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The Effect of Economic Integration on FDI "The Empirical Study of D8 Countries"

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Abstract
Toward the different economic integration and Commercial regional arrangements, which are the small scale of globalization, could relative advantage and put on the new opportunity on the national economies. These fact causes to the Developing countries open their markets to attract FDI and reduce their restriction on tariff and non tariff, which can increase international trading at the same time. With this important item, this study inquiry the effect of economic integration and globalization on the FDI, by specifying gravity model and panel data approach, for D8 member, during 2001 to 2011. Our Gravity model estimate show: the direct integration between member states D8 has positive and significant effect on foreign direct investment inflow.

Introduction
Foreign investing capital and multinational companies are two aspects of a great change that it formed universal economic union and this variable is most important feature of international economic. Ever-increasing development of economic organizations-local economic-combining financial markets-financial union-release interchange of goods and capital transformations are some variables of universal economic. Rather than formed international markets, universal economic established a competitive situation that only efficient and powerful companies can remain with it. It is necessary to equipped different countries of world, especially development countries. So study the equipment and benefits of economic and understanding their challenges and problems can provide an accurate stimulation field in this discussion. In addition, different economical unions and localizations as appropriate tools, can clarify advantages and disadvantages of universal economic. Indeed because of proximity and neighborhood of countries in an area (proximity in fields such as; culture- originality-language and religion) and shorter distance and decreasing costs of transitions in one hand, and detrimental results of universal capital in other hand, these countries would like to corporation with each other. In attention to importance of this discussion, this paper trying to study the empirical impact of
economical and universal unions on foreign investing capital absorption in countries of D-8. So structure of paper is as following: after introduction in chapter 1, we review the literature of subject that including: economical union and theory of Foreign investing capital and effective variables on Foreign investing capital absorption in chapter 2. Then based on theory bases and empirical evidences, an appropriate pattern had been clarified for studying impact of union on foreign investing capital in chapter 3. And finally this pattern had been estimated for countries of D-8. The last chapter is conclusion that explained in chapter 5.

2- relationship between foreign investing capital and international business:
Relationship between foreign investing capital and business in both aspects of succession relationship and completed relationship can be studied that in this section, by studying existing theories, these communications had been interpreted. In discussions of macro- economic, succession relationship between two variables understands by model of Hector Ohlin. This model is an interoperation to impact of production variables on business mechanism of countries. However the Model by Hector Ohlin, Considering word of economic in two goods(x-y) for two countries (A-B) by two variables of workforce(L) and capital(K). Assumptions of this model are: production factors in a country are easily transferable between different industries. Also production factors in all countries are equal. There is also constant outcome on a scale of production rate. Production goods according to producing factors are different. There is any cost of transition. In different countries production factors are different but any country doesn't produce just one of goods and all countries produce both of them. Production of Y requires working and Production of X requires capital and country of A has more workforce on scale of country of B. in attention to figure (1) production in country of A is set in point P1 where the diagram of production equipments (ppf1) is in tangent with rate of costs. Goods on scale rate (Px/Py) and by international way have been exchanged. In condition of free-business, consumption in country of A is in point C. business allowing country of A that reach to higher level of welfare. Country of A in required size OP, exported goods of X and in required size OC entered goods of Y. in this conditions according to theories of international business, the rate of production factors is equilibrate and capital of final production is equal in both countries. So there is any motivation for business on capital and per advantage of business is because of goods. (Markusen, 1995). Now, if country of A create a business limitation by tariff classification, this problem to cause increasing rate in country of A in scale to country of B and (Px/Py) A≥ (Px/Py) B. By increasing rate in goods of X, consumption and production points in country of A on diagram of ppf1 transfer from p1 to point Q.

Figure1: succession relationship between business and foreign investing capital.
Resource: (Markusen, 1995).
The result is that final production of capital in country of A on a scale of other countries has increased and final production of jobs in this country has decreased. And now rate of goods that required capital in this country are more than others. So, if all of limitations removed from production factors and motivation of capital has been established, so because of higher rate in returning capital, foreign capitalists inter their capitals to this country. Indeed this problem leads to reducing business of goods and it has been continued as long as there are differences in rate of goods. Indeed as long as there are differences in final production of jobs and capital in both countries of A and B, business of goods has been replaced by foreign investing capital (Mundel, 1957). At last, final production of jobs and capital has been equaled in both countries of A and B, and rate of goods has been equaled by previous level. Equipments of production has been developed in country of A. since x is a goods that required capital so, by continuing capital discussion, the maximum of X has been increased. In other words, diagram of PPF1 has shifted towards pivot of X. so because of same final production and same rate of goods, it can be said that incoming in country of A is unchanged. Indeed consumption is constant and comforted in C point. But production is not at a same point, because country of A must pay some share to country of B. the payment share is equal to rate of final production of capital, so new equality accepted in south east of P1 point, where X receiving is high and Y producing is low. Indeed it can be concluded that in model of Hector Ohlin, business established because of differences in production factors. And business of goods can be replaced by capital motivation. Indeed the model of Hector Ohlin had been accepted by some assumptions that this model is unreliable without them. Also in real world, cost of transport- variety of production technologies- unequal production factors and scale of economic are causes unreliability of this model. However, traditional theories of investing capital, decreasing exporting of origin country and entering of host country. But, since foreign investing capital is cause of replacement exporting of hostess country by production in host country, it leads to changing in kind of good and services. Although, when institutions of hostess country have investing capital in host country, this can motivated exporting goods and services from hostess country that is effective in decreasing exports.
studying the relation between economical union and foreign investing capital:

