

# The Effect of Democracy, Economic Stability and Political Stability on Foreign Direct Investment Evidence from 138 World's Countries

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**Abstract:** According to economic theories, investment is one of the most effective factors for economic growth. There are many ways for capital absorption that foreign direct investment is one of most effective ways; because foreign direct investment influx in addition to capital absorption leads to technology transmission, arrival of expert human capital, management and knowledge. Therefore, it is necessary to identify influential agents on FDI for stable and sustainable economic growth, scientifically. In recent decades, democracy has been emphasized more than ever. Foreign direct investment and democracy process are significant from many viewpoints. Thereupon, the purpose of this study is the comparative investigation of relation between democracy and foreign direct investment in three groups of countries including 36 developed, 68 developing and 34 least developed countries between the second half of 1995-2010 decade by panel data method. Hypothesis of this study is from statistical viewpoint, that, there is a meaningful difference between the effect of democracy on foreign direct investment is positive and meaningful, negative and meaningful and meaningless in developed, developing and least developed countries. Obtained results show that democracy influence on foreign direct investment is positive and meaningful, negative and meaningful and meaningless in developed, developing and least developed countries, respectively. In addition, the effect of economic growth, economic stability, and political stability and inflation agents in three mentioned groups of countries on foreign direct investigated as other independent variables.

**Key words:** foreign direct investment (FDI); democracy; political stability; economic stability; 138 world's countries

JEL codes: E22, F21

## 1. Introduction

One of most important immense goals of economy is continuous and sustainable economic development. Achieving economic growth and development is an aim that all governments and economic analyzers emphasize it. Many agents are engaged in economic growth that in all economic growth patterns and theories, capital has been identified as propulsion force and determining agent of economic growth. In addition, due to deep technology gap and problems such as lack of financial sources, knowledge and management developing countries have intense difference of per capita income and competitive power with respect to developed nations. Therefore,

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developing countries should investigate FDI influx for reducing technology gap and increasing competitive power in order to achieve sustain economic growth and development, because FDI influx into host nation leads to financial support, technology, knowledge and management transmission that could eliminate economic obstacles from developing countries including Iran's economy.

In recent decades, democracy has been discussed more than anytime, and is an epidemic belief. It appears all of non-fascist political leaders embellish their remarks by democratic statements. They found that democracy is a positive word that people identify it as "pretty", "acceptance" and "legitimation". The reason is obvious; all over the world, people comprehend obviously that it is in democratic condition that right of political destiny determination and opportunity for recess of suffer and disappointment due to oppression and injustice is realized that is pursued by elites or parts of society that demand progress and extension of their power (Tool, 1980).

Democracy is a composite concept that composed of several fundamentals that all democratic theories endorse it. Of course, democracy is a relative subject that gets mature by more institutions that struggle for its realization. Principles such as people sovereignty, political equality, public supervision and rule originality are essential characteristics of all democracies (Amir Kuasemi, 2008).

Regarding this fact that one effective agent on FDI absorption is economic and political stability and also economic, political and social stability are related with each other and have mutual relationships, one could argue that democratic governments acquire their authority through political stability, potentially. Whereas, stability of autocratic states often relies on dictator's behavior. As a result, those states that are ruled by democratic principles are appropriate place for FDI. In addition, in these societies due to people responsibilities and perpetual supervision of government performance, less bribery is observed and people have equal positions based on constitution. Therefore, foreign investors decide with more trust and security and this fact reduces risk of investment.

Studies show that democracy impresses economic variables such as economic development, income distribution, FDI, inflation and other influential economic parameters. In fact, briefly speaking, one could say that these variables have relation with democracy and are impressed by it. In addition, among these variables FDI is impressed by democracy.

In this study, comparative investigation of relation between democracy and foreign direct investment in three different groups of countries, i.e., developed, developing and least developed nations has been conducted. Therefore, this study effort to lighten the role of democracy on FDI influx in 138 nations of world including 36 developed, 68 developing and 34 least developed countries during period of 1995-2010.

# 2. Theoretical Background

In the literature mostly, FDI and economic factors linkage was investigated. Unfortunately, relatively limited number of studies had been made about how the political regime affects FDI. There are two opposite approaches to the linkage between the political regime and FDI. One approach is Class Analytical Theories which maintains that FDI decisions should be viewed within the detailed context of class conflict under global capitalism. "This literature (Class Analytical Theories) argues that developing countries became increasingly dependent upon foreign capital to finance economic development in the 1960s and 1970s. Multinational firms-who possessed capital badly needed by developing countries—demanded above-average profits and secure property rights before they would commit FDI to developing countries. As one step in meeting the demands made by multinational firms,

political regimes in developing areas resorted to authoritarianism and the repression of labor and working-class demands for higher wages and the redistribution of income" (Tuman & Emert, 2004, p. 14).

