Relationship between Tax Regulations and Direct Foreign Capital: Case of Balkan Countries

By Nuri BALTACI \( ^a \)† & Muhammet ŞAHİN \( ^b \)

Abstract. Balkan countries draw attention of many countries and investors after eastern bloc countries spread to free market economy. Moreover, these countries need to attract foreign capital as a development instrumental in order to adapt to the market system. They, for the purpose of attracting foreign capital inflow to their own countries, utilize tax advantages with many other applications. In this study, the relationship between foreign capital and tax in 11 Balkan Countries is examined. Annual data for the period of 2006-2014 was used in this study. System GMM (Dynamic Panel Data) was preferred as a model in this study. According to the findings through the analyses, a negative relationship is observed between indirect taxes and foreign direct capital investments for the sample countries while a positive relationship is found between total tax obligations, obtained from profit based, and foreign direct capital investments.

Keywords. FDI, Tax rates, Panel data.
JEL. F21, H25, C23.

1. Introduction

In today’s world, globalization process has been increasingly developed, significant technological improvements have been achieved in transportation and communication areas and specific concentration has been built in economic integration between countries. On the other hand, de-regulation policies, which come to force mostly after 1973 Petroleum Crisis, replaced regulation policies of Second World War. Moreover, the importance of capital movements within countries on national economies has been increased day by day. Likewise, the share of Foreign Direct Investment (FDI) inflow to global GDP reached to the level of 3.35%, just before 2008 Global Financial Crisis, in 2007 while it was in the level of only 0.39% as of 1970. Similarly, the portion of FDI inflows to all gross fixed capital investments reached to 14.06% from 1.54% as of the same period (UNCTAD, 2015a). Therefore, this reflects an increase of 858% in GDP term and of 912% in fixed investments term.

Even though some sort of inconsistency could be experienced in foreign capital flows because of global vulnerability caused by 2008 economic crisis, the competition for attracting foreign capital within countries has continued. As of 2014, China was the country which had most amount of FDI with $129 billion

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while it was followed by Hong Kong with $103 billion and USA with $92 billion. In the analysis of capital inflows depending on national degree, it could be seen that Asia-Pacific region economies (APEC) established nearly 53% of the whole global capital inflows with $652 billion. On the other hand, in capital outflows analysis, USA became the first country with $337 billion and Hong Kong and China followed USA with $143 billion and $116 billion, respectively (UNCTAD, 2015b).

As result of foreign capital inflow attracting competition within countries, various public incentives were brought into attention. Such initiatives, which are applied in many economies including especially developing countries which have experienced capital accumulation deficit problem, in the purpose of attracting investments, could be examined under four different titles. Among these, financial instrumentals include direct governmental subventions which were applied in order to improve the investment climate. Regulative instrumentals are the second one as they aim to make host countries’ environment standards and labor market rules flexible. Technic instrumentals are used to eliminate knowledge asymmetry, managerial difficulties and time delays. Fiscal instrumentals, which are also frequently used in action, cover mainly tax incentives. (OECD, 2003; UNCTAD, 2004; Johnson et. al, 2013).

Tax incentives cover different instruments including corporate income tax allowances, tax exemptions in investments, investment loans, accelerated depreciation practices, deduction in social security contribution payments, tax allowances in R&D, and customs tariff deductions for imported capital (UNCTAD, 2000; Holland & Vann, 1998; Fletcher, 2002; Kargi, 2014b). However, global basis distribution of these applications differs. Developed countries generally utilize these incentives to expand global competition power of local capital while developing countries and transition economies use them to improve industries within their countries and to attract foreign capital (Easson & Zolt, 2002). Therefore, tax incentive related to Technologies, for examples incentives to increase R&D researches, are more frequently applied in developed countries, including Far East, Pacific region and OECD countries, on the other hand, generally other tax related incentives are utilized in less developed or developing countries (James, 2013).