There is a proportional relation between economical union and FDI that dependence on features and characters of economical union and characters of countries in an economic combining. A union that is because of limitations in data transport ion and receiving productions is leads to increasing FDI, and indicated that there is a complete relation between business and foreign investing capital. (Graham, 1999). Impact of economical union on foreign investing capita in fields of: theories of custom unions-economical union and union blocks can be interpreted. Also there are several theorize models in this field that are as following (Halhci Oghlo): the first model is studying impact of this effect on theory of Hector Ohlin. And according to foresight of increasing business tariffs for independent countries, this leads to business deviation to union of members. In the other hand, established a union among dependent countries, leads to decreasing limitations and business tariffs and finally leads to increasing business volume among dependent countries. so it can be concluded that companion with increasing income of industrial entered, the rate of Foreign investing capital increasing too. The second method is based on theory of international production. Since development of economical unions increased the volume of tariffs in independent countries, these countries would like inter directly to dependent countries and investing capital, rather than exporting goods to this countries. Finally in the last model that is based on theory of customs union and internal markets. Increasing capital is because of investing capital from independent countries. (Joni lops 1990). Combining trade discrepancies is to cause decreasing investing capital between those countries and it leads to increasing foreign investing capital. Also economical combinations, by change in international politics and change national adjustments into international ones, decreasing risk of investing capital and it leads to increasing foreign investing capital. (Stevens and Lipsey). At the same time, efficient improvement and specialization of economical activities leads to growth of economic rate and greater geographical concentration. And it leads to foreign investing capital. (Bloomstorm and Kokoo, 1997). Based on above theory, create the economic union leads to establish more development markets. Indeed great markets made companies more motivated to use of credits for development and growth of company, and this leads to increasing foreign investing capital and create a powerful international competitive market. And because of cancelation of trade limitations and investing capital and powerful international competition, companies would like be combined with their competitors. When companies had been combined and established a greater company, investing capital in fields of research and development has increased and because of foreign investing capital has been increased too.

history of research

Galan and sekkat (2004) in their paper (does economical union has a same impact on foreign investing capital in all dependent countries?) studying the impact of unique market program of Europe on foreign investing capital. So in addition to accept the positive impact of European unique market on foreign investing capital, Galan and sekkat (2004) had tested the sameness of this effect among dependent countries. Indeed results of this test ejected the assumption of equality in impacts of unique market of Europe on foreign investing capital in difference countries. Velade and Bezmer (2004) in their paper (local union and foreign investing capital in development countries) studying the relation between local union and FDI in development
countries. Economical evidences in this paper indicated that: 1- although membership in an area can lead to external FDI, the kind of area is important.

2- For FDI absorptions, the position of countries in an area is important since the smaller countries on scale to greater ones are less advantageous.

Najarzadeh and Shaqaqi (1385) in their paper (local equality and its impact on foreign investing capital) studying the impact of local equality on foreign capital absorptions, by using pattern of absorbents for 8 countries of MNA from 1995 to 2000. The results of estimation indicate that, however there is some problems in absorption of FDI in Islamic countries, but moving towards local equality was added to foreign investing capital in Islamic countries.

The Model

For studying the impacts of economical union on foreign investing capital in countries of D-8, pattern of absorption had been used as following:

\[ \ln(FD_{ijt}) = \alpha + \beta \ln(Y_j) + \beta_2 \ln(POP_j) + \beta_3 \ln(Dist) + \beta_4 \ln(Free_j) + \beta_5 \ln(DI_y) \]

FDI_{ijt}: inventory of FDI

Y_j: incoming country of J

POP_j: population of country

Dist: distance between two countries of I and J

Free_j: releasing economic of country J

DI: index union between two countries of I and J.

For studying impact of union on absorption of foreign investing capital, the following index had been used that is based on the studies of (Ivan & ET al 2006): DI = \sqrt{DO_i \ DTC}

Since the union is started by economics and its impacts and range are related to structure and communication between economics, so the union of these two variables is an appropriate index for studying this communication.