According to Jessup (1999), foreign direct investment increases market share in authoritarian countries. The main reason of Jessup's argument is based on the differences between democratic and autocratic regimes in executive constraint. FDI would prefer autocratic regimes because of less executive constraint which provides greater foreign direct investment inflows (Jessup, 1999). O'Neal (1994) ensured that authoritarian regime's economy offer higher returns than democratic regime's economy in developing countries. However O'Neal made a differentiation between "center" and "periphery" countries. Investors achieve higher returns and have higher investment rates in democratic "center" nations but if the nation is "periphery" for example like Latin America investors changes the preferences and autocratic regimes becomes more attractive because of higher returns. O'Neal shows that results vary by region.

According to O'Donnell (1978), democratic regimes are inconsistent with the development of international capitalism. Moreover O'Donnell emphasizes on the fact that authoritarian regimes constraints shield FDI and firm, which invest abroad, from higher wages, capital taxation, etc. Tuman and Emert (2004) developed a multivariate model by using the OLI model and class analytical approaches to test the reasons of why Latin America countries attract US FDI. The analysis includes fifteen Latin American and Caribbean countries. The results showed that MNCs are avoiding from political instability but they also want more authoritarian regimes to protect property rights against the threats posed by labor unions and the working class. Countries with higher human rights abuse received more U.S. FDI during the study period than other countries. The opposite side posits that democratic institutions such as human rights, property rights and rule of law lead democracies to receive greater inflows. Unlike the approach of Class Analytical theory which claims that a repressive regime may offer a stable, well-controlled supply of labor so that the host country may have the ability to hold labor costs below the prospective market equilibrium.

Blanton and Blanton (2007, p. 147) argue that "respect for human rights creates an environment conducive to the development of human capital. Such societies tend to be more open, well-trained, and economically efficient....the "citizen voice" that personal freedoms engender can play a key role in the economic effectiveness of a state and thus its attractiveness as a host for FDI". The argument for this view was the changing structure of FDI. In the past FDI preferred mostly primary sector industries such as mining and oil extraction and these sectors are attracted to host countries due to the presence of natural resources and the availability of cheap and compliant labor. However, the composition of FDI has changed, with foreign investment increasingly going to consumer-products, manufacturing, and service and information industries. These changes cause an increase in the demand for skilled labor although it is true that wages tend to be lower under authoritarian regimes than they are in democratic countries (Rodrik, 1999) the evidence suggests that, democratic political systems with greater respect for human rights tend to attract more FDI inflows than their authoritarian counterparts. For example, the analysis made by Blanton and Blanton (2007) shows that there is a significant correlation between human right and FDI.

Moreover another noneconomic variable-democracy-is used by Busse (2003). He has made cross sectional and panel data analysis to test the linkage between democracy and FDI and "the results indicate that—on average—investments by multinationals are significantly higher in democratic countries, thereby refuting the hypothesis that political repression fosters FDI. Yet this positive link does not hold for the 1970s, when a considerable share of FDI flowed to countries with repressive regimes" (Buse, 2003, p. 1). The results of Busse

also confirm the empirical findings by Rodrik (1996) and Harms and Ursprung (2002). Olson (1991) emphases the importance of property rights on investors and argues that if the authoritarian government is predatory, protection of property rights or getting the principal rights carries high risks. For Olson, with independent judiciaries and regular change in elected officials of strong democracies, promotes stronger property rights and so higher levels of democracy should attract more investment (Olson, 1993; Biglaiser DeRouen, 2005; Biglaiser & Danis, 2002; North, 1995)

