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Openness of Trade, Unemployment and Inequality of Income Distribution: Comparison between Developed and Developing Countries

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Abstract
In the discussions of trading, unemployment and income distribution inequality, this question is raised by economists that in economic development of developing and developed countries, which policy is necessary in the first stage. Is trading liberalization the pre-requirement of transfer from a close economy to a relative open economy and is it necessary for the developed economy compared to other policies, or after achieving an economic growth level and reduction of class difference, poverty and unemployment, the countries should start trade liberalization. By this pre-requirement, a two-stage systematic generalized method of moments technique (GMM) presented by Blundell & bond (1998) during 1991-2008 is applied to evaluate the relationship between three main indices for both groups of selected developed and developing countries. The results of study show that in both groups of countries, high production and increasing foreign direct investment provide open economy and can create employment and reduce unemployment but by increasing population growth rate, unemployment and inflation in both groups of countries, household income inequality is increased. The turning point of this study is regarding household income inequality as increased by increasing economic growth rate and control of open economy in developing counties but in developed countries, increasing economic growth rate and open economy, household income distribution is improved.

Keywords: trade openness, income distribution, unemployment, economic growth, GMM model, Sargan test.

JEL Classification: C33, C36, D31, F43.

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1. Introduction

Globalization is a multi - dimensional phenomenon with various economic, social and political aspects. Globalization is rapid economic merging of the countries including trading liberalization, investment and technological changes. Labor force employment, the conditions of poor groups, income distribution and economic growth based on globalization development are challenging issues emphasized in many studies in two recent decades. Some people believe that the poor share benefits of trading liberalization. Others believe that these benefits are absorbed by those that are not poor (Ravallion, 2004). Todaro (2000) states that eradication of poverty and inequality is the main issue and main purpose of development policy for many countries". In the discussions of trading, unemployment and income distribution inequality, this question is raised by economists that in economic development of developing and developed countries, which policy is necessary in the first stage. Trade liberalization is the pre-requirement of transfer from a close economy to a relative open economy and is it necessary for the developed economy compared to other policies. The supporters of trading liberalization believe that liberalization provides wide opportunities for development of countries. This group by mentioning two reasons evaluates the positive impact of trading liberalization on poverty, income inequality and unemployment. First: the impact of trading liberalization on reduction of inequality and unemployment is via income growth. They believe that joining trading liberalization and economic integration causes that poor countries by production of goods and services and its presentation in global markets can have high income and this increases per capita income in poor countries and this income increase for the poor means high growth and reduction of poverty and inequality and reduction of unemployment. Second: The impact of trading liberalization is on the change of direction of production and finally inequality and unemployment. According to these experts, merging global markets as capital and trading helps the convergence of price and trading liberalization leads to reduction of inequality and unemployment. Shahzad Hussain et al. (2009) state that trading liberalization and location of the country in world market have good effect on household income distribution and income inequality is reduced by foreign investment in country. Ehrhart (2005) approved the results of the above study in a study conducted for Latin America and East of Asian countries and showed that globalization index has significant association with income distribution inequality and trading liberalization is associated with reduction of income inequality. Various studies as Sachs & Warner (1995), Reuveny & Li (2003) and Margit Bussmann et al (2005) supported the above hypothesis. The results of the studies including Galiani et al (2003), Meschi & Vivarelli (2007) and Bergh and Nilsson (2008) are inconsistent with the results of these studies. Gourdon (2006) in a study about trading liberalization and income distribution inequality in developing countries state that trading liberalization increases income inequality in developing countries with high difference in education of labor force. The countries with equal initial education level among labor force, there is low inequality and unemployment. Also, various studies have been conducted regarding the association between economic growth and income distribution inequality and various results have been achieved. Tabassum (2008) by identification of the deficiency of low income countries markets considered as probable reason for a negative relation between economic growth and income inequality for 69 developing countries, while in short term, there is a positive relation between economic growth and income distribution inequality but over time and increasing income inequality, economic growth is reduced.

