inflation will appear. This theory is one of Keynesian inflation theories which describes Phillips downward curve and indicates a negative relationship between inflation and unemployment.

Cost-push inflation theory is another inflation Keynesian theory which knows the reason of inflation in increase of prices due to labor unions bargaining and rising product costs. In this type of inflation supply because of shift of curve to the left and above, prices will start to rise. In addition, production rate decreases, then employment will decrease. This is the kind of inflation that is known as recession inflation. To deal with this type of inflation if in the monetary and fiscal policies, the demand increases, prices rise higher and higher wage demands appear and wage - prices spiral is defined here. Meanwhile, inflation caused by commodity prices as well as inflation caused by wage, leads to recession inflation. Because it reduces production and employment beside increasing prices.

Inertial inflation does not have a simple explanation of pressure demand or cost-push, but different and complex factors involved in its development and maintenance. This type of inflation is mainly particular in developing countries. The use of fiscal and monetary policies to fight inflation in developing economies may not work and cost too much for these types of businesses.

This type of inflation is explained by factors such as lack of infrastructure and economic infrastructure, expansion of the public sector, undermining the private sector, preventive rules of private productive activity, continually and expanding government budget deficits, expansion of services sector incompatible with the needs of the community, development of severe and uncontrolled urbanization and rapid population growth.

2.4 - Globalization and Inflation:

In most studies, the effect of openness of economy (the degree of openness of economy) on inflation has been studied, such as Lin, Daniels and Jin who have investigated the relationship between free trade international and inflation and have achieved different results. Lin believes that increased trade openness causes reduction of monetary policy stimulus and by observing inflation rates in 114 researched countries he found an inverse relationship between openness of economy and inflation. Daniels and Van hoose [7] observed that there is not necessarily relationship between openness of economy and inflation. Jin [11] showed that opening in a sudden shock, has had a negative effect on the price level in South Korea, but it is not a long-term effect. However, if the volume of imports be less than exports then it will lead to inflation in the global economy.

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3. Literature:

Nadem and Batool in a research titled the degree of openness of economy and inflation: A Case Study of Pakistan, using data from the period 1973 to 2005 with HAC time series (Auto correlation and Heteroscedasticity) method studied the effect of openness of economy on inflation in Pakistan. They used variables such as real GDP growth, money growth, interest rates and degree of openness of economy. The results showed that the degree of openness of economy, money growth and interest rates have positive and significant effect on inflation rate and GDP growth has negative and significant effect on inflation rate.

Tashci et al. in a research titled the effect of the degree of openness of economy on inflation for selected developing countries using data from the period 1980 to 2006 and with Panel Data method investigated the effect of the degree of openness of economy on inflation. They used variables such as openness of economy, GDP per capita and foreign direct investment. The results showed that the openness of economy and the GDP per capita have positive and significant effect on the inflation rate in the group of selected developing countries.

Jafari Samimi et al. in a research titled the degree of openness of economy in Iran studied the effect of openness of economy in Iran from the period 1973 to 2007 using Autoregressive-Distributed Lag (ARDL). Their findings showed that openness of economy has negative and significant effect on inflation in Iran in short term period. Based on the results, it was observed that openness of economy in long-term period has no significant effect on inflation.

Thomas in a research titled trade openness and inflation using panel data method in the Caribbean from the period 1980 to 2009 using panel data examined the effects of openness of economy (trade openness)on inflation. The results showed that open trade has positive and significant effect on inflation in these countries. He suggested that the Caribbean are sensitive to economic globalization in term of inflation.

Jafari Samimi et al in a research titled the degree of openness of economy and inflation: A Case Study in MENA countries, using data for the period 2000 to 2007 using panel data studied the hypothesis of Romer [22] which states that the degree of openness of economy will lead to inflation reduction in small and open countries. The results showed that openness of economy has positive and significant effect on inflation in these countries. Their result was contrary to Romer hypothesis.

Mukhtar [15] in a research titled whether trade openness reduces inflation, Pakistan case study, investigated Romer hypothesis using data from the period 1960 to 2007 and using co-integration and vector error correction model (VECM). The results showed that trade openness has negative and significant effect on inflation. His result confirmed Romer hypothesis in Pakistan.