Moreover, Li and Resnick (2003) views that newly democratized states may be less likely to receive FDI because of the affair of MNCs may gaining too much market control and domestic industries competing against foreign capital will be less efficient and have more difficulties raising capital than MNCs and will pressure their government to protect domestic businesses (Davis, 2004). However "over time the consolidation of democratic governance should bring about better property rights protection, improving the prospect of getting more FDI inflows" (Li & Resnick, 2003). Li (2009) analyzed expropriation of foreign direct investment at different regime types. Evidence indicates that expropriation of foreign direct investment accurse in democracies and autocracies both but that democracies do so less frequently. "An analysis of actual expropriation acts in 63 developing countries from 1960 to 1990 shows that democracies are most likely to expropriate foreign investment when leaders face little political constraint and when they reside in countries with frequent leadership turnover. Autocrats are least likely to expropriate foreign assets when they face high political constraints and have stayed in power for a long time. In essence, the chief executive's political incentive and policy-making capacity determine the host government's expropriation decisions. The findings have important implications for the rule of law, property rights protection, investment behavior, and the prospect of privatization reforms". Also Jensen (2003) tested the relation between democracy and FDI using cross sectional data from 1970 to 1997 and finds that as democratic institutions have lower "country risk," making it less expensive to borrow funds so that democracies attract higher levels of FDI. Jensen claims that democratic institutional constraints lead to more policy stability, via veto players. Tsebelis (1995) share the same views and argues that by the force of blocking policy change democratic regimes causes political stability and political stability is important for government to maintain its sovereignty. Political stability is also important for MNCs too, because they want a guaranty that policy will not change after they enter to foreign market. Moreover in systems with higher levels of political risk, MNCs will be negatively affected. Cho (2003) focuses on the role of political risk effects on foreign direct investment. He finds that higher political risk reduces foreign direct investment. Politically stable economies are appropriate to foreign direct investors.

Consequently, this approach claims that democracy brings more economic stability and political stability, lower political risk and better protection of property rights than autocratic regimes so that democratic countries are more preferred by foreign investors.

# 3. FDI and Democracy in the World

"It is today a well-known fact that globalization enhances economic expansion through international trade and capital movements accelerated by unprecedented technological developments, and that it is no longer possible for a country to isolate its economy from this process" (Turkmen, 2008, p. 150). According this issue Foreign Direct Investment (FDI) flows significantly increased all around the world economy over the past couple of decades. Although FDI flows intensively occur between developed countries, after 1990 the increase in the share of developing countries is incredible. At the beginning of 1980's global FDI flows were 54 076 million US\$ but in 2008 total amount of FDI increase 31 times and reach to 1 697 353 million US\$. There is a big difference at the between the rates of increase of FDI between the developed and developing countries. As FDI flows to developing countries were increasing by 477 times<sup>1</sup> between 1990-2008, the increase rate had been relatively low—20 folds only—for the developed countries (see Table 1). Despite the decrease of the total FDI due to global crisis in 2008 this incident did not affect developing countries. Their share is consequently the figures at Table 1 shows that developing countries are becoming very attractive for FDI, what are the factors that cause the changing of FDI wind from developed to developing countries.

YEAR	WORLD	Developing	Developing countries		Transition economies		ountries
	WORLD	Total	%	Total	%	Total	%
1970	13.346	3.854	28,9	0	0	9.491	71.1
1980	54.076	7.477	13,8	24	0,04	46.576	86.1
1990	196.617	35.087	17,8	71	0,03	172.115	87.5
1995	341.144	115.973	34	4.068	1,19	221.104	64.8
2000	1.381.675	256.883	18,6	6.998	0,50	1.117.795	80.9
2005	973.329	329.292	33,8	30.948	3,17	613.089	62.9
2006	1.461.074	433.764	29,7	54.548	3,73	972.762	66.5
2007	1.978.838	529.344	26,8	90.866	4,59	1.358.628	68.6
2008	1.697.353	620.733	36,6	114.361	6,73	962.259	56.6

Table 1	Global FDI	Inwards	(Million	US\$)
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Source: UNCTAD Statistics.

As developing countries have economic problems like shortage of capital, technology and skilled labor FDI flows may be a solution for them. In fact several studies show that "FDI triggers technology spillovers, assists human capital formation, contributes to international trade integration, helps create a more competitive business environment and enhances enterprise development." (OECD, 2002). Given these benefits, developing countries enter a competition between them to attract FDI in last couple of decades. In order to be more competitive in this race countries started to re-structure their political and economic policies (YASED, 2009).

"Economic systems are liberalized through market-oriented reforms while political systems undergo a parallel transformation calling for the expansion of truly democratic orders, respectful of universally recognized rights and freedoms" (Turkmen, 2008, p. 150) Similar to the increase in FDI in the expansion of democracy has been observed. While the proportion of free countries to the total was only 29% by 1973 the rate increased to 46% as of the year 2009 (Table 2).