2. Tax Applications and FDC Investments in Balkan Countries

Economic development levels of Balkan countries differ from each other. According to GDP per capita, the richest countries of the region are Slovenia and Greece while the poorest countries are Kosovo, Albania and Bosnia-Herzegovina (World Bank, 2016). Balkans was highly affected by 2008 crisis, in negative manner. Following the crisis, Romania, Montenegro, Greece, Turkey and Bulgaria economies lowered between rates of -4% and -7%. At the same time, the crisis increased unemployment rates of the countries in the region, especially of Greece. The most negative effect of 2008 crisis in public economy area was state’s increasing financial obligations. Following the crisis, the ratio of budget deficit to GDP in Greece increased as more than twice from -8% to -17% (World Bank, 2016), while Slovenia, Serbia, Kosovo, Albania and Montenegro encountered budget deficit rates, differing from nearly -4% to -13% (Pasquali, 2015).

Balkan Countries excluding Turkey and Greece are known as transition economies (old socialist economies) important changes in these countries’ tax systems were experienced with the processes of transition to market economy and getting membership in EU (Appel, 2006; Martinez-Vazquez & McNab, 1999);
likewise various tax related incentives were put into application in order to increase foreign capital inflow (Cass, 2007; Mitra & Stern, 2002). Factors including privatization activities, banking reforms and European Union membership had important effects on FDI inflows during this period (Popescu, 2014). However, the desired FDI inflow level could be reached in the first years of the transition even though the applied reform efforts and incentives and foreign capital inflows remained lower bars depending on the political and economic inconsistency experienced heavily during 1990’s (Estrin & Uvalic, 2013).

On the other hand, today, an obvious increase in foreign capital inflows to the regions could be observed. Total FDI inflow, received by Balkan countries as of 2014, is approximately $29.6 billion. On the other hand, the value for 1994 was about $2.4 billion. However, it could not be said that each country in the region had equal amount of FDI. Turkey has the most amount of FDI inflow with nearly $12.7 billion while Macedonia has the lowest level of FDI with nearly $60.8 million. On the other hand, Montenegro has the biggest portion of FDI when FDI inflow is rated with GDP value. This particular country’s FDI inflow rate to its GDP is 10.8%. Croatia has ranked as number one with 928 depending on FDI per capita (World Bank, 2016).

Countries in the region have carried an intense tax competition in order to get more shares in FDI inflows (Shala, 2013; Šimović & Žaja, 2010). This situation could be observed through the changes in tax rates. Only three of Balkan countries (Greece, Serbia and Albania) lately increased their Corporate Income Tax rates (CIT) while other countries made discounts as rates from 5% to 15% during the period of 2001-2013. Nowadays, the country which has the lowest level of CIT is Montenegro while the country which has the highest level of CIT is Greece. A similar structure could also be observed for Personal Income Tax (PIT) and Value Added Tax (VAT). The country which has the lowest level of personal income tax is Montenegro (9%) while the country which has the highest level of CIT is Slovenia (50%). The differences in Indirect Taxes are more subtle and Kosovo applies the lowest rate with 16% while Croatia applies the highest rate with 25% (KPMG, 2016; OECD, 2010; Pomerleau, 2014; Imeri, 2013). VAT rate is higher than both CIT and PIT in Montenegro, Bosnia and Herzegovina, Bulgaria, Macedonia, Albania, Serbia and Romania. This finding shows that the related countries use taxes in the purpose of increasing capital inflow and investments, and therefore, they associate taxes with consumption as keeping tax rates in capital low levels.

This rate differences in taxes affect tax obligations on company profits. The total share of taxes in Macedonia and Kosovo on profits happens to be 12.9% and 15.2%, respectively while this share reaches to levels of 49.6%, 42% and 40.9% in Greece, Romania and Turkey, respectively. Macedonia pioneers in the region according to its simplicity of tax system. On the other hand, Albania, Serbia and Bosnia and Herzegovina have the most complex tax payment systems (Doing, 2016). According to fiscal freedom index, which is calculated by Heritage Foundation (2016) depending on PIT and CIT rates and composition of public debt, and shows whether or not public sector creates pressure on private sector, the best performance is obtained by Kosovo, Macedonia, Montenegro and Bulgaria. On the other hand, comparing to these countries, Slovenia, Greece, Croatia and Turkey had lower performances.

