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DETERMINANTS OF FDI: A COMPONENTWISE ANALYSIS

Abstract:

For two decades, the questions of what really motivates foreign investors to invest in a certain country remains unanswered and a controversial issue. Moreover, previous studies have overwhelmingly treated FDI as unidimensional rather than multidimensional. In reality, FDI is rather multidimensional in that it is composed of components (equity capital, reinvested earnings, and other capital), each with its intrinsic characteristics in response to the same economic fundamentals, such as growth, institutional quality, exchange rate, taxes, market size, skill abundance, etc. Therefore, the main objective of this study was to seek the major determinants of each sub-component of the total FDI inflows in Turkey separately to avoid a distorted empirical prediction concerning the total FDI, which is greatly neglected in the FDI literature. Accordingly, we employed the panel corrected standard error model for annual data between 2003 and 2012. We found that reinvested earning and other capital as sub-components of FDI are responsive to the country risk indices of both Turkey and EU and to the tax measures of 2006. On the other hand, the variations in equity capital flows may be due to some other macroeconomic fundamentals. The responsiveness of the reinvested earning and other capital can be attributed to the nature of these components which are thought to be reversible in general.

Keywords:

FDI, Reinvested earnings, Other capital, Equity capital

JEL Classification: C23, F21, F29

1 – Introduction

International trade and foreign direct investment (FDI) flows stand out as the fastest-growing economic activities in the global environment in the last two decades. A critical analysis of global FDI flows data issued by UNCTAD (United Nations Conference on Trade and Development) (2008) announced that global FDI inflows have increased gradually over the years and reached a peak level of $1,833 billion in 2007, with a 30% increase. Despite the growing interest in FDI inflows, the major reasons behind foreign investors seeking a country in which to invest and the uneven spatial distribution of FDI across countries are still an unanswered question in both the theoretical and the empirical international business (IB) literature. An apparent consensus in the extant literature reveals that previous studies have primarily focused their attention on the independent explanatory variables rather than questioning the nature of FDI. Hence, as Oseghale and Nwachukwu (2010) noted, 'it is not surprising that FDI has been operationalized in prior literature as a monolithic variable rather than a multidimensional one'. However, FDI consists of three main components (new equity, reinvested earnings, and inter-company debt flows) and each component has its own determining factor, so that the components may react differently to the same macroeconomic variables. This argument has been also justified greatly by the study by Lundan (2006) on the determinants of reinvested earnings as sub-components of FDI. She noted that 'reinvested earnings are the only major component of foreign investment position that originates in the host country, rather than being transferred from the home country'. That means that while the other components of FDI involve a cross-border transfer of funds, reinvested earnings are the only sub-component that occurs in the host country. Furthermore, the Undersecretariat of Treasury, General Directorate of Foreign Investment Report (2006) highlighted the importance of examining each component separately by stating that 'although each transaction related with one of the components generates FDI, from investors' point of view, reasons and motivations determining preferences among these transactions show variations'. Besides that, the independence of the components from each other and therefore the probable variations in their reactions to the same set of explanatory variables have been greatly emphasized by the studies by Wolff (2007), Brewer (1993), Auerbach and Hassert (1993), and Oseghale and Nwachukwu (2010). Wolff (2007) explained in his study that in particular the sub-components of FDI may respond differently to the taxation in the home and the host country due to the involvement of each part with tax system changes as the place of taxation changes. He also noted that 'set-up costs relate to new investment projects, which are contained in equity FDI, but, by definition, not in retained earnings or intercompany credits. The effects of source and host country taxes on equity, as pointed out, crucially depend on the tax system in place.'

