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The Effect of Foreign Direct Investment on Poverty: Panel Regression Analysis for 40 Selected Underdeveloped and Developing Countries[1]

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Abstract

This study aims at determining the effects of Foreign Direct Investment (FDI) on the level of poverty in developed and developing countries. For this purpose, the panel regression method, which covers 40 countries' income distribution data, is employed. The results show that the poorest segments receive a lower share of the income created by FDI than the richest segments of these countries, indicating that FDI does not have a serious contribution to poverty reduction. FDI affects the income levels of different income groups in every country, however, there is not a uniform effect in the countries examined.

Keywords: Poverty, FDI, Panel Regression

Doğrudan Yabancı Sermaye Yatırımlarının Yoksulluk Üzerindeki Etkisi: Seçilmiş 40 Az Gelişmiş ve Gelişmekte Olan Ülke için Panel Regresyon Analizi

Özet

Bu çalışmanın amacı, doğrudan yabancı sermaye yatırımlarının (DYSY) az gelişmiş ve gelişmekte olan ülkelerde yoksulluk düzeyini nasıl etkilediğini tespit etmektir. Bu amaçla 40 az gelişmiş ve gelişmekte olan ülkenin %10'luk gelir dağılım dilimleri kullanılarak, DYSY'nin yoksulluk düzeyini nasıl etkilendiği panel regresyon yöntemiyle belirlenmiştir. Panel sonuçlarına göre DYSY ile elde edilen gelirden 1. ve 2. dilimin düşük, 9. ve 10. dilimin ise yüksek pay aldığı ortaya çıkmıştır. Ülkelerin ortalama gelir gruplarından nasıl farklılaştığını tespit etmek için yapılan ikinci panel regresyon sonuçlarına göre DYSY, ülkelerin bir kısmında üst, bir kısmında alt ve orta, diğer kalan kısımda ise orta gelir gruplarının gelirleri artarken, diğerlerininki düşürdüğü sonucu elde edilmiştir.

Anahtar Kelimeler: Yoksulluk, DYSY, Panel Regresyon

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Introduction

Foreign Direct Capital Investments (FDI), defined as the transfer of a settled enterprise or capital in an economy to another economy in order to provide permanent benefits, brings a number of effects both on the economic conditions of the country it exits and also on the one it enters. Effects in question carry positive and negative conditions together for both countries. However, in order to attract more FDI, countries are in the state of continuous competition with each other. This may lead us to the conclusion that FDI effects the economic conditions (employment, income distribution, production level, foreign trade, tax revenues, etc.) of the country it enters much rather positively. In other words, negativities generated by FDI on the country it enters are not at the level to take them into consideration, i.e. they are negligible.

We may say that one of the positive effects of FDI for receiver country can be on poverty. This effect may come on the scene such as; the increasing employment as a result of FDI, increasing amount of production and reduction on the general level of the prices in the consequence of FDI, emergence of the possibility to make more social expenditures by the State together with the increase in the tax revenues and the social projects implemented by FDI. The most dominant one out of these listed effects is the one related with employment. The reason for this is that previously unemployed people who consequently have no labour income, start to earn income together with this employment. Thus, according to the level of the income obtained by them, they either go above the poverty threshold and survive themselves from the poverty or they get close to that limit. In both cases, general poverty level decreases in the country in question.

The focus point of this study is that the determination of the effects of FDI on poverty levels in the countries it enters. For this purpose, the effect of FDI on the poverty in 40 selected underdeveloped and developing countries will be determined with Panel Regression Method by using 10% income distribution brackets. In this study, 1st and 2nd 10% brackets have been taken into consideration as the poverty group. After including of all 10% sections into the analysis it would give an opportunity us to see how FDI effect the other 10 % sections together with the poverty groups. In other words, it will provide an opinion about which 10% income proportions effected in which country and how they are affected.

This article consisted from three main sections. In the first section of the study, how and through which economic factors FDI effects the poverty will be determined while econometric modelling of this effect is mentioned in the second section and the opinion reached in the result of the study will be determined in the final section.