The present study attempts to evaluate the effects of three main indices of trade openness, unemployment and income distribution inequality in two groups of developed and developing countries. Also, a two-stage systematic generalized method of moment's technique (GMM) presented by Blundell & bond (1998) during 1991-2008 is applied. The paper is organized as follows and in the second section of theoretical basics is regarding the results of theoretical and empirical studies. The third section of model is about study method and applied tests. Fourth section is about the results of tests and model estimation. Fifth section is dedicated to summary and conclusion.

2. Literature Review

This study evaluates the effects of three indices of trade openness, unemployment and income distribution inequality with the highest impact on economic growth in two developed and developing countries. The significance of the study shows that separation of the poor and the rich is one of the economic problems in global era and is not only adjusted but also it is developed by increasing population growth. Also, this factor creates insecurities in countries

and by indices referred in this paper, the amount of income distribution inequalities of household and unemployment can be evaluated. The awareness to the mutual effects of macro-economic variables is one of the requirements of selection of correct policy to achieve macro-economic goals. There are various theoretical and empirical views about the impact of these variables on each other and the determination of type of macro-economic variables of each country requires scientific study based on the data of the country. Grossman and Helpman (1991) considered innovation dependent upon employed labor force in R&D and believed that these activities by quantitative and qualitative improvement of products are stimulating factor of economic growth. River – Batiz and Romer (1991) in the study regarding endogenous growth theories mentioned some reasons for the impact of trading on growth: 1- The high access to knowledge, 2- Technology development reducing the costs and increasing the speed of goods variety, 3- Avoiding the conduction of industrial studies not requiring much innovation, 4- Improving creativity, innovation and identification of benefits of scale in case of strong competition.

Some economists as Romer, Lucas, Grossman and Helpman raised theoretical bases of positive relation between foreign trading and economic growth and showed the dynamic and continuous impact of foreign trading on economic growth rate. Robertson introduces trading as driving force and Balassa states that increasing export increases efficiency. Some of the empirical studies show that economic growth is affected by open trading degree and it increases open trading degree. The growth literature in this regard emphasize on some issues as endogeneity of the variables by policies in applied studies can establish an explicit relation between growth and trading. Those opposing this theory state that we cannot accept that economic growth are dependent upon the change in trading models and open trading degree. Some economists are doubtful about the power of economic open degree under pressure of economic growth. They believe that even in case of using the methodologies supporting the benefits of the increasing effects of economic open degree on growth, there are some doubts in this case. The statistic trading models propose that economic open degree can increase growth temporarily. Indeed, trading open degree is a (minor passage) to achieve endogenous growth.

There are many arguments for and against trading, income distribution inequality studies. The results of some studies show that increasing trading interactions improves income distribution and reduction of income inequality and unemployment among various people in society. Cororaton and Cockburn (2007) in a study regarding commercial reforms and poverty in Philippine showed that reduction of tariffs reduced the price of household consumption goods. This increased the real income of household and improved income distribution. Generally, there are two basic solutions in this regard. The first solution is about international monetary fund, World Bank and World Trade organization and it explicates the gap between the poor and the rich is reducing. Watkins referred that according to World Bank, international monetary fund and most of advanced industrial countries governments, eliminating the trading limitations are one of the strongest tools to share the poor in global economy prosperity. This group believes that open economy with liberal market reforms can present some benefits of globalization to the poor and reduction of unemployment. Some critics reacted to this view and emphasized that globalization was not for the benefit of the poor and merging in world markets increased poverty and inequality and unemployment. This issue emphasizes on the second solution regarding UN organization and economic organizations as the gap between the rich and the poor is developed increasingly. Harjes (2007) justified the above theory in a study in Europe and showed that there was increasing concern due to the impact of globalization on life standards of people and this concern was due to stock crash, work income and national income data. He stated that a wide phenomenon as globalization and technology changes can guide the countries to high inequality. Milanovic (2005) states that globalization is not good before improving income distribution. Adams (2007) in a study on 62 developing countries showed that globalization explained only 15% of the changes in income inequality and this coefficient was increased by increasing commercial liberalization.