					-			
Blobal trend in democracy								
Year under review	Total countries	Free countries		Partly free countries		Not free countries		
		Number	%	Number	%	Number	%	
2008	193	89	46	62	32	42	22	
1998	191	88	46	53	28	50	26	
1988	197	60	36	39	23	68	41	
1972	151	44	29	38	25	69	46	

 Table 2
 Global Trend in Democracy

Source: Collected from Freedom House.

<sup>&</sup>lt;sup>1</sup> also it increase 81 times (from 7 477 million US\$ to 620 733 million US\$) at transition economies.

# 4. Methodology

In this study panel data have been used for evaluating pattern of 1995-2010 period and regression relation between democracy and foreign direct investment in 138 countries with three different development levels has been obtained, finally evaluated results are compared with each other.

United Nations organization has published a list for 186 member countries based on human development index on March 14th, 2013, that divided them into four groups with different development levels, i.e., extremely developed, highly developed, moderate developed and low developed countries. Development of a country is evaluated by statistical indexes such as per capita income (Gross Domestic product), life expectancy and illiteracy rate and so on. UN organization offered a combinational index of abovementioned statistical agents as human development index in order to evaluate human development index of those countries whose economic data is available.

The UN HDI is a statistical measure that gauges a country's level of human development. While there is a strong correlation between having a high HDI score and a prosperous economy, the UN points out that the HDI accounts for more than income or productivity. Unlike GDP per capita or per capita income, the HDI takes into account how income is turned "into education and health opportunities and therefore into higher levels of human development." Since 1990, Norway (2001-2006, 2009-2011), Japan (1990-91 and 1993), Canada (1992 and 1994-2000) and Iceland (2007-08) have had the highest HDI score. The top 47 countries have scores ranging from 0.805 in Croatia to 0.943 in Norway.

Among these 47 countries 36 of which have required data for present investigation are selected as follows:

Norway- Australia- United States- Netherlands- Germany- New Zealand- Ireland- Sweden- Switzerland-Japan- Canada- South Korea- Denmark- Israel- Belgium- Austria- Singapore- France- Finland- Slovenia- Spain-Italy- United Kingdom- Czech Republic- Greece- Cyprus- Estonia- Slovakia- Hungary- Poland- Chile- Lithuania-Portugal- Latvia- Argentina- Croatia.

A developing country, also called a less-developed country (LDC) is a nation with a low living standard, undeveloped industrial base, and low Human Development Index (HDI) relative to other 3 countries. Based on Human Development Index (HDI) Countries with high, medium and low human development are classified in developing countries.

In this study, nations with high and moderate HDI are considered as developing nations and those with low HDI categorized discretely in a groups least developed nations because have not reached a considerable development.

In this study, 68 developing countries which possess all required data for present study have been selected. These countries are as follows:

Bahrain- Belarus- Uruguay- Kuwait- Russian Federation- Romania- Bulgaria- Saudi Arabia- Panama-Mexico- Costa Rica- Libya- Malaysia- Serbia- Trinidad and Tobago- Kazakhstan- Albania- Venezuela - Georgia-Lebanon- Iran- Peru- Macedonia- Ukraine- Mauritius- Bosnia and Herzegovina- Azerbaijan- Oman- Brazil-Jamaica- Armenia- Ecuador- Turkey- Colombia- Sri Lanka- Algeria- Tunisia- Dominican Republic- Fiji- Jordan-China- Thailand- Gabon- El Salvador- Bolivia- Mongolia- Paraguay- Egypt- Moldova- Philippines- Syrian Arab Republic- Guyana- Botswana- Honduras- Indonesia- South Africa- Kyrgyzstan- Viet Nam- Namibia- Nicaragua-Morocco- Cape Verde- Guatemala- Ghana- India- Cambodia- Lao People's Democratic Republic- Swaziland Among least developed nations which according to UN organization categorization are identified as countries with low HDI, 34 of them have all required data, therefore, selected for this group. These nations are as follows:

Congo- Solomon Islands- Kenya- Bangladesh- Pakistan- Angola- Myanmar- Cameroon- Madagascar-Tanzania- Nigeria- Senegal- Papua New Guinea- Nepal- Lesotho- Togo- Yemen- Haiti- Uganda- Zambia-Djibouti- Gambia- Benin- Rwanda- Malawi- Sudan- Guinea Bissau- Sierra Leone- Burundi- Guinea- Mali-Burkina Faso- Mozambique- Niger

In this study, for evaluating FDI, GDP and inflation (I) variables and also economic stability (ES) World Development indicator (WDI) data were used. For evaluating political stability (PS) worldwide Governance indicator (WGI) and for democracy variable polity IV data set were used.