Tax applications of countries might have effects in investment decisions (Hall & Jorgenson, 1967; Hassett & Metcalf, 1999; Kargi, 2014a). Therefore, different tax applications, employed by region countries, have different effect levels on attracting investments. According to the scoring system, which is established by World Economic Forum (2015), the tax system in the region is most suitable to
attract investments in Macedonia and this country receives 4.6 out of 7 top points as it ranks 21 in the world. Accordingly, Montenegro is ranked 43. With the score of 3.9 while Bulgaria is ranked 56. With the score of 2.8. On the other hand, Croatia, which has the lowest degree performance in the region is ranked 137. With the score of 2.4; Greece is ranked 136. With the score of 2.5 and Slovenia is ranked 130. With the score of 2.7.

Table 1. FDI Inflows and Some Chosen Tax Indicator for Balkan Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>FDI (Billion $)</th>
<th>FDI/Gdp (%)</th>
<th>FDI Per Capita ($)</th>
<th>CIT Rate (%)</th>
<th>PIT Rate (%)</th>
<th>VAT Rate (%)</th>
<th>Taxes/Profits (%)</th>
<th>Taxation Incentive Score (1-7)</th>
<th>Time To Tax Comply (Hours)</th>
<th>Total Tax Payments (Number)</th>
<th>Fiscal Freedom Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALBANIA</td>
<td>1.15</td>
<td>8.7</td>
<td>397.10</td>
<td>15</td>
<td>23</td>
<td>20</td>
<td>36.5</td>
<td>3.2</td>
<td>357</td>
<td>34</td>
<td>87.8</td>
</tr>
<tr>
<td>BOSNIA AND HERZ.</td>
<td>0.50</td>
<td>2.7</td>
<td>130.13</td>
<td>10</td>
<td>10</td>
<td>17</td>
<td>23.3</td>
<td>2.8</td>
<td>420</td>
<td>45</td>
<td>83.9</td>
</tr>
<tr>
<td>BULGARIA</td>
<td>1.97</td>
<td>3.5</td>
<td>272.87</td>
<td>10</td>
<td>10</td>
<td>20</td>
<td>27</td>
<td>3.8</td>
<td>423</td>
<td>14</td>
<td>91.1</td>
</tr>
<tr>
<td>CROATIA</td>
<td>3.94</td>
<td>6.9</td>
<td>928.87</td>
<td>20</td>
<td>40</td>
<td>25</td>
<td>20</td>
<td>2.4</td>
<td>206</td>
<td>19</td>
<td>70.8</td>
</tr>
<tr>
<td>GREECE</td>
<td>1.68</td>
<td>0.7</td>
<td>154.80</td>
<td>29</td>
<td>42</td>
<td>23</td>
<td>49.6</td>
<td>2.5</td>
<td>193</td>
<td>8</td>
<td>64.4</td>
</tr>
<tr>
<td>KOSOVO</td>
<td>0.20</td>
<td>2.7</td>
<td>109.59</td>
<td>10</td>
<td>10</td>
<td>16</td>
<td>15.2</td>
<td>N.A</td>
<td>155</td>
<td>32</td>
<td>93.6</td>
</tr>
<tr>
<td>MACEDONIA</td>
<td>0.06</td>
<td>0.5</td>
<td>29.33</td>
<td>10</td>
<td>10</td>
<td>18</td>
<td>12.9</td>
<td>4.6</td>
<td>119</td>
<td>7</td>
<td>92.1</td>
</tr>
<tr>
<td>MONTENEGRO</td>
<td>0.50</td>
<td>10.8</td>
<td>799.01</td>
<td>9</td>
<td>9</td>
<td>19</td>
<td>21.6</td>
<td>3.9</td>
<td>314</td>
<td>17</td>
<td>91.6</td>
</tr>
<tr>
<td>ROMANIA</td>
<td>3.86</td>
<td>1.9</td>
<td>194.14</td>
<td>16</td>
<td>16</td>
<td>24</td>
<td>42</td>
<td>2.9</td>
<td>159</td>
<td>14</td>
<td>87.5</td>
</tr>
<tr>
<td>SERBIA</td>
<td>2.00</td>
<td>4.6</td>
<td>280.46</td>
<td>15</td>
<td>15</td>
<td>20</td>
<td>39.7</td>
<td>2.9</td>
<td>244</td>
<td>42</td>
<td>84.3</td>
</tr>
<tr>
<td>SLOVENIA</td>
<td>1.03</td>
<td>2.1</td>
<td>499.56</td>
<td>17</td>
<td>50</td>
<td>22</td>
<td>31</td>
<td>2.7</td>
<td>245</td>
<td>10</td>
<td>58.6</td>
</tr>
<tr>
<td>TURKEY</td>
<td>12.7</td>
<td>1.6</td>
<td>168.11</td>
<td>20</td>
<td>35</td>
<td>18</td>
<td>40.9</td>
<td>3.5</td>
<td>226</td>
<td>11</td>
<td>75.2</td>
</tr>
</tbody>
</table>