The review of literature of income distribution and growth in the world includes the

old literature of growth and distribution evaluating the impact of economic growth on income distribution. The first researcher in income distribution and growth literature is Kuznets (1955). Kravis (1956), Oshima (1962), Paukert (1973), Ahluwalia (1976), Papanek & Kign (1986) studied the impact of economic growth on income distribution and unemployment index.

Galor (2000) in a study found that the relation between income inequality and growth in included in the form of two classic or modern models or a combination of these two models. In classic model, income inequality and growth is associated via saving or physical capital. The higher the income inequality, the higher the wealth presented to highly-income class of society intending to save mostly. This issue increases total saving and capital accumulation and also economic growth is increased. Despite classic model, in modern model, the relationship between growth and income inequality is negative and human capital is the factor for this negative relation. High equality in society provides investment in training for many people in society. The lower the income inequality, the higher is the human capital and economic growth. Barro (1999), Frank (2005), Pieters (2010) and Binatli (2011) conducted some studies in this respect.

3. The Model

Regarding the previous studies, this study is a comparative design. It evaluates the relationship between trade liberalization, income distribution inequality and unemployment as important economic indices in developed and developing countries by Arrelano & bond (1991) model presenting a two-stage systematic generalized method of moment's technique (GMM) for dynamic panel data. GMM was presented for the first time by Hansen (1982) and later was extended by Chamberlain (1987) and Newey (1988). This model is used for time series, cross section and panel data. The studies such as Hayashi and Sims (1983), Stoica, Soderstrom and Friedlander (1985), Hansen and Singleton (1991, 1996) and Hansen, Heaton and Ogaki (1996) have applied mostly GMM estimators in time series (Kuersteiner, 2002). Anderson- Hsiao (1981) due to the problems in dynamic pooled data and caused that non-observed effects in each section (country) and specific individual effects with explanatory variables created auto-correlation and they took the basic step to eliminate these problems, the elimination of specific effects of each section (country) and proposed 2SLS model. In a study done by Matyas & Sevestre (1991) regarding the estimation of 2SLS, it was found that this model achieved big variances for coefficients due to the problem in selection of tools and the estimations were not significant. Also, to eliminate auto-correlation problem, Anderson- Hsiao proposed that dependent variable in level or the first and second lag of this variable could be used as instrumental variable. However, in the study done by Arellano, it was found that instrumental variable in level was excellent to their lag and it had low variance. By instrumental variable in level, no observation is lost namely if the sections are high and time is low (this is raised as the basic assumption of proposed models by Arellano & bond, Arellano & Bover and Blundell & bond (1998). Thus, GMM method is proposed to solve this problem in panel data by Arellano & bond (1991), Arellano & Bover (1995) and Blundell & bond (1998). The advantage of the present study in using two-stage systematic Blundell & bond compared to other studies is based on the following points:

- Considering individual inconsistency and much information and elimination of existing biases in cross section regressions and the result is exact estimation, high efficiency and low collinearity (Arellano and Bond, 1991).

- Solving the problem of endogeneity of institutional variables considered as the main advantages of dynamic GMM estimator and all regression variables without correlation with disturbance term (including variables with lagged and differential variables) can be instrumental variable potentially (Green, 2003).

- Reduction of collinearity in model: Using lagged dependent variables eliminates collinearity in model. It is less possible the lagged difference has correlation with lagged level of inputs with lagged difference and lagged level of the variables (Baltagi, 2005).