UNCTAD (2008) also reported that 'Reinvested earnings accounted for about 30% of total FDI inflows as a result of increased profits of foreign affiliates, notably in developing countries'. In the case of Turkey, which is also an outstanding developing country with an emerging market in the international economy, reinvested earnings and intra-company loans as sub-components have become an important contributor to the total FDI in recent years. As can be seen in Figure 1, even though the major contributor to the total FDI is equity capital, in recent years, reinvested earnings

and intra-company loans (other capital) have exhibited a tendency to increase, such that, according to the data from the Central Bank of the Republic of Turkey, reinvested earnings started to increase gradually from 1995 to 2007, rising sharply from 86 million euros to 218 million euros, and continued to rise in the following years to reach a peak level in 2009, when the total FDI inflows hit their lowest point due to the world economic crisis. Moreover, the gradually rising trend of intra-company loans started in 2002 and reached a maximum level of 1,435 million euros in 2008, when the total FDI inflows exhibited a downward trend due to the global crisis. Obviously, as is evident from Figure 1 and Figure 2 and the numerical facts explained above, Turkey has witnessed opposite movements of each sub-component in the case of exposure to the aftermath of the world economic crisis, which deteriorated the total FDI inflows overall.

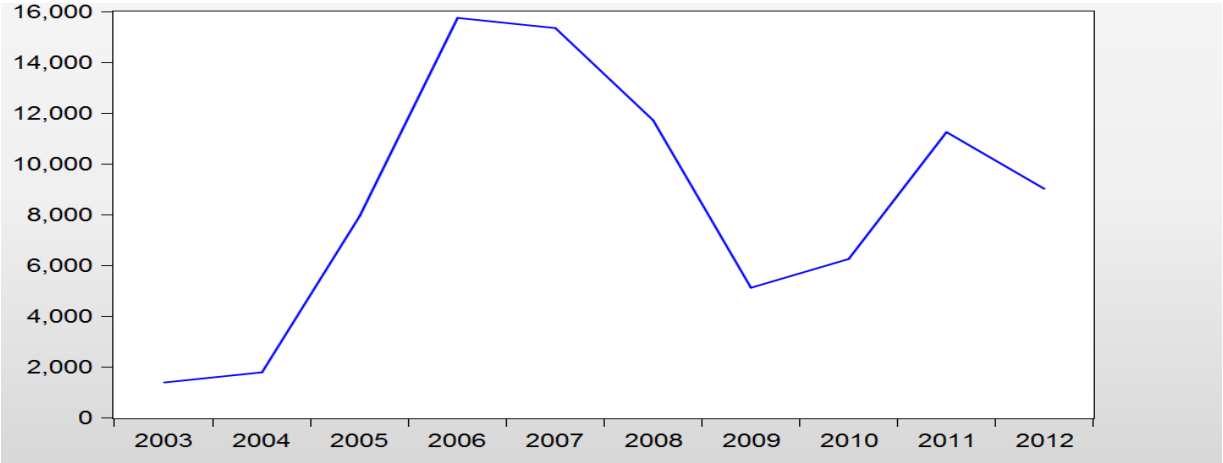

Figure 1: Equity Capital in Turkey between 2003 and 2012 (Millions of Euros)

Source: Central Bank of the Republic of Turkey.