## 5. Specify and Model Assessment

#### 5.1 Unit Root Test

First of all, statistical characteristic of variables which are used in model should be investigated from conservativeness and probable existing of unit root point of views.

Unit root test of Philips-Perron (PP), extended Dickey-Fuller (ADF) and Pesaran and Shin (Im) tests for all three models has been conducted.

Results show that in model of developed nations GDP and economic stability variables have been conserved in 1st difference level, other variables are conservative in 5% level; strictly speaking, null hypothesis based on non-conservativeness of them at 5% level is denied. Therefore, these 4 accumulated variables are zero order or I(0), in addition GDP and economic stability in 1st difference level are accumulated zero order or I (0). Results are shown in Table 3.

Variables	(PP) test statistic	P-value	(ADF) test statistic	P-value	(Im) test statistic	P-value	Accumulation order
Democracy	90.4233	0.0000	61.9064	0.0000	-5.43024	0.0000	I(0)
FDI	235.771	0.0000	222.720	0.0000	-8.72237	0.0000	I(0)
Economic stability	114.819	0.0010	124.589	0.0001	-3.54976	0.0002	I(0)
Political stability	182.645	0.0000	140.440	0.0000	-4.29083	0.0000	I(0)
d <sub>1</sub> (Inflation)	324.567	0.0000	271.012	0.0000	-12.2965	0.0000	I(0)
d <sub>1</sub> (GDP)	158.358	0.0000	143.098	0.0000	-4.91540	0.0000	I(0)

Table 3 Results of Unit Root Test in Developed Nations

Source: Research calculations.

In model of developing nations GDP and democracy variables have been conserved in 1st difference level, other variables are conservative in 5% level; in other word, null hypothesis based on non-conservativeness of them at 5% level is denied. Therefore, these 4 accumulated variables are zero order or I (0) and GDP and democracy in 1st difference level are accumulated zero order or I (0). Table 4 shows obtained results.

In model of least developed nations GDP and democracy variables, economic stability and inflation have been conserved in 1st difference level; two other variables, i.e., political stability and FDI are conservative in 5% level. Therefore, these 2 accumulated variables are zero order or I(0) and GDP, democracy, economic stability and inflation in 1st difference level are accumulated zero order or I(0). Results are shown in Table 5.

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Table 4         Results of Unit Root Test in Developing Nations							
Variables	(PP) test statistic	P-value	(ADF) test statistic	P-value	(Im) test statistic	P-value	Accumulation order
FDI	201.014	0.0002	207.276	0.0001	-1.95952	0.0250	I(0)
Inflation	567.897	0.0000	536.730	0.0000	-36.0545	0.0000	I(0)
Economic stability	186.318	0.0013	188.783	0.0009	-3.19473	0.0007	I(0)
Political stability	217.957	0.0000	205.410	0.0001	-3.21026	0.0007	I(0)
d <sub>1</sub> (Democracy)	146.392	0.0000	127.563	0.0000	-10.7729	0.0000	I(0)
d <sub>1</sub> (GDP)	369.906	0.0000	334.740	0.0000	-8.52138	0.0000	I(0)

Source: Research calculations.

Fable 5	<b>Results of</b>	Unit Root	Test in Least	Developed	Nations

Variables	(PP) test statistic	P-value	(ADF) test statistic	P-value	(Im) test statistic	P-value	Accumulation order
FDI	352.897	0.0000	279.076	0.0000	-10.9622	0.0000	I(0)
Political stability	174.989	0.0000	125.692	0.0000	-2.05504	0.0199	I(0)
d <sub>1</sub> (Economic stability)	353.182	0.0000	298.088	0.0000	-13.4163	0.0000	I(0)
d <sub>1</sub> (Democracy)	106.811	0.0000	99.1522	0.0000	-9.15584	0.0000	I(0)
d <sub>1</sub> (Inflation)	364.169	0.0000	266.023	0.0000	-12.9754	0.0000	I(0)
d <sub>1</sub> (GDP)	157.739	0.0000	132.263	0.0000	-4.13807	0.0000	I(0)

Source: Research calculations.