- GMM method eliminates many variables as fixed over time and effective strong factors on dependent variable and can create correlation with other variables and these eliminated variables can create bias in model estimation. GMM can eliminate the effect of these factors by

differentiating the statistics (idb, 2005).[1]

3.1. Determination of Variables

Trade liberalization, income distribution inequality and unemployment in society are complex concepts with various indices to show various dimensions of this concept. By considering all the points in this study, these indices beside other effective control variables as effective factors on economic growth and progress of countries can enter regression equation. Based on the theoretical basics of study and previous studies, Adams (2002), Gourdon (2006), Meschi & Vivarelli (2007), Cororaton & Cockburn (2007) and Rao & Vadlamannati (2011), the general model of study to evaluate the effects of trade liberalization indices, unemployment and income distribution inequality is introduced by three specified equations as flows:

$$Open_{i,t} = \rho_0 + \beta_1 Open_{i,t-1} + \beta_2 GDP_{i,t} + \beta_3 FDI_{i,t} + \beta_4 UN_{i,t} + \beta_5 POP_{i,t} + \beta_6 POP_{i,t} + \tau_i + \vartheta_{i,t} \quad (1)$$

$$UN_{i,t} = \alpha_0 + \theta_1 UN_{i,t-1} + \theta_2 FDI_{i,t-2} + \theta_3 POP_{i,t} + \theta_4 GDP_{i,t} + \theta_5 INF_{i,t} + \varepsilon_i + \delta_{i,t} \quad (2)$$

$$EHII_{i,t} = \varphi_0 + \epsilon_1 EHII_{i,t-1} + \epsilon_2 GDP_{i,t} + \epsilon_3 EDU_{i,t} + \epsilon_4 UN_{i,t} + \epsilon_5 INF_{i,t} + \epsilon_6 POP_{i,t} + \epsilon_7 Open + \omega_i + \sigma_{i,t} \quad (3)$$

where i indicates country (i=1,2,…,N), t index indicates time section (t=1,2,…,T), Open trade volume (ratio of the sum export and import to GDP)[2] as trade liberalization index, EHII: Estimated Household Income Inequality as income distribution inequality index, UN Unemployment, total (% of total labor force) (modeled ILO estimate) as unemployment index, GDP: actual GDP growth (annual %), INF: Inflation, consumer prices (annual %), FDI: Foreign direct investment, net inflows (% of GDP), POP: Population growth (annual %) and EDU: School enrollment, secondary (% gross) are considered as control variables.

The study population is composed to the information of 20 developed countries with high income including Austria, Canada, Cyprus, Czech republics, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Malt Island, South Korea, Netherland, Norway, Slovakia, Spain, Israel, England and US and 18 developing countries with average income including Albania, Azerbaijan, Bulgaria, Chile, Colombia, Ecuador, India, Indonesia, Iran, Jordan, Malaysia, Morocco, Maurice, Romania, Africa, Turkey, Ukraine and Uruguay during 1991-2008. This period is selected based on access to the maximum existing data and studied countries. The relevant data are extracted from World Bank site except the data of EHII collected from UTIP database.

Regarding the investigation of the effects of income distribution on other indices, using income inequality data is of great importance. Gini coefficient data presented by Deininger & Squire (1996) in World Bank is one of the first databases of income inequality as applied in some studies. Before the study of Atkinson and Brandolini (2001), this index was famous. As referred by Atkinson and Brandolini (2001), dispersion and imbalance, hard measurement, using various data and their combination as a series of data are the drawbacks restricting the comparison of D&S data not only among the countries, but also over time and serious problems are created for estimation. The requirement of statistical inferences is to achieve the observations of the similar sources; otherwise estimated parameters are mostly forged. Most researchers in their study apply Gini coefficient data of Luxembourg Income Study (LIS) or World Income Inequality Database (WIID). It seems that Gini coefficient data of these sources have high adaptability and precision compared to D&S data but the main drawback of all the information sources is heterogeneous distribution of data over time as the information of Gini coefficient is not available for all studied countries in the studied period and this restricts using statistical sources in time series analysis (Galbraith, 2009). We applied Estimated Household Income Inequality (EHII) in this study to evaluate income distribution condition. This index is calculated by Galbraith and Kum (2003) and is developed in University Of Texas Inequality Project database (UTIP). EHII index is estimated by combination of D&S data with data of University Of Texas Inequality Project-United Nations Industrial Development (UTIP-UNIDO) and like Gini coefficient is defined by the ratio as ranging 0-100 and low values are low inequality and values about 100 show high