1. FDI and Poverty in the World: Overview

Continuous increase of the capital stock in the world has added on to the concern in the orientation of new investment areas and regions. This is because, those regions present more advantageous conditions in order to make an investment than the investment environment and conditions that exist in the country where the capital originally comes from. Besides this, with each passing day, opening the economies of

countries to the foreign investors, moderating the restrictions existing in the country for the foreign investors and presenting activity possibilities almost in every sector by the economy have caused more capital to flow into other countries for the investment from the country it takes place. According to this, while the amount of implemented FDI in the year 1970 was 13.346 million USD, five years later (1975) these investments have doubled up and have reached the amount of 26.567 million USD. Even if this trend has levelled off slightly in the beginning of 1980s (54.076 million USD in 1980 and 55.887 million USD in 1985), a rapid increase has started from the year 1986 (86.344 million USD) again. In the following years, in concurrence with the increase (207.273 million USD in 1990, 341.144 million USD in 1995, 1.381.675 million USD in 2000 and 973.329 million USD in 2005), due to economic crisis occurring in certain parts of the world and because of other developments in temporary recessions, have been encountered in the amounts of FDI. In 2007, FDI has reached its highest level in its history with the amount of 1.979 billion USD. However, because of the economic crisis emerging in the year of 2008 and effecting countries starting with the developed countries and many other countries in the beginning of 2009, FDI has declined with a considerable extent (1.697 billion USD in 2008 and 1.114 billion USD in 2009) (UNCTAD FDI Stat and UNCTAD, 2010: 2).

Even though the population who cannot afford its basic needs (food, shelter and clothing) with the normal incomes has declined substantially since 1980, according to the data of the 2005 approximately 1/4 of the total population (25.7%) in the world still maintain their lives under daily 1.25 USD which expresses the bottom line of poverty as determined by the World Bank. In 1981, slightly more than half of the world's total population (52%) lived below the poverty threshold. As a matter of fact, while the total population in the world increases, regression of poverty level from 52% to 25,7% during the time period of 25 years can be evaluated as a success. However, there are still 1.376,7 million people in the world who maintain their lives below the daily income of 1.25 USD. Proportionately, one part of this decrease is generated from the increase of total population. In other words, during the time period of 25 years, the number of poor people (below daily 1.25 USD) has decreased by 27.40% (from 1.896,2 million people to 1.376,7 million people). Besides this, the most important source for the regression of poverty almost in half has taken place by the courtesy of East Asia and Pacific countries. While the numbers of poor people in these regions were 1.071 million in 1981, this figure has declined to 316 million in 2005. In contrast, in the same years, population suffering from poverty in Sub-Saharan Africa has increased to 388 million from 212 million and it has increased to 596 million from 548 million in South Asia (UN, 2009: 13–19).

Between the years of 1981–2005, there has been an increase in FDI investments in the developing and in countries of transition economy (and, between 1981 and 2005 it has been implemented in developing countries, respectively as 24.042,78 and 329.291,5; in transition economy countries, as 12.6 and 30.948,23 million USD respectively). During the same time period, namely, in 1981 and in 2005, in South Asia FDI has been implemented 283.71 and 14.351,82 million USD and it has been implemented as 1.545,47 and 28.291,82 million USD worth of FDI in sub-Saharan Africa respectively. In 2008, FDI has been implemented as 50.668,59 million USD in South Asia and as 66.247,13 million USD in sub-Saharan Africa. (UNCTAD FDI Stat).

Poverty has never declined in these two regions during the 25 years, moreover FDI has shown a increase in these two regions. It is difficult to claim that FDI does not have any effect on the poverty by just looking at the poverty taking place in these two regions and according to FDI's development. In order to reach a reasonable judgement in this subject, it is required to look at amount of FDI implemented in these countries and development of poverty levels and the more detailed analysis in this topic[2].

2. Factors determining the Effect of FDI on Poverty

FDI is not only a capital flow, but it is the long-term capital package making contribution to economic development by improving technological capacity, management skills, productivity and also to the regression of poverty in various ways (Aaron, 2). In terms of the effects of the factors that decrease the poverty, FDI's reduction effect for the poverty is divided into two parts as direct and indirect (Nguyen, 2003: 61). While direct effect becomes implemented by way of employment (of the poor), indirect effects occur as economic growth, infrastructure investments (education, health, transportation, etc. in the regions where the poor people live), increase of the tax revenues, indirect employment increase, social responsibility projects supported by the foreigners and utilised by the poor people, etc.