4. Specifying model:

To estimate the impact of globalization on the size of government in economic cooperation organization countries in period 1996 - 2009, a model inspired by Jafari Samimi et al [10] and Thomas [25] research , was stated as follow:

$$LINF_{it} = \beta_0 + \beta_1 LTR_{it} + \beta_2 LFDI_{it} + \beta_3 LgMO_{it} + \beta_4 LINF_{it}(-1) + U_{it}$$

$LINF_{it}$: logarithm of inflation rate, $LFDI_{it}$: logarithm of foreign direct investment inflows than GDP, LTR_{it}: logarithm of ratio of imports to total exports and imports, $LgMO_{it}$: logarithm of ratio of money and quasi money growth to GDP, $LINF_{it}$ (-1): logarithm of previous period inflation and U_{it}: disrupting of model.

Panel data model is divided into two total parts including panel data model with fixed effects and panel data model with random effects. The two total forms of panel data differ in the assumption of a fixed or random intercept levels (countries). To select the better model between noted panel data models (random effects or fixed effects) Hausman test is used. Also, to check for the presence of Unit Root in panel models, Levin, Lin, Chu test was used.

5. Discussion and Results:

To study the persistence of model variables for the period (1996-2009) Levin - Lin - Chu test was used. This test was done at level zero and with intercept. The results are shown in Table 1:

Table 1: Study of persistence of variables using Levin - Lin - Chu (LLC).

With intercept and trend		With intercept		
Probability level	Value of test statistic	Probability level	Value of test statistic	variable
0000/0	05/4-	0008/0	15/3-	LINF
0007/0	20/3-	0000/0	19/6-	LTR
4620/0	09/0-	0000/0	60/6-	LFDI
0000/0	59/6-	0000/0	63/5-	LgMO
resource: research calculations				

As shown in Table 1all variables in the model are persistent in zero level and with intercept during the period 1996-2009

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4-2 *Limer and Hausman F test:*

Before estimating the model, it was necessary to determine the type of panel data estimation, so Limer F-test was first used to determine whether there is a separate intercept for each country. The results are presented in Table 2:

Table 2: Limer and Hausman F test.

Probability level	statistic	Test
0/0377	2/28	F Limer
0/0080	13/80	Hausman
resource: research calculations		

According to the F statistic and probability level, the hypothesis is rejected OLS and each school should have a separate intercept.

To estimate the model by using fixed effects or random effects method, Hausman test was used. The results of this test is presented in Table (2) and Hausman statistic and probability level indicate that the model must be estimated by fixed effects, so each country should have separated intercept and the model must be estimated by fixed effects.

4-3 estimated model of effect of globalization on the size of government in economic cooperation organization countries

This research is studying the effect of economic globalization (the degree of openness of economy) on inflation rate from the period 1996 to 2009 in economic cooperation organization countries called ECO using panel data method. According to Limer F test and Hausman test, a specified model was estimated to study the effect of openness of economy (economic globalization) on inflation in economic cooperation organization countries using fixed effect method. Estimated method results are shown in Table 3.

Table 3: Results of estimated model of the effect of openness of economy on inflation in economic cooperation organization countries (ECO) during the years of 1996-2009.

Probability level	statistic t	coefficient	variable
0241/0	306/2-	283/3-	C
0238/0	311/2	815/0	LTR
2235/0	228/1-	065/0-	LFDI
0004/0	713/3	306/0	LgMO
0000/0	355/8	546/0	LINF(-1)
70/0	R^2 Adjusted	74/0	R^2
0000/0	**F** Probability level	87/17	statistic F
resource: research calculations		68/1	Watson camera

The results presented in Table 3 show that the degree of openness of economy with coefficient 0.815 has positive and significant effect on inflation in economic cooperation organization countries called ECO during studied period. The degree of openness of economy is done to increase net export, meanwhile it leads to exit of foreign exchange for Importing of consumption goods and it is harmful for domestic production because of both changing customer tastes and reduce in import of intermediate and capital goods. And it leads to decrease of production and this process will lead to increased inflation.

The results also show that the growth of total quantity of money and quasi money with previous period inflation have positive and significant effect on inflation. Based on theory of quantity of money, increase in quantity of money helps increase of inflation. Also previous period inflation influence on inflation expectations and thus it cause increase of inflation.

Foreign direct investment has had a negative impact on inflation in these countries which is not statistically significant. FDI in developing countries causes productivity increase and improvement of technology level and economy management and increase production and thus it can have a negative effect on inflation. The results obtained show that economic cooperation organization countries are sensitive in term of inflation against globalization of economy (open trade). Therefore economic policy makers should consider this issue to act appropriately in making appropriate policies to control inflation in the course of globalization. Because inflation causes uncertainty in economy and damages investment and domestic production.