Now, model and variables are introduced. Then, model calculation by Chaw test (Likelihood ratio) for determining whether the model is panel or pool has been done. If model be a panel one, Hausman test is used for determining whether panel model has constant effects or random ones. Afterwards, model has been estimated and then being falsely of model and also auto-correlation will be investigated. Finally, the model will be presented.

### 5. 2 Model Introducing and Used Variables

According to present study and available data, following variables are used in model specification:

$$FDIit = f(Dit, Iit, ESit, PSit, GDPit)$$
(1)

Variables:

 $FDI_{it}$ : foreign direct investment (BoP, current US\$) of 138 countries all over the world on (1995-2010) period  $D_{it}$ : democracy of 138 mentioned countries on mentioned period

Iit: inflation of 138 mentioned countries on mentioned period

ESit: economic stability of 138 mentioned countries on mentioned period

PS<sub>it</sub>: political stability of 138 mentioned countries on mentioned period

 $GDP_{it}$ : gross domestic product (economic growth) of 138 mentioned countries (BoP, current US\$) on mentioned period

t = 1995 - 2010

In this study, for evaluating economic stability variable following relation has been used:

Economic Stability = 
$$\frac{Total Reserves}{Imports}$$
 (2)

Where total reserve includes gold and imports includes import of goods and services with respect to current US\$ that economic stability variable acquired by dividing total reserves on total import.

## 5.3 Models Assessment and Results Discussion

## 5.3.1 Developed Countries Model

In developed countries model, evaluation method has been based on fixed effects. Selection of evaluation method was based on results of obtained tests in Eviews software, because after performing F-Lymr test (Chaw) it was determined that its model is panel data. In next stage, it was determined by using Hausman test that this model is fixed effects model.

And its model is as follows:

$$FDI_{it} = \beta_1 + \beta_2 D_{it} + \beta_3 d_1(I_{it}) + \beta_4 ES_{it} + \beta_5 PS_{it} + \beta_6 d_1 log(GDP_{it}) + AR(2) + u_{it}$$
(3)

Initial results show that this model has two important forms. Firstly, regression has a strong auto – correlation because Durbin-Watson statistic is very low. Secondly, some coefficients are meaningless in 10% level; in addition, determining coefficient is very low and sign of some variables are in contradiction with suggested theories. Therefore, based on spurious regression theory, probably in this portion there is a spurious regression. For solving mentioned problems, two time halts (second order auto-regression) are given to all 36 developed nations. Obtained results of model assessment for developed countries are shown in Table 6.

Dependent Variable: FDI							
Independent Variables	Method: Pooled E	Method: Pooled EGLS (Cross-section weights)					
	Coefficient	t-Statistic	Prob.				
Democracy	9.97E+08	2.066404	0.0401				
GDP	3.15E+09	2.754671	0.0064				
Economic stability	2.80E+09	2.099635	0.0370				
Political stability	1.65E+09	2.065153	0.0402				
Inflation	-26812358	-0.510747	0.6101				
c	-1.85E+10	-3.842055	0.0002				
F-statistic	7.715114						
Prob(F-statistic)	0.000000						
R-squared	0.604391						
Adjusted R-squared	0.526052						
Durbin-Watson stat	2.243149						

 Table 6
 Results of Model Assessment for Developed Countries

Source: Research calculations.

Coefficient of democracy variable (D) has a positive and meaningful effect, statistically, and is equal to 9.97E+08. It means that if democracy increases by 1%, foreign direct investment will increase by 9.97E+08 percent. Considering critical values, democracy variable in 5% level is meaningful and H<sub>0</sub> hypothesis that this variable in meaningless is denied certainly. This finding is consistent with result of present study that there is a positive and meaningful relation between democracy and foreign direct investment in developed countries.

Coefficient of GDP (economic growth) variable has a positive and meaningful effect equal to 3.15E+09 that refers to significance of FDI in developed countries. In other words, 1% increase of GDP leads to 3.15E+09 percent increase on foreign direct investment.

Coefficient of economic stability variable (ES) has a positive and meaningful effect equal to 2.80E+09. In other words, 1% increase of ES leads to 2.80E+09 percent increase on foreign direct investment.

Coefficient of political stability variable (PS) is positive and meaningful and equal to 1.65E+09 09 that refers

to significance of PS on foreign direct investment in developed countries. In other words, 1% increase of PS leads to 1.65E+09 percent increase on foreign direct investment.

Coefficient of inflation variable (I) has not a meaningful influence on FDI in developed nations from statistical point of view, therefore has been denied.

Based on table, F test indicates that all of regression is meaningful.