FDI's direct or indirect reduction effect for the poverty is not the same in any term and condition and this effect changes depending on many factors. These are the factors such as the amount and characteristic (labour-intensive, capital-intensive) of the investment, receiving way of investment for the country (acquisition – merger, privatisation, capacity increasing and from the zero), the status of the sector in which the investment is implemented, technological improvements and the effect of these on the community, taxes paid by FDI and how these taxes are spent, productivity of the investments and wages. Additionally, as a result of the economic and political conditions of country effect all abovementioned factors, they can be considered as FDI's most important determinants for the reduction effect on the poverty forms. (Passing on from Mayne 1997, Shahbaz and Aamir, 2008: 8 and Mirza and Giroud, 2004: 225). For this reason, if a country wants to achieve better results in the reduction of poverty through FDI, it must take into consideration of its economic and political conditions to be attractive for these investments.

2.1. Employment

FDI may generate direct reduction effect on the poverty in the host country by the way of employment increase and training of the labour force (Nguyen, 2003: 64). However, it is required that the employment and labour force training taking place here must be predominantly from poor unemployed or poor low income groups. Labour taking place in this group will gain qualified labour attribution with the training taken by them and they obtain the possibility to yield high income and they reach a living standard that is

[2] For detailed information in these two regions for FDI's reducing Effect on the Poverty, see: Gohou and Soumare, 2009 and Mirza et al, 2003.

over the poverty threshold. Successes achieved by the poor people as a result of labour training, under normal conditions (validity of the profession in the market), may provide them to maintain this living standard throughout their lives. On the other hand, since some poor people who do not have regular income become employed by courtesy of these investments and start to gain income, FDI (specially, labour-intensive) provides direct and important contributions in the reduction of the poverty arising because of unemployment. If FDI is providing contribution to the employment of unqualified poor people, it's effect for the reduction of poverty arising because of unemployment increases even more. This is because, the employment of unqualified poor unemployed workers is more difficult compared with the employment of qualified unemployed persons. For this reason, FDI's effect on the reduction of the poverty by way of employment increase is the most important effect (Chudnovsky and Lopez, 1999: 15). Moreover, even the commencement of working of one person in a totally unemployed family, plays a very important role for that family to get out of poverty (IFC, 2000: 3).

FDI's reduction effect on the poverty by way of employment is not limited only with its own employment. Owing to these investments, the employment increase of the enterprises taking place in the ancillary industry that is to be established from beginning and expanding, is an indirect and important factor contributing for the reduction of the poverty (UNCTAD, 1994: 192 – 195). This follows from the reason that this indirect employment increase caused by FDI, in some cases, can be more than the employment increase occurring in direct employment increase[3]. When this is compared with direct and indirect reduction effects of the foreign investments on poverty, sometimes it comes through that indirect factors might be more dominant.

It can be said that capital-intensive FDI's reduction effect on the poverty remains to be with limited level when compared with the labour-intensive one. The reason for this is that, considering these investments provide very little employment and in general they employ qualified labour force, it is not effective as much as labour-intensive investments for the reduction of the poverty arising because of unemployment. Beside this, since capital-intensive investments are generally the ones with high volumes and productivity, by way of productivity increase is generated with these investments, they can provide partial contribution for the reduction of general poverty level taking place in the country.

Even though employment increases provide positive contributions for the reduction of the poverty, the most important factor determining the decreased/to be decreased level is the wage to be paid by the foreign investors to their employees. If the wage paid/to be paid by the foreign investors to their employees is over the poverty threshold, poverty reduction effect of these investments will be high, however, this

[3] According to the estimations done for the year of 1997, FDI taking place in the developing countries has provided 26 million direct and 41,6 million indirect employments. For detailed information, see; Asiedu, 2004: 373. Likewise, while there was the total of 20.000 persons working in Nike Company, there are 500.000 persons worldwide making productions fort his enterprise. (Watkins and Fowler, 2002: 190).

effect will be low if the wage is below the threshold[4]. In other words, wage taking place below the poverty threshold cannot secure the persons from poverty in despite of getting them closer to it.

2.2. Entry Methods of Investments to the Country

When we evaluate FDI's reduction effects on the poverty according to the receiving way of the investments to the country, investments from zero and capacity increasing ones are more efficient when compared with the investments implemented by way of acquisition - merger and privatisation (UNCTAD, 1999: 261). This is because, in the first group investments, there are additions taking place on the existing investment level and their circumstances directly affect economic variables such as employment and production, on the other hand, in the second type only the investments change hands and there is no changing in the existing investment stock. Moreover, FDI coming in the country by this way[5]4 may sometimes cause decrease in the employment. Additionally, foreign investments implemented by way of acquisition - merger and privatisation may generate positive or negative effects on the poverty through the ones who have direct or indirect commercial benefits in these enterprises. For instance, if an enterprise starts to import the raw materials used in the production after it gets under the control of foreign investors, this situation will cause a decrease in domestic raw material production and for this reason it creates a negative effect on the poverty. In the contrary situation, namely, when foreign investors meet their raw material needs from inland to a great extent; this will create a positive effect on the poverty because the production of the raw materials will increase (UNCTAD, 1994: 192).