FDI inflows and some tax related values belong to Balkan countries could be reached in Table-1 (the best values within its section is depicted as bold.) In an accumulated analysis of the data, the most interesting issue is that Macedonia could not reach a satisfactory level in terms of FDI inflows although it has utilized relatively positive tax structure. On the other hand, Montenegro has very good level of FDI inflows comparing to its population and GDP volume with parallel its low level of CIT and PIT rates. Moreover, Croatia and Albania have good performances even though they do not implement the best encouraging tax applications in the region.

3. Literature

Results of studies in which the relationship between FDI inflows and tax applications were examined are different from each other. Some of the studies concluded that tax incentives affect FDI inflows in positive manner. In their studies, where Klemm & Van Parys (2009) focused on some countries located in Africa, Latin America and Caribbean, they showed that host countries’ tax applications had effects on FDI inflows. According to this study, 10% increase in CIT rates reduced the position of FDI inflows on GDP at a rate of 0.33% whereas 10-year temporary tax exemption application increased the same share at a rate of 1%. Additionally, they reached the finding of that an increase in public spending, which was another instrumental for public finance in this study, did not have any effects on FDI inflows.

In their studies, where Demirhan & Masca (2008) focused on some developing countries, they remarked that high level of CIT rates and high inflation factors had negative effects on FDI inflows while such factors including market volume, infrastructure, trade openness and economic stability had positive effects on FDI inflows. In their studies, where Bénassy-Quéré et al (2005) worked on 11 OECD countries, they remarked that tax differentiation among countries were important...
and high level of CIT rates had negative effects on FDI while market potential and public investments affected FDI inflows in positive direction.

In their studies, where Serin & Çalışkan (2010) focused on South East European (SEE) countries, they concluded that low level of tax rates and low level of public debt affected FDI in positive direction. Additionally, GDP volume, law reforms, EU membership, economic openness and regulation reduction had effects on FDI in positive manner. Büttner & Ruf (2005) determined that tax incentives and market volume had positive and labor costs had negative effects on German multinationals’ investment decisions.

In his study, where Hines (1996) examined different states of USA, remarked that tax incentives had effects on geographical positioning of FDI inflows to the country. Accordingly, foreign capital, which was brought to USA, was invested in the states according to their tax credit application while investors decided the states, which applied tax incentives, rather than others. In the study, where Babatunde (2012) worked on Nigeria’s petroleum and natural gas industries, illustrated that there was a positive relationship between tax incentives and FDI inflows. Additionally, such factors including market volume, infrastructure, macroeconomic stability and politic risks had no effects on FDI inflow decisions for the related industries in Nigeria.