This index established in following stages and in it, Xij indicated the reciprocal exporting and Yij indicated the internal grass production in host and hostess countries.

\[ DG_I = \sum a_1 \ D_I \]

\[ \ln(FD_{ijt}) = \alpha + \beta \ln(Y_j) + \beta_2 \ln(POP_j) + \beta_3 \ln(Dist) + \beta_4 \ln(Free_j) + \beta_5 \ln(DG_I) \]

4) Empirical Results of Estimated Pattern

For estimating the model of absorption countries I, first 6 countries from 8 countries of D-8 including: Iran- Malaysia- Pakistan- Turkey- Bangladesh that has written of agreement had been considered. Lack of reliable statistics in foreign investing capital among countries of D-8 leads to used following substitute variable for estimation the rate of foreign investing capital. Indeed this model is to carry of the paper of Najarzadeh and Shaqaqi (1385). Also for measuring volume of FDI, authors of this paper, used complete rate in FDI from host country of investing capital in the rate of entering of this country.

\[ FDI_{ijt} = \frac{(M_{ijt} / M_{jt}) \ FDI_{jt}}{FDI_{jt}} \]

FDI_{ijt}: foreign investing capital in country of I in T year

FDI_{jt}: the volume of foreign investing capital in country of I in T year

M_{ijt}: all entering of country in T year

It is necessary that before estimation of model, the kind of estimation method of panel data must be clarified.

As indicated in table 1 the rate of statistics of F is 60/26, and its probability is zero, also it indicated that assumption of zero is based on this data that their combining had been denying because of
other assumptions. Also for distinction the estimation data test of Housman has been used. That statistic is $20/82$ with probability of zero. Also results from FGLS show the statistics of $217/02$ with probability of zero. The results of estimation model of absorption foreign investing capital showed in following table:

Table 1: impact of economical union and other economic variables on reciprocal foreign investing capital in countries of D-8

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Coefficient of pattern variables</th>
<th>Estimate coefficient</th>
<th>Standard deviation</th>
<th>Statistic of $z$</th>
<th>prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>constanstant</td>
<td>0β</td>
<td>-0/80</td>
<td>2/84</td>
<td>-0/28</td>
<td>0/77</td>
</tr>
<tr>
<td>InYj</td>
<td>1β</td>
<td>1/61</td>
<td>0/17</td>
<td>9/44</td>
<td>0/00</td>
</tr>
<tr>
<td>inpopj</td>
<td>2β</td>
<td>-0/26</td>
<td>0/14</td>
<td>-1/83</td>
<td>0/06</td>
</tr>
<tr>
<td>InDistj</td>
<td>3β</td>
<td>-0/97</td>
<td>0/15</td>
<td>-6/36</td>
<td>0/00</td>
</tr>
<tr>
<td>InFreej</td>
<td>4β</td>
<td>4/25</td>
<td>0/98</td>
<td>4/30</td>
<td>0/00</td>
</tr>
<tr>
<td>InDLij</td>
<td>5β</td>
<td>1/89</td>
<td>0/19</td>
<td>9/49</td>
<td>0/00</td>
</tr>
</tbody>
</table>

Resource: Research Findings

Complete results of estimation indicated that more than 60 percent of dependent variable explained by independent variable, and all off coefficients except population variable are in accepted level. As we thought, internal gross production of host countries as an index of economic rate of countries had a positive impact on reciprocal foreign investing capital. Indeed increasing 1 percent in GDP leads to increasing 1/62 in foreign investing capital. And it indicated that by increasing internal demands for goods-services and development of market, foreign capitalists had been motivated for investing capital. In addition, population variable has negative impact on FDI and increasing 1 percent of population leads to decreasing 0/26 percent of investing capital. The next variable is index of economic liberation. Accepted coefficient indicated that more economic liberation in a country leads to more FDI coefficient in that. Moreover distance variable had a negative impact on FDI of D-8 countries. in other word index of union had a positive impact on FDI and it indicated that in recent years, union and communication development among countries could increasing the foreign investing capital in countries of D-8.

TABLE2: impact of variables on reciprocal foreign investing capital in countries of D-8.
Estimation results of variables by universal index are like to index of union. But in contrast, population variable has a negative impact on universal index. Indeed negative impact of population to be dominant on positive impact of market and leads to negative impact of this variable on reciprocal FDI of countries. Also low production in these countries is a cause of decreasing the volume of trade exchanges.

5) Conclusion and suggestions:
Based on accepted results for countries of D-8 from 2001 to 2010 it can be said that union and universal activities had positive impact on foreign investing capital in these countries. Internal gross production of countries is most important factors in trade development among countries. In other word development of economic capacities and rates of countries are cause growth of trade relations among them. Also negative sign of distance is an impediment for FDI and since smaller number is indicated high degree of liberality in country, so this variable showed the absorption of FDI in these countries. One of the effective and common characters of economical union is a competitive situation that had been established among countries and leads to constant of powerful economics. This competition can be an important factor in universal economic. While adherence to universal village is necessary, so union can be a test for weaker economics to compare themselves with universal economic and prepare themselves for universal markets.

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