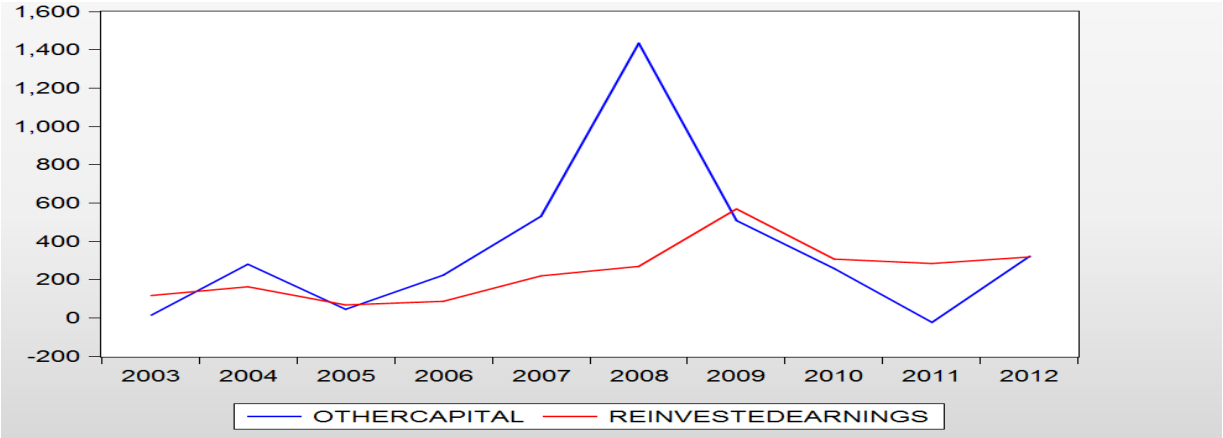

Figure 2: Reinvested Earnings and Other Capital in Turkey between 2003 and 2012 (Millions of Euros)

Source: Central Bank of the Republic of Turkey.

In the case of a new contribution to the FDI literature, it is therefore important to accept that FDI is structured by multidimensional independent components and that each component has its unique characteristics, which cause the components to respond differently to the same economic fundamentals, such as growth, institutional quality, exchange rate, taxes, market size, skill abundance, etc. Therefore, the main objective of this study is to seek the major determinants of each sub-component of the total FDI inflows in Turkey separately to avoid a distorted empirical prediction concerning the total FDI, which is greatly neglected in the FDI literature. We contribute to the literature in several respects. First, to our knowledge, we are the first to examine the determining factors of each component of the total FDI inflows into Turkey simultaneously. To achieve this, we employ a panel data technique so called as the panel corrected standard error (PCSE) model by considering the probable correlation among the components, regardless of the fact that the components have their own uniqueness and they will therefore respond to the same situations in different manners. Second, with appropriate data, we are able to show that each different part of the total FDI responds differently to macroeconomic variables and risks in the market of the host country (Turkey) and the home country (EU).

The structure of the paper is as follows. Section 2 provides a brief summary of the previous works. Section 3 explains the data and methodology of the PCSE (panel-corrected standard error (PCSE) model. Section 4 provides the estimation results. Finally, Section 5 concludes the study.

2 – Literature Review

The investigation of the determinants of FDI by treating each component as an independent part of the aggregated FDI and accepting its own uniqueness in explaining the total FDI is almost totally neglected in the FDI literature. Even though the importance of examining each component separately was mentioned in the studies by Brewer (1993), Auerbach and Hassert (1993), Oseghale and Nwachukwu (2010), Lundan (2006), and Chakravarty and Xiang (2011) on the determinants of reinvested earnings as a sub-component of aggregated FDI, only the study by Wolff (2007) has estimated the effect of the corporate tax rate of both the home and the host country on four different bilateral FDI measures (total FDI, reinvested earnings, equity capital, and intra-company loans).

By doing so, he concluded that each component responds differently to the top statutory corporate tax rate of both the source and the host country, such that the corporate tax rate is an insignificant explanatory variable in explaining equity capital and other capital (intra-company loans), and thereby also the total FDI due to the dominant share of FDI coming from equity capital. However, corporate taxes in the source country lead reinvested earnings to be invested abroad and decrease the chance of repatriation of profits. He explained that the effect of host country taxes on the equity component is ambiguous and may be different from other components, because equity capital includes a set-up cost related to new investment projects but neither reinvested earnings nor intra-company loans do. Therefore, the deductibility of taxes paid previously in the host country reduces the relevance of the host country tax rates. On the other hand, exemption from tax on the income of a foreign affiliate abroad increases the relevance and

importance of the host country tax rate. Conversely, the effect of taxes on reinvested earnings is more guided than that on equity capital, such that the home country taxes on reinvested earnings have a direct effect, leading them to be held abroad rather than repatriated, while the host country tax rate has a negative effect and causes a fall in reinvested earnings. Moreover, the effect of the host country tax system on other capital is also complicated and ambiguous. Fewer funds are likely to be extended to a host country where the tax rate is high, but on the other hand, a high tax rate in the host country may lead to the use of debt instruments whereby the interest of the fund credit is taxed in the home country rather than in the home country. Therefore, the host country tax rate does not have a clear effect on intra-company loans, as it does for reinvested earnings. Overall, Wolff found that the sensitivity of each component to the tax rate changes and taxes has an effect on the reallocation of profit but possibly leaves the total FDI unchanged.