After a certain while, there may be expansion investments and productivity increase can be realised in the foreign investments which are implemented by way of acquisitions - merger and privatisation. The effect of this type of investments on the poverty also appears after this stage. Consequently, the effect of investments from zero and capacity increasing ones on the poverty takes place immediately while the effect of investments by way of acquisitions - merger and privatisation occurs as delayed for the poverty[6].

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[4] In the Studies done in literature on this topic, it has appeared that foreign investors pay higher wages to their employees compared to the domestic investors. For detailed information, see: Ugur and Ruane, 2004. For the Summary of Literature in this topic, see: Velde and Morrisey, 2002: 3.

[5] In some of the enterprises having their ownerships passed to the foreign investors as a result of Privatization, it might be possible to cancel labour contracts of some employees within the framework of re-structuring.

[6] FDI coming in by way of acquisition – merger and privatization may cause direct and FDI from zero and capacity increasing may cause externalization of domestic investments indirectly. If domestic enterprises are deprived from the competition power with the foreign enterprises, they encounter more externalization in the investment market. While FDI causes decrease on the domestic investment amount, they increase the dimension of externalization with the amount of the credits they use in the finance market. However, sometimes it is also possible to have increases in domestic investments through FDI. Specially the investments having the attribution of raw material and the investments having the characteristic of being complemented for the foreign investments (supply industry) cause rapid increase for the domestic investments. For

2.3. The Sector in which the Investment is Implemented

The relation between FDI's implemented sector and poverty can be explained by being in connection with the sector-specific distribution of foreign investments and poverty. According to this, when three sector-specific discriminations are done in the economy as agriculture, industry and service, there is a parallelism between the sector having the most foreign investments and poverty-intensive sector and this can have a positive effect for the reduction of the poverty. When the distribution of poverty is observed according to the sector, it is seen that, in general, poverty rate taking place in the agriculture segment is higher than the other two sectors[7]. Therefore, FDI implemented in agriculture sector has higher reducing effect on the poverty when compared with the ones taking place in the other sectors[8]. Foreign investments have direct (increases in the employment in itself or in the supply industry) and indirect (productivity, technological development, etc.) reduction on the factors effecting the poverty in the sectors they take place.

2.4. Tax Revenues

Direct (Corporate Tax) and indirect (VAT, etc.) taxes paid by FDI cause increasing effect on the total tax revenue. Being dependent on how these additional increases occurring in tax revenue are used, it can be effective on the poverty. According to this, if these tax revenues are used in the financing of services/investment from which the poor people may utilise directly (in-kind or cash assistance, etc.) or indirectly (vocational courses, etc.), then FDI achieves positive contribution on the reduction of the poverty. However, because of having the implementing of modern budget system's non-allocate principle, it is not certain in which financings the taxes paid by FDI are used. If there is an increase encountered in the investments/services to be utilised by the poor segment as long as the tax revenue increases, in that case, it can be claimed that the increase taking place in the tax revenue because of the taxes paid by the foreign investors have a reducing effect on the poverty.

2.5. Economic Growth and Technological Developments

As long as the counties become enriched, the average poverty rate gets reduced. In the contrary situation (negative economic growth, war, economic crisis) poverty increases. Since economic growth is the most important determinant of enrichment, it is also one

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detailed information, see: UNCTAD, 1999: 171 – 173. Additionally, see the information about the results of the studies done on FDI's externalization or increasing for the domestic investments: Sumner, June–2005: 278.

[7] According to Poverty Data of the World Bank, it is seen that poverty level of the rural section is higher than the poverty level of cities. For detailed information, see: Word Bank, Data on Poverty and Inequality.

[8] In an analysis done for Indonesia, conclusion has been reached that the employment in production and service sector has a little effect to reduction of poverty in agriculture sector. For detailed information, see: Mason and Baptist, 1996: 16.

of the most important factors effecting the reduction of poverty. However, the effect of economic growth on poverty shows differences between the countries. The basic reason of this is having the countries with different economic growth levels from each other in the long period and as a result of this, income levels per capita differentiate. Additionally, determination of the groups that utilise more from the production and income increase, implemented with the economic growth (primary income distribution), is an another important factor designating the effect of growth on poverty (Word Bank, 2001: 45 – 52).