On the other hand, in some studies, researchers concluded that there was not a relationship between tax incentives and FDI inflows (or the relationship was complex). Beyer (2002) determined that there was not a meaningful relationship between tax incentives and FDI inflows in the study, which was conducted for transition economies, however, he emphasized that this results should have implemented as public policies did not affect FDI inflows. According to him, Tax’s long term levels and privatization of public institutions, rather than incentives such as short term tax exemptions, had effects on investments, in positive direction. Gastanaga et. al. (1998) determined that taxes did not create a pressure on FDI inflows in all conditions. Accordingly, taxes could be tolerated to some extent, in the framework of the nonlinear relationship between the two parameters. However, excluding effect of taxes on FDI inflows become increasingly dominant when the rates exceeded 20%.

In their studies, where van Parys & James (2010) covered 12CFS Franc Zone countries, determined that temporary tax exemptions, which were implemented by these countries, had no effects on FDI inflows, on the other hand, factors including legal guarantees, which were offered to investors, and tax adaptation cost reduction, which was created as simplifying tax systems, increased the encouragement for FDI inflows. In her study, where Kersan-Škabić (2015) examined South East European (SEE) countries, she concluded that the important factors affecting FDI inflows were population, growth rapid, GDP per capita, infrastructure reforms and prices, on the other hand, they remarked that low level of tax rates did not carry importance on boosting FDI inflow.

In her survey study, where Tuomi (2011) focused on the Republic of South Africa (RSA), researched the factors, which were taken into account by foreign companies while they decided to enter to this country. According to the study, the factors carrying high level of importance were “market volume” with 28%, “market growth rate” with 16%, “suitability of RSA to be used as a base location while exportation to African countries” with 13%, and “natural resources” with 10%, on the other hand, incentives were ranked as the second last. A similar study was conducted by UNCTAD (2009), and the effects of tax and related incentives on international direct capital inflows were found to be very limited. According to the findings, obtained in this study, 17,1% of the investors declared that “market volume” was the most important factor while 15i9% of them declared that “market

TER, 3(4), N. Baltaci, & M. Sahin, p.642-651.
growth rapid” was the most important factor while making investment decisions; on the other hand, only 2.5% of them remarked “incentives” had such importance.

4. Model and Application

In the study, annual data belong to 11 Balkan Countries for the period of 2006-2014 was utilized. Tax reforms, which were applied by countries in order to attract more foreign capital, were important factors to choose these countries as sample. Study limits are consisted of obtaining data for the countries in the country group and short term data existence in the time level. Data, belong to the countries, was obtained from The World Bank and KPMG (Retrieved from). In the study, System GMM was preferred.

Descriptive statistics for the variables, used in this study, are presented in Table-2. There are totally 10 macro data for 12 countries. Tax of Profit and Value Added Taxes are used for the purpose of financial indicators. Other instrumental variables are included into the model to measure the model’s explanatory power.