[1] For further study regarding dynamic panel models, you can refer to the paper of "generalized moment" for panel data and "Sargan test" in the first international conference of political collective effort (with an approach on middle east changes) and economic collective effort (with an approach on management and accounting) by these authors.

[2] Trade (% of GDP)

inequalities in income distribution.

To calculate this index, Gini coefficient data of D&S is regressed on UTIP-UNIDO inequality index and on other control variables. This process leads to separation of useful information from the wrong D&S data and eliminates the dispersion and imbalance in D&S data and leads to the homogenous and adaptable data as comparing time and place (Galbraith and Kum, 2005). Another advantage of this index is as EHII data are available for some of countries in continuous time period at appropriate time.

4. Empirical Results

Prior to providing a model, it is necessary to estimate and test the reliability of all variables used in estimations since the reliability of the variables cause problems of spurious regression.

In this paper, three types of panel unit root tests are used to assess reliability of variables, these tests include the LLC, the Fisher-ADF and the IPS as reported in Table 1.

Table 1: Unit root test for the variables

	Developed countries			Developing countries		
Variables	IPS	ADF-Fisher	LLC	IPS	ADF-Fisher	LLC
Open	I(1)	I(1)	I(0)	I(1)	I(1)	I(0)
EHII	I(0)	I(0)	I(0)	I(0)	I(0)	I(0)
UN	I(0)	I(0)	I(0)	I(0)	I(0)	I(0)
GDP	I(0)	I(0)	I(0)	I(0)	I(0)	I(0)
FDI	I(0)	I(0)	I(0)	I(0)	I(0)	I(0)
EDU	I(0)	I(0)	I(0)	I(1)	I(1)	I(0)
POP	I(0)	I(0)	I(1)	I(0)	I(0)	I(0)
INF	I(0)	I(0)	I(0)	I(0)	I(0)	I(0)

Source: Authors

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Open	I(1)	I(1)	I(0)	I(1)	I(1)	I(0)
EHII	I(0)	I(0)	I(0)	I(0)	I(0)	I(0)
UN	I(0)	I(0)	I(0)	I(0)	I(0)	I(0)
GDP	I(0)	I(0)	I(0)	I(0)	I(0)	I(0)
FDI	I(0)	I(0)	I(0)	I(0)	I(0)	I(0)
EDU	I(0)	I(0)	I(0)	I(1)	I(1)	I(0)
POP	I(0)	I(0)	I(1)	I(0)	I(0)	I(0)
INF	I(0)	I(0)	I(0)	I(0)	I(0)	I(0)

Source:Authors

The results and calculated statistics and their support show that some variables are stationary in level and others are stationary with one differentiation.

4.2. Panel Cointegration Tests:

The most important thing in Cointegration analysis is that despite of static time series and a random increase or decrease in the long term, it is possible that a linear combination of these variables be always static, and with no trend. The long-term relationships are discovered by using Cointegration analysis. In other words, if every economic theory is correct and there is a relationship in the set of variables, we expect that the combination of these variables on the long-standing become static and without a trend. As in time series, analyzing the variables in the panel data Cointegration is also important. Cointegration tests have more credibility and authority compared to each level of panel Cointegration tests individually. The tests can be used even when the sample size is small and the period is short (Baltagi, 2005)

Cointegration tests of panel data hypothesis are as follows:

$$\begin{cases} H_0 : \rho = 1 \\ H_1 : \rho \langle 1 \end{cases}$$

The null hypothesis suggests a lack of

Cointegration between all levels and hypothesis against shows the integration between variables.