Statistic value of Durbin-Watson is equal to 2.2 that is a very appropriate value and suggested that auto-correlation problem has been solved.

5.3.2 Developing Countries Model

In developing countries model, evaluation method has been based on fixed effects. Selection of evaluation method was based on results of obtained tests in Eviews software, because after performing F-Lymer test (Chaw) it was determined that its model is panel data. In next stage, it was determined by using Hausman test that this model is fixed effects model.

 $FDI_{it} = \beta_1 + \beta_2 d_1(Dit) + \beta_3 I_{it} + \beta_4 \log(ES_{it}) + \beta_5 PS_{it} + \beta_6 d_1(GDP_{it}) + AR(2) + u_{it}$ (4)

It is more likely that in this model there exist a spurious regression. For solving these problems, two time halts (second order auto-regression) is given to all 68 developing countries. Obtained results of calculation model for developing countries are shown in Table 7.

Dependent Variable: FDI						
Independent Variables	Method: Pooled EGLS (Cross-section weights)					
independent variables	Coefficient	t-Statistic	s) Prob. 0.0203 0.0000 0.0000 0.0000 0.0000 0.0000			
Democracy	-58996	-2.33160	0.0203			
GDP	0.027569	4.485447	0.0000			
Economic stability	5.29E+08	4.504000	0.0000			
Political stability	8.65E+08	4.934581	0.0000			
Inflation	55902	5.77552	0.0000			
c	4.15E+09	21.39485	0.0000			
F-statistic	16.69856					
Prob(F-statistic)	0.000000					
R-squared	0.762044					
Adjusted R-squared	0.716409					
Durbin-Watson stat	1.547943					

Table 7 Results of Model Assessment for Developing Countries

Source: Research calculations.

Coefficient of democracy variable (D) has a negative but meaningful effect, statistically, and is equal to -58996. It means that if democracy increases by 1%, foreign direct investment will decrease by -58996 percent. Considering critical values, democracy variable in 5% level is meaningful and this fact is consistent with result of present study that there is a meaningful relation between democracy and foreign direct investment in developing countries.

Coefficient of GDP (economic growth) variable has a positive and meaningful effect equal to 0.027569 that refers to significance of this variable on FDI in developing countries. In other words, 1% increases of GDP leads to 0.027569 percent increase on foreign direct investment.

Coefficient of economic stability variable (ES) has a positive and meaningful effect equal to 5.29+08. In other words, 1% increase of ES leads to 5.29E+08 percent increase on foreign direct investment.

Coefficient of political stability variable (PS) is positive and meaningful and equal to 8.65E+08 that refers to significance of PS on foreign direct investment in developing countries. In other words, 1% increase of PS leads to 8.65E+08 percent increase on foreign direct investment.

Coefficient of inflation variable (I) has a positive and meaningful effect and is equal to 55902 that refers to significance of I on foreign direct investment in developing countries. In other words, 1% inflation increase leads to 55902 percent increase on foreign direct investment.

Based on table, F test indicates that all of regression is meaningful.

Statistic value of Durbin-Watson is equal to 1.54 and suggested that auto-correlation problem has been solved.

5.3.3 Least Developed Countries Model

In the model of least developed nations pooled method has been used for model evaluation. Method selection for these countries is based on obtained results of conducted test in Eviews software. Because based on F-limber test, it was verified that method of this model is pooled. Least developed nations' model is as follows:

$$FDI_{it} = \beta_1 + \beta_2 d_1(Dit) + \beta_3 d_1(I_{it}) + \beta_4 d_1(ES_{it}) + \beta_5 PS_{it} + \beta_6 d_1 log(GDP_{it}) + u_{it}$$
(5)

In model of least developed nations, a halt time (first order auto-regression) as cross sectional halt is assigned to all 34 least developed nations that this halt on 10% level is meaningful for 14 nations and meaningless for 20 nations. Obtained results of estimated model are as follows:

T. J J X7 1.1	Method: Pooled EGLS (Cross-section weights)						
Independent variables	Coefficient	t-Statistic	Prob.				
Democracy	54022318	1.286268	0.2002				
GDP	7.80E+08	1.717572	0.0878				
Economic stability	-1.27E+09	-3.060690	0.0026				
Political stability	-4.17E+08	-2.042102	0.0428				
Inflation	-167425	-2.290433	0.0233				
c	4.00E+08	2.713403	0.0074				
F-statistic	8.775812						
Prob(F-statistic)	0.000000						
R-squared	0.788571						
Adjusted R-squared	0.698714						
Durbin-Watson stat	1.809384						

Table 8 Results of Estimated Model for Least Developed Nations

Source: Research calculation.