Perhaps one of the most outstanding studies regarding the importance of disaggregating FDI into its components in order to gain a better understanding of the determining factors of the total FDI is set out by Lundan (2006). She grouped six explanatory factors of reinvested earnings into three categories.

Those encouraging reinvestments: these factors related to possible good investment opportunities have a positive effect on the decisions of foreign investors to hold their earnings in the host country. For example, the growth rate of the host country and the income level in a given industry may be a signal of good investment opportunities in the host market.

Those encouraging repatriation: movements in the exchange rate are supposed to have an effect through repatriation such that depreciation of the host currency tends to discourage repatriation. Moreover, a high tax rate in the host country is assumed to have a negative effect on reinvested earnings and to cause repatriation of the profit.

Agency consideration: factors affecting the MNF's decision on the amount of dividend payments may also cause repatriation. For example, countries that have high market risk or political risk or that are culturally or institutionally different from the home country of MNFs would cause high levels of repatriation.

Moreover, the study by Oseghale and Nwachukwu (2010) investigated the impact of good governance along with a set of other explanatory variables on reinvested earnings of USA multinationals in selected developing and emerging countries for the period between 1994 and 2006 by employing a fixed-effect regression model. He emphasized greatly the importance of disaggregating FDI data into its components to ensure robustness in the results. In addition, at the end of the day, he concluded that reinvested earnings respond to good governance positively, while the openness of the host country does not have any effect on reinvestment decisions. Moreover, he found that host country macroeconomic variables, such as market size, market growth rate, exchange rate, quality of labour, and profitability of existing operations, are positively related to reinvested earnings of USA multinational firms (MNFs).

Taylor, Mahabir, Jagessar, and Cotton (2013) also showed that reinvested earnings are an independent component of the total FDI and require a separate investigation from the aggregated

FDI. Therefore, they examined the determining factors of reinvested earnings in Trinidad and Tobago for the period between 1975 and 2010 by utilizing the feasible generalized least squares (FGLS) regression model. Finally, they explained that while the economic growth and profitability of foreign firms increase, foreign investors tend to hold reinvested earnings in the country. Moreover, depreciation of the host currency has a significant effect on the level of reinvested earnings, while an increase in the host country government consumption has a tendency to decrease the level of reinvestments.

Chakravarty and Xiang (2011) investigated the possible determinants of reinvestment decisions by using data from a survey of 7000 companies in 36 developing countries. They argued that access to external financing, property rights, extent of private ownership, and relative competitive advantage have a significant effect on the decision of foreign investors concerning the level of retained earnings in the host country.

The study by Loree and Guisinger (1994) is also distinctive from the previous ones in terms of examining the impact of policy and non-policy variables on the equity capital of the total USA FDI abroad. In conclusion, they claimed that investment incentives have a positive effect on equity capital, while performance requirements and host country tax rates have a negative effect. Non-policy variables, such as infrastructure, political stability, cultural distance, and GDP per capita, also have a role in determining the level of USA equity capital abroad.

3 – Data and Methodology

3.1 – Data

The sub-components of the total FDI are our dependent variables, which account for equity capital, reinvested earnings, and intra-company loans (other capital) in Turkey acquired from the Research Center International Economics (Forschungsschwerpunkt Internationale Wirtschaft) Database Retrieval Tool (http://data.fiw.ac.at/FiwDat/FiwDatServlet). We identified the following as explanatory variables: the exports to imports ratio as an indicator of the openness of the host country, the country risk (CR) index for Turkey and the EU area, the real effective exchange rate (REX), and lastly a dummy variable to account for the new corporate tax system introduced in June 2006 to stimulate more FDI in the country. We obtained both exports and imports in goods values from the Organisation for Economic Co-operation and Development (OECD) data dissemination server (www.oecd.org). Moreover, while the CR indexes for Turkey and the EU area came from the PRS Group, International Country Risk Guide 2012 (http://www.prsgroup.com/), REX data were attained from the Central Bank of the Republic of Turkey data dissemination server (http://www.tcmb.gov.tr/). Furthermore, we specified annual data between 2003 and 2012 as the time span of the study due to the missing observations encountered in reinvested earnings and other capital data for some years and the acceptance of the Eurocentric monetary unit after 1999. In addition, the definitions of the variables and expected signs of the coefficients are explained below.