With the increase of the production amount, since it will reduce the general level of the prices, the ones who consume the products produced by FDI will be effected positively in this process. If more of the poor population makes the use of the income increase implemented with commodities and services (clothing, shelter and food) offered by FDI and by the courtesy of these investments, then the effect of these investments in reducing the poverty level increases (because, consumable expenditures of the poor people will be reduced compared with the previous situation and their obtained income will be increased) (Calvo and Hernandez, 2006: 9). As for the adverse condition, namely, if high-income group substantially makes the use of the income increase with the commodities and service offered by FDI, the effect of foreign investments on poverty may remain at limited level in despite of supporting the economic growth.

Economic growth's reducing effect on the poverty starts at the point where GDP's growth rate is higher than population growth rate. In other words, a lesser economic growth rate than population growth rate cannot be effective for the reduction of poverty. Because, despite the participation to the labour force, if the level of the investment does not increase at the same level, at that time unemployment, in other words, poverty also increases (Jenkins and Thomas, 2002: 11). In underdeveloped countries and in some developing countries where economic growth rate is rather low and on the other hand having high population growth rate, GDP lends assistance to be able to meet the deficit.

One of the most important contributions of GDP provided to the host country is to cause the increase of welfare in the community by the courtesy of technological improvement and productivity increase. Depending on the benefit obtained by the poor people from the increase of welfare through DYSY, poverty level existing in the community is affected positively. Because, as long as the economical growth increases, the income of the people who is in the poverty level also increase (Dolar and Kraay, 2002: 219 and 2002b: 121). Thus, economical growth supported with the technological improvements and productivity increase also causes reduction in the rate of poverty. Another poverty reducing effect of technological improvement emerges by facilitating daily life (such as communication, etc.).

2.6. Social Projects

Another effect of FDI on poverty becomes implemented through the contribution it will make for the social projects. According to this, foreign investors may play a role in reducing the poverty in the country they take place as per social responsibility by way

of providing direct (establishing a foundation or association) or indirect (to do outright helps to non-governmental organisations) supports in the projects and programs which the poor people may utilise directly or indirectly. However, it is difficult to say that reducing effect of these kinds of implemented projects on poverty is considerably high. Because, these mentioned projects generally provide services within a certain region and with limited level. In other words, it is not possible to say that all of the poor people in the country can benefit from these social responsibility projects. However, it can be said that these projects are efficient to eliminate the poverties of the people who benefits from them, because these projects are generally specific and have the characteristic to meet the needs of the poor people in that area (such as education, health, environmental conditions, sheltering, etc.).

3. Literature

It is possible to divide empirical studies carried out on the topic of FDI's reducing effect on poverty into two groups. In the first one of these, the determination of the effect on poverty by using direct and indirect variables (employment – economic growth, ... etc.) through FDI which give a reducing effect to the poverty (Mirza and et al., 2003) was attempted. In the second one of these, the determination of the effect of these investments on the poverty without making any discrimination (Calvo and Hernandez, 2006) was attempted. It is seen in the literature that there are many studies carried out in this topic. In the study of Shahbaz and Aamir (2008), the effect of FDI on the income distribution has been examined for Pakistan. In this study, it is expressed that a low rate of investment against the high rate of population growth in developing countries leads to low level of growth and this result also increases the irregularity in the income distribution. In the study, GINI coefficient has been tested with the approach of ARDL limit test.

In the study done by Zhang (2006) FDI's effect has been searched by using cross-section and panel data models, on the income distribution taking place in China. He made estimations with or without FDI for two separate models as dependent variable of growth rate. Karim and Ahmad (2009) have searched whether or not FDI is effective in reducing the poverty between the years of 1984–2005 with 8 data and at the level of provinces in Malaysia and this has been done with the Panel regression Method.