Coefficient of democracy variable (D) has no meaningful effect on FDI statistically in least developed nations and is denied.

Coefficient of GDP (economic growth) variable has a positive and meaningful effect equal to 7.80E+08. In other words, 1% increase of GDP leads to 7.80E+08 percent increase on foreign direct investment.

Coefficient of economic stability variable (ES) has a negative and meaningful effect equal to -1.27E+09. In other words, 1% increase of ES leads to -1.27E+09 percent decrease on foreign direct investment.

Coefficient of political stability variable (PS) is negative and meaningful and equal to -4.17E+08 that refers

to significance of PS on foreign direct investment in least developed countries. In other words, 1% increase of PS leads to -4.17E+08 percent decrease on foreign direct investment.

Coefficient of inflation variable (I) has a negative and meaningful effect and is equal to -167425. In other words, 1% inflation increase leads to -167425 percent decreases on foreign direct investment.

Based on table, F test indicates that all of regression is meaningful.

Statistic value of Durbin-Watson is equal to 1.8 and suggested that auto-correlation problem has been solved.

# 6. Conclusion

Nowadays, increase of GDP (economic growth) and improving economic condition through ameliorating democracy is one of most important goals of politicians. What could be deduce form comparative study of economic condition is that developing countries should pay more attention to democracy, because it is one of most critical sources of economic development and improving national income that in most developing nations has not an appropriate condition. In addition, because one duty of democratic governments is observing and respecting possession rights, hereby democracy affects FDI influx. From other hand, democratic governments due to supporting benefits of all individuals of society intend foreign investments that do not cause loss of domestic producing and local industries. Therefore, generally FDI could leads to decrease or increase of FDI influx. Although, much efforts has been devoted to improve democracy all over the world, but these endeavors should be intensified and encompasses contemporary issues of modern world.

Foreign direct investment has a critical role in economic growth because leads to technology, knowledge and management transmission; because of this fact all countries seeking more foreign capital absorption. In addition, FDI have a strong influence on reducing technology gap and increase of competitive power.

This study with a comprehensive outlook to theoretical background of democracy and foreign direct investment relation investigated relation between these two variables for 138 nations in three different groups including 34 developed, 68 developing and 334 least developed nations during period of 1995-2010 that could be useful for all of authors in the world. Research findings are as follows:

(1) Linear relation between democracy and foreign direct investment in developed and developing countries; as could be observed from unit root, Chaw and Hausman tests, and model of developed and developing countries is panel model with constant effects and all of these cases are a reasons for selecting linear model.

(2) Democracy effect on FDI in developed nations is positive and meaningful, in developing in negative and meaningful and finally in least developed is meaningless, statistically.

(3) In some studies different econometric methods including spurious regression and solving it by first and second order of auto-regression has been observed that during model calculation being falsely of model disregarded that is very critical, because if regression be spurious, results and studies will lose their validity. Therefore, in this study a special attention paid to this fact and necessary investigations have been done.

(4) Positive and meaningful relation between gross domestic product (economic growth) and foreign direct investment in developed, developing and least developed countries; this shows that economic growth increase FDI influx in most countries of world, considerably.

(5) Positive and meaningful relation between economic stability and foreign direct investment in developed and developing countries; whereas relation between economic stability and FDI is meaningful and negative in least developed nations. (6) Negative and meaningful relation between political stability and foreign direct investment in developed and least developed countries; whereas relation between economic stability and FDI is meaningful and positive in developing nations.

(7) Effect of inflation on FDI in developed nations is meaningful statistically, whereas in developing countries is positive and meaningful and finally in least developed nations is negative and meaningful.

Finally, following suggestions is presented for increase of FDI influx in developing and least developed countries:

• Democracy index in developing and least developed nations is low and because a minimum limit (approximately 6.5-8 from 10) is necessary for FDI absorption, therefore, developing nations' efforts should be improving democracy index in the limit of 6.5-8.

• Gross domestic product has a positive effect on FDI influx in all of countries; it is appears that commercial policies is complementary for FDI influx. Therefore, macroeconomic policies of developing and least developed countries should be alongside increase of GDP (economic growth).

• Adopting macroeconomic policies along more economic and political stability leads to FDI absorption in least developed nations.

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