Equity Capital. Equity capital is the purchase of the shares of a foreign affiliate in a foreign market rather than in a domestic market. The IMF states that equity capital ‘covers equity in

branches, shares (whether voting or non-voting) in subsidiaries and associates, and other capital contributions (such as the provision of machinery by a direct investor to a direct investment enterprise) that constitute part of the capital of the direct investment enterprise. Equity capital also covers the acquisition by a direct investment enterprise of shares in its direct investor. However, nonparticipating preference shares are not part of equity capital but are treated as debt securities and classified as other direct investment capital. Purchases and sales of land and buildings by nonresidents are also included in the equity capital component.'

Reinvested Earnings. Reinvested earnings simply represent the shares of foreign investors in the profits of MNFs that are not distributed. The IMF also defines reinvested earnings as 'the direct investors' shares (in proportion to equity held) of the undistributed earnings of the direct investment enterprises. Reinvested earnings are considered to be additional capital of the direct investment enterprises. They are recorded as direct investment income, with an offsetting capital transaction.'

Other Capital (Intra-Company Loans). Other capital consists of long-term and short-term intra-company loan transactions between foreign investors and their foreign affiliates. The IMF states that other capital 'covers the borrowing and lending of funds, including debt securities and trade credits, between direct investors and direct investment enterprises, and between two direct investment enterprises resident in different countries that share the same direct investor. Debt claims on the direct investor by the direct investment enterprise are also included as direct investment other capital. As indicated above, nonparticipating preference shares are treated as debt securities and are therefore classified as other capital.'

Export to Import Ratio. The export to import ratio can be defined as the coverage ratio of imports by exports. As a matter of course, we assume that a rise in the export to import ratio demonstrates the extent of a country's openness to international trade. Hence, this ratio is included in our model with the intention of determining the effects of host country openness on each sub-component of the total FDI in Turkey.

Real Effective Exchange Rate. The real exchange rate is calculated simply as the nominal exchange rate, $e_{i,d}$, multiplied by the ratio of the domestic price level, PPI_d, to the foreign price level, PPI_f. On the other hand, the real effective exchange rate (REX_t) is found by taking the weighted geometric average of the real exchange rate shown mathematically as $REX_t = \pi^N{}_i \left[e_{i,d} \frac{PPI_d}{PPI_f} \right]^{W_I}$, where N refers to the number of countries in the analysis and w_i refers to the weight of the country i in Turkey's REX index. Consequently, based on this equation, a decline in REX_t can be interpreted as real depreciation of the exchange rate, whereas an increase means real appreciation of the exchange rate. Since the real exchange rate is an indicator of the competitiveness of a country in the international market, we take this variable to ensure the potential effect of movements in the exchange rate on the disaggregated components of the total

FDI in Turkey. In the theoretical literature, two arguments attract attention regarding the real effect of the exchange rate on FDI. One of them is the so-called wealth position hypothesis. Froot and Stein (1991) claimed that the depreciation of the host currency causes FDI inflows to rise due to the lowered investment cost and the increased wealth of investors. On the other hand, the second hypothesis, which is so-called the relative labour cost, proves the opposing argument, which supports the depreciation of the host currency encouraging more FDI inflows due to the lowering of the day-to-day production costs. The study by Cushman (1985, 1988) is consistent with the second hypothesis. Hence, the impact of movements in the real exchange rate level of the host country on FDI remains a complex and unanswered question.