4. Data and Application

In this study having the subject of FDI's reducing effect on poverty, the study will be done by considering the lowest 1st and 2nd group in 10% income distribution for FDI data between the years of analysis in selected underdeveloped and developing countries. Since all of the 10% segments are included in the analysis, the way of being affected from 10% income distribution brackets in FDI will also be determined. In the analysis, instead of using the factors (employment, technological development, social projects, etc.) determining FDI's effects on poverty, the reason of using only FDI data is because of not having the date for the other mentioned variables or because of encountering the difficulties to obtain them. In the analysis, in the event of using all of the variables

having FDI's reducing effect on the poverty, there is the compulsion of limiting it to a very small number of countries. Whereas, the purpose of this study is to determine how the FDI's reducing effect influences the poverty and income groups in many countries. For this reason, analyses using all of the variables are more suitable for a country or a certain region of a country.

In this study, Panel Regression Analysis has been done for 40 countries having FDI data between the years of 1980–2008 (UNCTAD FDI Stat) and the date of income distribution in 10% brackets in the same time period and for at least 6 years (World Bank, Data on Poverty and Inequality). Countries used in the study have been given in Table 1.

Table 1: Observation Number of the Countries[9]

Countries			
Argentina (ARJ) (8)	Philippine (PHI) (8)	Latvia (LAT) (8)	Poland (POL) (12)
Bangladesh (BAN) (6)	Guatemala (GUA) (6)	Lithuania (LIT) (8)	Romania (ROM) (8)
Belarus (BEL) (9)	Georgia (GEO) (9)	Hungary (HUN) (9)	Russia (RUS) (7)
Brazil (BRA) (17)	Croatia (CRA) (7)	Madagascar (MAD) (6)	Chile (CHI) (8)
Bulgaria (BUL) (6)	Honduras (HON) (9)	Malaysia (MAL) (7)	Turkey (TUR) (7)
Côte d'Ivoire (COT) (8)	Jamaica (JAM) (7)	Mexico (MEX) (14)	Uganda (UGA)(6)
China (CHN) (15)	Kazakhstan (KAZ) (6)	Pakistan (PAK) (6)	Ukraine (UKR) (6)
Dominic Rep. (DOM) (9)	Kyrgyzstan (KIR) (6)	Panama (PAN) (6)	Uruguay (URU) (8)
El Salvador (ELS) (9)	Colombia (COL) (7)	Paraguay (PAR) (7)	Venezuela (VEN) (11)
Estonia (EST) (9)	Costa Rica (COS) (7)	Peru (PER) (8)	Zambia (ZAM) (6)

Because of not being able to find/calculate some observation values, Unbalanced Panel Regression Methods has been used in the study. 10% brackets have been used as a dependent variable and FDI has been used as an independent variable in the model. Obtained models in the analysis are given below.

Table 2: Panel Regression Results

Dependent Variables	**Independent Variables: FDI**			
	Coefficient	**Standard Error**	**t-statistics**	**Prob**
B1	**0.000073**	1.44E–05	5.096264	0.0000
B2	**0.000109**	2.12E–05	5.154238	0.0000
B3	**0.000141**	2.67E–05	5.287216	0.0000
B4	**0.000174**	3.19E–05	5.467324	0.0000
B5	**0.000211**	3.88E–05	5.438718	0.0000
B6	**0.000254**	4.63E–05	5.477022	0.0000
B7	**0.000306**	5.57E–05	5.499334	0.0000
B8	**0.000378**	6.87E–05	5.506761	0.0000
B9	**0.000499**	9.08E–05	5.496667	0.0000
B10	**0.001125**	0.000211	5.338837	0.0000

Residuary terms obtained in the models show pure error characteristic. As seen from the results of the application, it was found that FDI affects the income groups

[9] The values taking place in the brackets alongside of the country data used in the study expresses the data of 10% income groups in terms of years.

relevantly and it has achieved contributions to income groups significantly. After determining FDI's income increasing effect on the income groups, the dimension of this effect has gained importance. The main question here can be raised as "What proportions do the groups, that subjected to income distribution, gained from FDI? ". This question can be answered as stated below.

Table 3: The Shares of 10% from FDI[10]

10% Brackets	Shares Received from FDI
1. %10	2.23
2. %10	3.33
3. %10	4.31
4. %10	5.32
5. %10	6.45
6. %10	7.77
7. %10	9.36
8. %10	11.56
9. %10	15.26
10. %10	34.40

As it is understood from Table 3, while the share of the poorest (1st) 10% from FDI was 2.33%, this rate has been calculated as 3.33% for 2nd 10% group. However, the richest group from the incomes of FDI (10th) gets 34.4% share, the second richest group (9th) gets 15.26% share and the third richest (8th) gets 11.56% share and they have obtained values above the average. If these obtained outputs are interpreted, it is seen that the income obtained from FDI by the richest three groups (8th, 9th, 10th 10% proportions) are above from the average income obtained from FDI and moreover, it is seen that the richest 2 groups approximately get half of the income obtained from FDI. Alongside of the situation expressing the average of the countries participated in the analysis, determining how FDI affects poor and other groups at the level of countries forms the second part of the analysis. Obtained findings are given in Table 4.