In this study, we use both t-panel test type Phillips Perron (PP-Statistic Panel) and Statistic panels test type augmented dickey–fuller showed by Statistic Panel ADF. Group Phillips Perron test statistics type P (Group PP-Statistic) and group Dickey Fuller test (Group ADF-Statistic) will be used to analyze the presence or absence of Cointegration relationships among the variables.

Table 2: Panel Cointegration test results

Test Statistic	Developed Countries	Developing Countries
	Statistic	Statistic
Panel PP-Statistic	-3.126737 (0.0009)	-2.400307 (0.0082)
Panel ADF-Statistic	-7.113059 (0.0000)	-2.400307 (0.0023)
Group PP-Statistic	-3.140048 (0.0008)	-2.307176 (0.0105)
Group ADF-Statistic	-10.72654 (0.0000)	-4.287468 (0.0000)

Source: Authors

According to the results of Table and low significant level than 0.05, H0 regarding the lack of co-integration relation between variables is rejected and four tests indicate the convergence of variables and variables are co-integrated in long-term and there is a long-term relation among them.

4.3. Model Estimation

In both groups of countries, foreign direct investment provides open economy and high population and high unemployment restrict open economy but economic growth rate in two groups of countries has different effect on open economy. It seems that in developing countries, economic growth is applied to fill the gap of non-development and cannot stimulate open economy and has inhibiting impact.

In both groups of countries, high production and increasing foreign direct investment can create employment and reduce unemployment. As control of price growth, increasing population and trade openness in developed countries provides much employment, in developing countries, unemployment is increased.

Table 3: GMM results for the first model

Variable	Developed Countries	Developing Countries
Open(-1)	0.757142 (0.0000)	0.700271 (0.0000)
FDI	0.245453 (0.0503)	0.461254 (0.0004)
GDP	-0.583258 (0.0000)	-0.219539 (0.0000)
POP	-5.768542 (0.0030)	-4.911892 (0.0000)
UN	-0.486168 (0.0005)	-0.565445 (0.0000)
	J-Statistic=15.82406 Instrument Rank=20 Sargan-Test=0.393840	J-Statistic=15.05870 Instrument Rank=18 Sargan-Test=0.303703

Source: Authors

Table 4: GMM results for the second model

Variable	Developed countries	Developing countries
UN(-1)	0.777477 (0.0000)	0.610676 (0.0000)
GDP	-0.171399 (0.0000)	-0.038195 (0.0000)
INF	0.062773 (0.2629)	-0.020787 (0.0000)
POP	-0.531499 (0.0789)	0.070279 (0.0316)
FDI	-0.031133 (0.0887)	-0.052961 (0.0000)
Open	-0.045357 (0.0160)	0.003680 (0.0849)
	J-Statistic=10.12846 Instrument Rank=20 Sargan-Test=0.752733	J-Statistic=12.62681 Instrument Rank=18 Sargan-Test=0.396739

Source: Authors

Table 5: GMM results for the third model

Variable	Developed countries	Developing countries
EHII(-1)	0.443638 (0.0102)	0.310995 (0.0000)
Open	0.001600 (0.7975)	-0.014515 (0.0287)
POP	0.425254 (0.6297)	1.517441 (0.0000)
EDU	-0.075598 (0.0480)	-0.032327 (0.0346)
UN	0.081337 (0.0000)	0.058228 (0.1021)
INF	0.066765 (0.0000)	0.038932 (0.0046)
GDP	-0.027873 (0.0000)	0.048925 (0.0000)
	J-Statistic=8.901914 Instrument Rank=20 Sargan-Test=0.780311	J-Statistic=9.123182 Instrument Rank=18 Sargan-Test=0.610523

Source: Authors

By increasing population growth rate and increasing unemployment and inflation rate in both groups of countries, household income inequality is increased. As household income inequality is increased in developing countries by increasing economic growth rate and control of open economy, it is improved in developed countries.