Country Risk Index for Turkey. CR is a composite index of the financial risk, political risk, and economic risk indexes of Turkey and the EU area for the period between 2003 and 2012. Due to the dominant share of FDI inflows into Turkey sourced from the EU area, reasonably, we include the CR index of the EU to account for risks originating in the home country. Moreover, the CR index of the EU area represents the average CR indexes of Belgium, Austria, Denmark, England, Finland, France, Germany, Italy, the Netherlands, Norway, Sweden, and Switzerland. The economic risk rating is used as a means to assess a country's economic weaknesses and strengths. With respect to risk factors, taken into consideration as economic risk measures are the GDP per head of population, real annual GDP growth, annual inflation rate, budget balance as a percentage of GDP, and current account balance as a percentage of GDP. The financial risk rating, on the other hand, is used to assess a country's financial weaknesses and strengths. The risk points to be assessed for financial soundness are the foreign debt as a percentage of GDP, foreign debt service as a percentage of exports of goods and services (XGS), current account as a percentage of XGS, net liquidity as months of import cover, and exchange rate stability. Furthermore, the political risk rating is used as a means to assess the political stability of a country. The factors of interest to be assessed are the government stability, socioeconomic conditions, investment profile, internal conflict, external conflict, corruption, military in politics, religious tensions, law and order, ethnic tensions, democratic accountability, and bureaucracy quality. Overall, the data points of the CR index range from very high risk (00.0–49.5) to very low risk (80.0–100), which means that as the points become lower, the risks become higher. In other words, a higher value of the CR index means lower aggregated FDI risk for Turkey. Therefore, we expect that an increase in the CR index of Turkey may have a positive effect on the FDI inflows. On the other hand, the CR index of EU countries may have a positive or a negative effect on FDI in Turkey based on the main objectives of foreign investors.

Dummy Variable to Account for June 2006. A new corporate tax rate was introduced by the Turkish Government in June 2006 to encourage more FDI into the country. To achieve this, the basic corporate tax rate was reduced from 30% to 20% and the withholding tax rate, which applies if profits are redistributed, was increased from 10% to 15%. Thus, a reduction in the overall tax burden was realized from about 37% to around 32%. On account of this, we ensure the potential impact of the new corporate tax rate implementation on the reinvested earnings and thereby overall FDI as well by including a dummy variable to account for the June 2006 measure.

Table 1

Expected Signs of Coefficients

Variable	Effect
Export to Import Ratio	Positive
Real Effective Exchange Rate	Undetermined
Country Risk Index for Turkey	Positive
Country Risk Index for the EU Area	Undetermined
Dummy Variable to Account for June 2006	Positive

3.2 – Methodology

The restricted size of the annual FDI inflows broken down into components that are heterogeneous leads us to adopt a panel model that differs from the conventional fixed- or random-effect specifications. First, we have to consider the heteroskedasticity of disturbances on account of the scaling differences among the components. Therefore, it is assumed that each panel has its own variance. Second, the components are also very likely to be contemporaneously correlated so that each pair of panels has its own covariance. Consequently, the PCSE (panel-corrected standard error (PCSE)) model may turn out to be an appropriate choice.

Although it can address the issues stated above, the PCSE model is not the only option, but an alternative to feasible generalized least squares (FGLS) cross-sectional time-series models when the disturbances are not assumed to be independent and identically distributed (i.i.d.). Therefore, the disturbances may be either heteroskedastic across panels or heteroskedastic and contemporaneously correlated across panels. Moreover, they may be assumed to be autocorrelated within panels, and the autocorrelation parameter may be constant across panels or different for each panel. The downside of the FGLS method, however, as Beck and Katz (1995) showed, is that the variance–covariance estimates are typically over-optimistic when used with data with units much shorter than time dimensions.

The PCSE model can be written as

$$y_{it} = x_{it}\beta + \varepsilon_{it}$$

where i = 1,2,.., m is the number of units (or panels); t = 1,2,.. Ti, with Ti being the number of periods in panel i; and ε_{it} is a disturbance that may be autocorrelated along t or contemporaneously correlated across i.