Table 4: The Effect of FDI on Country Basis 10% Income Distribution Brackets

[10] In the calculations of Table-3, coefficients obtained with Panel Regression Equations are summed up with the approach of being the part of the whole and obtained by dividing it to relevant Regression Parameter.

	10% Brackets									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
ARJ	-0.916	-1.063	-0.999	-0.866	-0.674	-0.423	-0.095	0.353	1.083	3.543
BAN	1.753	1.636	1.535	1.374	1.134	0.822	0.396	-0.177	-1.099	-7.317
BEL	1.348	1.658	1.693	1.655	1.556	1.369	1.053	0.479	-0.708	-10.099
BRA	-1.242	-1.777	-1.962	-2.039	-2.023	-1.888	-1.575	-0.907	0.642	12.783
BUL	1.136	1.717	1.804	1.745	1.595	1.339	0.937	0.292	-0.908	-9.633
CHI	-0.907	-1.276	-1.437	-1.528	-1.570	-1.548	-1.433	-1.122	-0.396	11.280
CHN	1.369	1.556	1.622	1.541	1.344	1.035	0.612	0.033	-0.876	-8.195
COL	-1.424	-1.670	-1.763	-1.799	-1.781	-1.691	-1.495	-1.077	-0.185	12.944
COS	-0.953	-0.862	-0.703	-0.512	-0.292	-0.039	0.254	0.596	1.056	1.405
COT	0.290	0.150	0.110	0.099	0.104	0.110	0.115	0.103	0.023	-1.112
CRA	1.284	1.577	1.598	1.539	1.422	1.226	0.911	0.367	-0.699	-9.206
DOM	-0.858	-1.027	-1.059	-1.035	-0.967	-0.843	-0.647	-0.329	0.271	6.493
ELS	-1.376	-1.314	-1.196	-1.034	-0.829	-0.568	-0.228	0.239	1.031	5.225
EST	0.399	0.604	0.669	0.701	0.711	0.685	0.610	0.411	-0.068	-4.741
GEO	-0.139	0.214	0.372	0.491	0.589	0.661	0.689	0.625	0.329	-3.869
GUA	-1.281	-1.549	-1.647	-1.683	-1.661	-1.573	-1.361	-0.932	-0.002	11.738
HON	-1.293	-1.590	-1.653	-1.634	-1.545	-1.375	-1.077	-0.542	0.549	10.157
HUN	1.826	2.118	2.046	1.892	1.652	1.320	0.849	0.114	-1.252	-10.525
JAM	-0.083	-0.123	-0.137	-0.130	-0.114	-0.085	-0.038	0.011	0.063	0.629
KAZ	0.724	0.812	0.903	0.968	1.001	0.991	0.909	0.661	0.084	-7.104
KYR	0.479	0.384	0.399	0.412	0.408	0.389	0.352	0.304	0.276	-3.441
LAT	0.611	1.227	1.310	1.290	1.199	1.033	0.758	0.300	-0.600	-7.117
LIT	0.767	1.109	1.166	1.161	1.108	0.989	0.785	0.394	-0.412	-7.072
MAD	-0.028	-0.272	-0.323	-0.360	-0.401	-0.439	-0.457	-0.418	-0.241	2.972
MAL	-0.352	-0.554	-0.593	-0.586	-0.540	-0.450	-0.321	-0.112	0.245	3.257
MEX	-0.689	-0.891	-0.943	-0.957	-0.938	-0.872	-0.734	-0.446	0.192	6.294
PAK	1.574	1.557	1.404	1.202	0.951	0.643	0.246	-0.298	-1.214	-5.997
PAN	-1.517	-1.866	-1.845	-1.708	-1.474	-1.133	-0.659	0.048	1.277	8.827
PAR	-1.316	-1.494	-1.497	-1.437	-1.319	-1.127	-0.837	-0.350	0.590	8.773
PER	-0.692	-0.781	-0.801	-0.785	-0.737	-0.649	-0.510	-0.268	0.184	5.042
PHI	0.195	-0.190	-0.320	-0.395	-0.434	-0.423	-0.335	-0.096	0.550	1.433
POL	1.227	1.425	1.428	1.378	1.278	1.109	0.843	0.369	-0.599	-8.451
ROM	1.106	1.519	1.582	1.559	1.463	1.288	0.986	0.451	-0.639	-9.308
RUS	-0.085	0.037	0.116	0.186	0.253	0.311	0.355	0.348	0.239	-1.791
TUR	-0.092	-0.044	-0.052	-0.064	-0.075	-0.078	-0.079	-0.071	-0.069	0.636
UGA	0.151	-0.001	-0.050	-0.102	-0.160	-0.224	-0.291	-0.328	-0.285	1.319
UKR	1.266	1.525	1.561	1.527	1.444	1.275	0.986	0.461	-0.610	-9.429
URU	-0.529	-0.588	-0.508	-0.378	-0.211	-0.008	0.231	0.500	0.821	0.613
VEN	-0.954	-0.922	-0.838	-0.715	-0.561	-0.363	-0.103	0.250	0.825	3.347
ZAM	-0.781	-0.970	-0.992	-0.971	-0.906	-0.797	-0.600	-0.235	0.534	5.699