Table-2. Descriptive Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDI (% GDP)_{t-1}</td>
<td>98</td>
<td>6.015</td>
<td>6.633</td>
<td>-3.69</td>
<td>37.410</td>
</tr>
<tr>
<td>FDI_{t-1}</td>
<td>98</td>
<td>3.510</td>
<td>4.770</td>
<td>-3.46</td>
<td>2.200</td>
</tr>
<tr>
<td>Value Added Taxes (VAT)</td>
<td>99</td>
<td>.1961</td>
<td>.0220</td>
<td>.17</td>
<td>.25</td>
</tr>
<tr>
<td>Tax of Profit (TOP)</td>
<td>99</td>
<td>.3322</td>
<td>.1154</td>
<td>.07</td>
<td>.57</td>
</tr>
<tr>
<td>Growth (Gr)</td>
<td>99</td>
<td>1.935</td>
<td>4.201</td>
<td>-9.13</td>
<td>10.088</td>
</tr>
<tr>
<td>Gdp Per Cap (Gdp/per)</td>
<td>99</td>
<td>10386.95</td>
<td>7481.68</td>
<td>3005.01</td>
<td>31686.65</td>
</tr>
<tr>
<td>Real Interest (r)</td>
<td>75</td>
<td>6.1466</td>
<td>3.3999</td>
<td>-3.1185</td>
<td>12.6816</td>
</tr>
<tr>
<td>Unemployed (Unp)</td>
<td>99</td>
<td>15.93</td>
<td>8.38</td>
<td>4.4</td>
<td>36</td>
</tr>
<tr>
<td>Political Stability (PS)</td>
<td>99</td>
<td>.018</td>
<td>.566</td>
<td>-1.200</td>
<td>1.1210</td>
</tr>
<tr>
<td>Employer (Emp)</td>
<td>92</td>
<td>44.56</td>
<td>6.87</td>
<td>29.7</td>
<td>56.9</td>
</tr>
</tbody>
</table>

3 different models were established in order to test the relationship between tax obligations and foreign direct investment movements. The models, used in this study, were obtained through developing models of Slemrod (1990).

Model 1:

\[ FDI(\%GDP) = \beta_1 FDI(\%GDP)_{t-1} + \beta_2 TOP + \beta_3 Gr + \beta_4 r + \beta_5 Unp + \beta_6 Ps + \beta_7 Emp \] (1)

Model 2:

\[ FDI(\%GDP) = \beta_1 FDI(\%GDP)_{t-1} + \beta_2 TOP + \beta_3 Gdp/Per + \beta_4 r + \beta_5 Unp + \beta_6 Ps + \beta_7 Emp \] (2)

Model 3:

\[ FDI = \beta_1 FDI_{t-1} + \beta_2 VAT + \beta_3 Gr + \beta_4 r + \beta_5 Unp + \beta_6 Ps \] (3)

The variables in the models FDI (GDP) represents the ratio of foreign direct capital amount to national income. FDI variable is included to the model as foreign direct capital amount. Value added tax and tax of profit variables are used in the model to determine tax incentives. Macro variables, used in the model, are growth, GDP per capita, real interest rates, unemployment, political stability and employment. Empiric results of the model are presented in Table 3.
Table 3. Relationship between Tax Obligations and Foreign Direct Investment Movements (System GMM Approach)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>1. Model Dependent Variable: FDI (% GDP)</th>
<th>2. Model Dependent Variable (FDI)</th>
<th>3. Model Dependent Variable (FDI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>Std. Error</td>
<td>Coefficient</td>
</tr>
<tr>
<td>FDI (% GDP)&lt;sub&gt;-1&lt;/sub&gt;</td>
<td>0.273*</td>
<td>0.1515</td>
<td>0.266</td>
</tr>
<tr>
<td>FDI&lt;sub&gt;-1&lt;/sub&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value Added Tax (VAT)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tax of Profits (TOP)</td>
<td>51.147 (3.11)***</td>
<td>16.440</td>
<td>51.905 (3.36)***</td>
</tr>
<tr>
<td>Growth (Gr)</td>
<td>0.081</td>
<td>(0.61)</td>
<td>1.240</td>
</tr>
<tr>
<td>GDP Per Cap (Gdp/Per)</td>
<td>-0.0003</td>
<td>(0.60)</td>
<td></td>
</tr>
<tr>
<td>Real Interest (r)</td>
<td>-0.699</td>
<td>(-3.53)***</td>
<td>-0.798</td>
</tr>
<tr>
<td>Unemployed (UNP)</td>
<td>0.219</td>
<td>(0.94)</td>
<td>0.2121</td>
</tr>
<tr>
<td>Political Stability (PS)</td>
<td>-1.087</td>
<td>(0.39)</td>
<td>-0.4034</td>
</tr>
<tr>
<td>Employer (EMP)</td>
<td>0.553</td>
<td>(0.80)</td>
<td>.4804</td>
</tr>
</tbody>
</table>