4.4. Sargan Test

Sargan test statistic has been proposed by Arrelano and Bond (1991), Arrelano and Bover (1995) and Blondel and Bond (1998). The test used to measures the validity of the used instrument. Sargan test is used to analyse the validity of instrumental variables defined in the model and due to being too specific equation and defined as follows:

$$s = \hat{\Sigma}' Z \left(\sum_{i=1}^{N} Z_i' H_i Z_i \right)^{-1} Z' \hat{\Sigma}$$

In this case $\hat{\Sigma} = y - x\hat{\sigma}$ and $\hat{\sigma}$, matrices $K \times 1$ is the estimated coefficients, Z is instrumental variable matrix, H is a matrix with

dimensions (T-q-1), where T is the number of observations, q is the number of explanatory variables. We examined two hypotheses to defined validity of the instrumental variables:

$$H_0 = m(\theta_0) = 0$$
$$H_1 = m(\theta) \neq 0$$

In Sargan test, the hypothesis H_0 determines the correlation between the instrumental variables and disturbing element and is based on the authentic model. Alternative hypothesis (H_1) is based on the invalidity model. Sargan test is asymptotically follows the distribution of χ^2 with degree of freedom of k-q, where k equals the number of instrumental variables and q is equal to the number of explanatory variables. To confirm Sargan test in 95% of testing level, calculations χ^2 with degrees of freedom k-q is compared with χ^2 of Table. If calculated χ^2 be less than ta χ^2, then H_0 is accepted. (variable to obtain the degrees of freedom of table χ^2 detract rated instrumental number of variables from the number of estimated variables in the model).

Also the other way to accept the hypothesis H_0 of the Sargan test is to use p-value that if the p-value is up to 0.05, assuming H_0 is accepted. To obtain p-value following command is used in Eveiws software:

Scalar pval = @chisq (J-statistics value, Instrument rank – the number of estimated coefficients)

In This test if the hypothesis H_0 does not reject, then valid instrumental variable is defined in the model and the model does not need to define more instrumental variables. But if the hypothesis H_0 rejected, the defined instrumental variables in the model were inadequate and it is needed to define a better instrumental variables for model (Baltagi, 2005).

$$H_0 : j < q^{\chi^2_{k-q}}_{95\%}$$
$$H_1 : j > q^{\chi^2_{k-q}}_{95\%}$$

Results for three models show the acceptance of the null hypothesis and there is no correlation between the instrumental variable and disturbing elements.

5. Conclusion

Globalization is the initial factor of social segmentations and is not the only cause of social unfairness in contemporary history. Globalization can continue or increase social unfairness but these results are appeared when globalization is implemented with political frameworks improving unfair outcomes. Globalization is not problematic but the methods we use for its fulfillment can create some problems. We cannot ignore internal weaknesses of developing countries in creating poverty, unemployment and inequality in globalization process. Due to these weaknesses, most of these countries cannot use globalization opportunities. In developing countries in this study, open economy reduces economic inequalities and increases unemployment. It means that households in low level of employment, production and income reach equality. However, in developed countries, open economy with increasing employment levels due to specialization of production, inequalities are increased. It seems that if division of countries is not considered based on development level, open economy is for the benefit of experts in all countries as based on labor division and specialization. Based on the importance of globalization, it seems that developing countries by taking stable and long term economic policies and futuristic planning besides the attempt to improve cultural, social and economic infrastructures (e.g. inflation control, unemployment and improvement of income distribution), by gradual reduction of tariff rates and eliminating the non-tariff barriers, encouragement of foreign investment , formation of export and import policies and the effort to increase economic growth rate increase the international trading.

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