According to results, it is possible to classify the effect of FDI on 10% distribution for the countries included in the Analysis in 4 different forms. These are:

- *While FDI increases the incomes of the richest groups, it decreases the incomes of middle and poor groups.* The countries of this group are: Brazil, Chile, Colombia, Costa Rica, Dominic Republic, El Salvador, Guatemala, Honduras, Jamaica, Madagascar, Malaysia, Mexico, Panama, Paraguay, Peru, Turkey, Uruguay, Venezuela and Zambia.

- *While FDI increases the incomes of middle and poor groups, it affects negatively the incomes of the richest groups.* The countries taking place in this group are: Bangladesh, Belarus, Bulgaria, China, Ivory Coast, Croatia, Estonia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Pakistan, Poland, Romania and Ukraine.
- *While FDI increases the incomes of the rich and poor groups, it reduces the incomes of the middle groups.* The countries taking place in this group are: Uganda and Philippines.
- *FDI only increases the incomes of the persons taking place in the middle group and negatively effects the incomes of other groups.* The countries in this group are: Russia and Georgia.

Conclusion

In order to provide permanent benefits, investment going from a country to another country affects positively or negatively the economic variables of the origin country or the country they established. One of the variables of the host country affected from these investments is the poverty. Theoretically, FDI's effect on the poverty is realised by way of employment (direct and indirect), economic growth, technological development, tax revenues and social projects. Mainly, the FDI's effect on the poverty comes into the picture through direct and indirect employments provided by these investments. Reason for this is when an unemployed and poor person starts to work and gains income, at the same time person becomes secure from the poverty or gets closer to poverty threshold according to the amount of income he/she gained. Additionally, FDI's way of coming to the country, the regions where the investments are implemented and sector are other factors to determine the effects of these investments on the poverty status of the country.

In the previous studies, it has stated that the FDI has a positive effect on the poverty of some countries while it has not any effect on other countries. The basic reason of these differences is because the countries have considerably different basic economic structures from each other.

In the general analysis we have done by using 10% proportions of income distribution in selected 40 underdeveloped and developing countries, it was seen that FDI has affected poor group (1st and 2nd proportions) positively. However, it has become apparent that the same effect has influenced top groups, which get the highest share from the income distribution, more positively. In other words, despite the fact that FDI increases the income level of poorest group(s) which is the result of unjust distribution of the income, it does not have a positive effect for more equitable distribution of general income.

In order to determine how average income groups of the countries differentiate, a second Panel Regression has been done. According to these results, it is seen that the countries are divided into 4 different groups. In the first group, there are 19 countries take place and while FDI in these countries are increasing the incomes of 9th and 10th proportions, incomes of poor and middle groups are affected in negative direction. In the second group with 16 countries, while FDI increases the incomes of poor and

middle groups, the incomes of the ones taking place in 9th and 10th proportions are reduced. In 3rd group which has two countries, while FDI increases the incomes of poor and the richest groups (1st, 9th and 10th of 10% proportions), the incomes of the ones taking place in the middle group are reduced. Also in two countries of the last group, FDI only increases the incomes of the ones taking place in the middle group and the incomes of poor and the richest (1st, 9th and 10th of 10% brackets) are affected negatively.

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