Number of Observation | 38 | 38 | 56 |
Number of Country     | 7  | 7  | 9  |
Arellano Bond Test    |    |    |    |
AR (2)                | -0.35086 [0.7257] | -0.50235 [0.6154] | 0.12068 [0.9938] |
Sargan-χ²             | 31.71501 [0.674]  | 31.650 [0.1076]   | 26.269 [0.5037]  |
Wald Chi²              | 135.42[0.000]     | 136.27[0.000]     | 175.440[0.000]   |
Instrumental Variable  | 30 | 30 | 33 |

Notes: Explanations: ***, **, * represents p < 0.01, p < 0.05 and p < 0.10, respectively.

Dynamic models (System GMM) structurally use one term delayed value as independent variable (instrumental variable). This value must statistically a relationship insignificant level of 10%.

In Model 1, a strong and positive relationship between FDI (%GDP) variable and one term delayed value, was found in significant level of 10%. a strong and positive relationship between taxes of profit and dependent variable was found in significant level of 1%.the increase of taxes of profit led to a parallel increase in FDI amount, thus this consequence showed that taxes did not have the prior importance on FDI inflows to the region. As also clarified in some studies (Morisset & Pirnia, 2000; Tuomi, 2011; UNCTAD, 2009); tax rates might have determinacy level depending on other conditions (infrastructure, transportation activities, market volume, economic and political stability etc.). Therefore, in a scenario that a country is inferior to another in terms of the related conditions, the country might create racing to bottom problem while causing to deficiency in public services as it decreases its tax rates in a belief to increase FDI inflows (James, 2013). Additionally, a negative relationship was found between foreign capital amounts and Real interest rates in significant level of 10%. Statistically strong relationships could be found between other variables and dependent variable. Sargan test was applied to check the suitability of instrumental variables, which were used in the model, and endogeneity problem within instrumental variables was not found. Autocorrelation was tested as applying Arellano Bond test. It could be observed that (AR 2) Autocorrelation problem did not exist in level 2.

Model was re-established as using GDP per capita values for model 2 as replacing growth rate, as it was used in Model 1, yet, similar results were achieved.
a positive relationship was found between tax of profit and FDI (%GDP), which was used as dependent variable, in statistically significant level of 1%. According to autocorrelation test results of the model, the model was not auto-correlated. Sargan test was applied for instrumental variables. Endogeneity problem within instrumental variables in the model was not found.

FDI, in dollar, was used as a dependent variable in Model 3. A positive relationship was found between dependent variable and one term delayed value, in statistically significant level of 1%. Value added taxes were included to the model as tax obligation indicators. A negative relationship was found between value added taxes and FDI, in statistically significant level of 5%. The findings of this study matched with the studies (Desai et al., 2004; Miller et al., 2013) in the related literature. A positive relationship was found between dependent variable and growth variable, in statistically significant level of 5%. A negative relationship was found between foreign direct capital investments and real interest, in statistically significant level of 1%. A statistically strong relationship was not found between unemployment and political stability. Arellano Bond test was used for correlation test of the model and the model was not found auto-correlated. Suitability of instrumental variables was tested with Sargan Test and instrumental variables were found suitable.

5. Conclusion

The findings of this study reflect the existence of a relationship between tax incentives and foreign direct capital investments however; different results were achieved for different countries and economies. This differentiation is affected by many factors including tax, public spending, infrastructure, geographical conditions and political stability, which are unique to countries and economies. The relationship between tax of profits and foreign direct capital investments is derived from differences in tax rates of other countries, depending on region conditions. Gastanaga et al., (1998) remarked, in their studies, that tax rates would not directly affect foreign direct capital investments as long as tax rates did not exceed the optimal level.

As the limit of this study, time series of the region countries were restricted and many data could not be obtained, therefore further findings could not be achieved. In the future studies, the model should be re-established with a longer time series and section series, and then the results should be re-evaluated.
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