REFERENCES

[1] Jafari Samimi, Ahmad Mahmoud Zadeh, Mahmoud Shadabi Leila, 2009. Economic Liberalization and Inflation: A cross-country analysis, Journal of Modelling, 2: 27-46

[2] .Alfaro, Laura, 2005. Inflation, openness, and exchange-rate regimes. The quest for short-term commitment. Journal of Development Economics, 77: 229-249.

[3] Agenor, P.R., P.J. Montiel, 2008. Development Macroeconomics, Princeton University Press, Princeton, New Jersey, Third Edition.

[4] Badinger, Harald, 2009. Globalisation, the output-inflation tradeoff and inflation. European Economic Review, 53: 888-907.
[5] Boschen, John, Charles Weise 2003. What Starts Inflation: Evidence from the OECD countries. Journal of Money Credit and Banking, 35: 324-49.
[6] Bowdler, Christopher, Adeel, Malik, 2006. Openness and Inflation Volatility: Cross-country evidence. Journal of Economic Literature.
[7] Daniels Joseh, P., D. Van-Hoose David, 2006. Openness, the sacrifice ratio, and inflation: Is there a puzzle? Journal of international Money and Finance, 25: 1336-1347.
[8] Dornbusch, Rudiger, 1992. The case of trade liberalisation in developing countries, The Journal of Economic Perspectives, 6(1): 69-85.
[9] Jafari Samimi, Ahmad, Ghaderi, Saman, Sanginabadi, Bahram, 2011, Openness and Inflation in Iran, International Journal of Economics and Management Engineering (IJEME), 1(1): 42-49.
[10] Jafari Samimi, Ahmad., Ghaderi, Saman, Ghaderi, Kaveh, Ghaderi, Salahaddin, 2012. Openness and Inflation: A Case Study for MENA, Universal Journal of Management and Social Sciences, 2(1): 50-56.
[11] Jin Jang, C., 2006. Openness growth and inflation: Evidence from South Korea before the economic crises, Journal of Asian Economic, 17:738-757.
[12] Kim, M., H. Beladi, 2005. Is free trade deflationary? Economics Letters, 89:343-349.
[13] Karras, Georgios, 1993. Money, inflation, and output growth: Does the aggregate demand-aggregate supply model explain the international evidence?, Review of World Economics, Vol. 129, No. 4, December.
[14] Karakayali, H., 2002. Makro Ekonomi, 4th edition, Manisa.
[15] Mukhtar, Tahir, 2012. Dose Trade Openness Reduce Inflation? Emprical Evidence from Pakistan, Journal of Economic Cooperation and Development, 33: 33-52.
[16] Muhammad, Hanif, Irem Batool, 2006. Openness and Inflation: A case study of Pakistan. MPRA Paper 10214. http://mpra.ub.uni-muenchen.de/10214/
[17] Nasser, Omar, Adolfo Sachsida, Mario Jorge Cardoso de Mendonca, 2009. The openness-inflation puzzle: Panel data evidence. International Research Journal of Finance and Economics, 28: 169-81.
[18] Nahavandian, M., 2006. We and Globalized World, the Center for Globalization Studies.
[19] Hanif, N., Muhammad, Batool, Irem, 2006. Openness and Ination: A Case Study of Pakistan, Munich Personal RePEc Archive, Online at http://mpra.ub.uni-muenchen.de/10214/
[20] Orhan, Z., Osman, 1995. Balica Enflasyon Teorileri ve stikrar Politikalari, stanbul: Filiz Kitabevi.
[21] Rogoff, Kenneth, 2003. Globalisation and global disinflation. Presented at the Federal Reserve Bank of Kansas City conference, 28-30.
[22] Romer, David, 1993. Openness and inflation: Theory and evidence. The Quarterly Journal of Economics, 108(4): 869-903.
[23] Rudd, Jeremy and Karl Whelan, 2003. Can Rational Expectations Sticky-Price Models Explain Inflation ynamics?, Central Bank and Financial Services Authority of Ireland, Research Technical Paper, August.
[24] Tasçi, H., Mehmet, Esener, S. Çasri., Darici, Burak, 2009. The effects of openness on inflation: panel data estimates from selected developing countries, Investment Management and Financial Innovations, 6(4): 28-34.
[25] Thomas, Chrystol, 2012. Trade Openness and Inflation: Panel Data Evidence For The Caribbean, International Business & Economics Research Journal, 11(5): 507-516.
[26] Wu, Chung-Shu, Jin-Lung Lin, 2006. The Relationship Between Openness and Inflation in the NIE's and G7, Journal of Economic Literature.
[27] Wynne, Mark, Erasmus Kersting, 2007. Openness and Inflation. Staff Papers of the Federal Reserve Bank of Dallas.2.