The model can also be formulated as a panel by the panel set-up:

$$\begin{bmatrix} y_1 \\ y_2 \\ \vdots \\ y_m \end{bmatrix} = \begin{bmatrix} X_1 \\ X_2 \\ \vdots \\ X_m \end{bmatrix} \beta + \begin{bmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \vdots \\ \varepsilon_m \end{bmatrix}$$

For a model with heteroskedastic disturbances and contemporaneous correlation but with no autocorrelation, the disturbance covariance matrix is assumed to be:

$$E(\varepsilon\varepsilon') = \Omega = \begin{bmatrix} \sigma_{11}I_{11} & \sigma_{12}I_{12} & \cdots & \sigma_{1m}I_{1m} \\ \sigma_{21}I_{21} & \sigma_{22}I_{22} & \cdots & \sigma_{2m}I_{2m} \\ \vdots & \vdots & \cdots & \vdots \\ \sigma_{m1}I_{m1} & \sigma_{m2}I_{m2} & \cdots & \sigma_{mm}I_{mm} \end{bmatrix}$$

where σii is the variance of the disturbances for panel i, σij is the covariance of the disturbances between panel i and panel j when the panels' periods are matched, and I is a T_i by T_i identity matrix with balanced panels. The panels need not be balanced for the PCSE model, but the expression for the covariance of the disturbances will be more general if they are unbalanced.

The above equation could also be formulated as

$$E\left[\varepsilon\varepsilon'\right] = \Sigma_{mxm} \otimes I_{T_i x T_i}$$

where Σ is a panel-by-panel covariance matrix and I is an identity matrix. The covariance matrix elements are estimated from panels i and j, using the observations with common time periods. Consequently, the estimators for this model achieve their asymptotic behaviour as the Ti approaches infinity.

4 – Empirical Results

Table 2

Results of PCSE Model

FDI	Coef.	Std Err.	Z	$P>\|Z\|$	$[95\%Conf.Interval]$
Constant	-58.64399	15.2379	-3.85	0.000	0.077555-0.6706103
TurkCR	0.3740827	0.1512924	2.47	0.013	3.940991-7.009248
TaxDum	5.47512	0.7827329	6.99	0.000	-16.70675-8.835834
ExptImpRatio	-3.93546	6.516086	-0.60	0.546	-.1737958-.0650458
REX	-.054375	0.0609301	-0.89	0.372	.1817571-.8718446
EUCR	0.5268008	0.176046	2.99	0.003	-88.50972-28.77827

The estimation results are reported in Table 2. The aggregated FDI inflows seem to be affected by three variables, namely the CR index of Turkey and the EU area and the tax dummy for 2006. The CR index of Turkey is significant with a low P value (0.013) and positively affects the total FDI. In other words, as the confidence index (CR index) of Turkey increases, the potential direct investments in Turkey also increase since foreign investors may be more confident about investing in Turkey than ever before. On the other hand, the CR index of the EU area is significant with a low P value (0.003) and has a positive impact on the total FDI inflows as well. That is to say, as the confidence index of EU countries increases, the FDI inflows into Turkey also increase. There may be two reasons for this phenomenon. The first revolves around foreign investors' intention to invest in a new market that is unsaturated rather than a saturated market since the EU area is composed of mainly developed countries with saturated markets. As the confidence level increases in these countries, foreign investors may wish to expand their operations to Turkey, which is an unsaturated emerging market with rich natural resources. Second, an increase in the confidence index of EU countries may be perceived as a good signal for banks and other financial institutions to lend funds to foreign investors in order to support their operations abroad. As a result, an increase in the confidence index of EU countries may facilitate borrowing opportunities in financial markets and therefore induce more FDI into Turkey. Furthermore, the tax dummy, which represents the overall corporate tax reduction since 2006, is also highly significant with a low P value (0.000) and has a positive effect on the total FDI. Since foreign investors may reasonably increase their investment as the basic corporate tax rate decreases from 30% down to 20% and decrease the repatriation of their earnings (therefore increasing reinvested earnings) as the withholding tax rate increases from 10% to 15%, the result is hardly surprising.

However, the factors driving the total FDI may not hold for each individual component on account of their intrinsic features. Therefore, one may need to know the sensitivity of each component of the aggregated FDI to the explanatory variables included in the model separately. To achieve this, we plot fitted values of FDI across the actual values for each component separately. The results are shown in Figure 3.

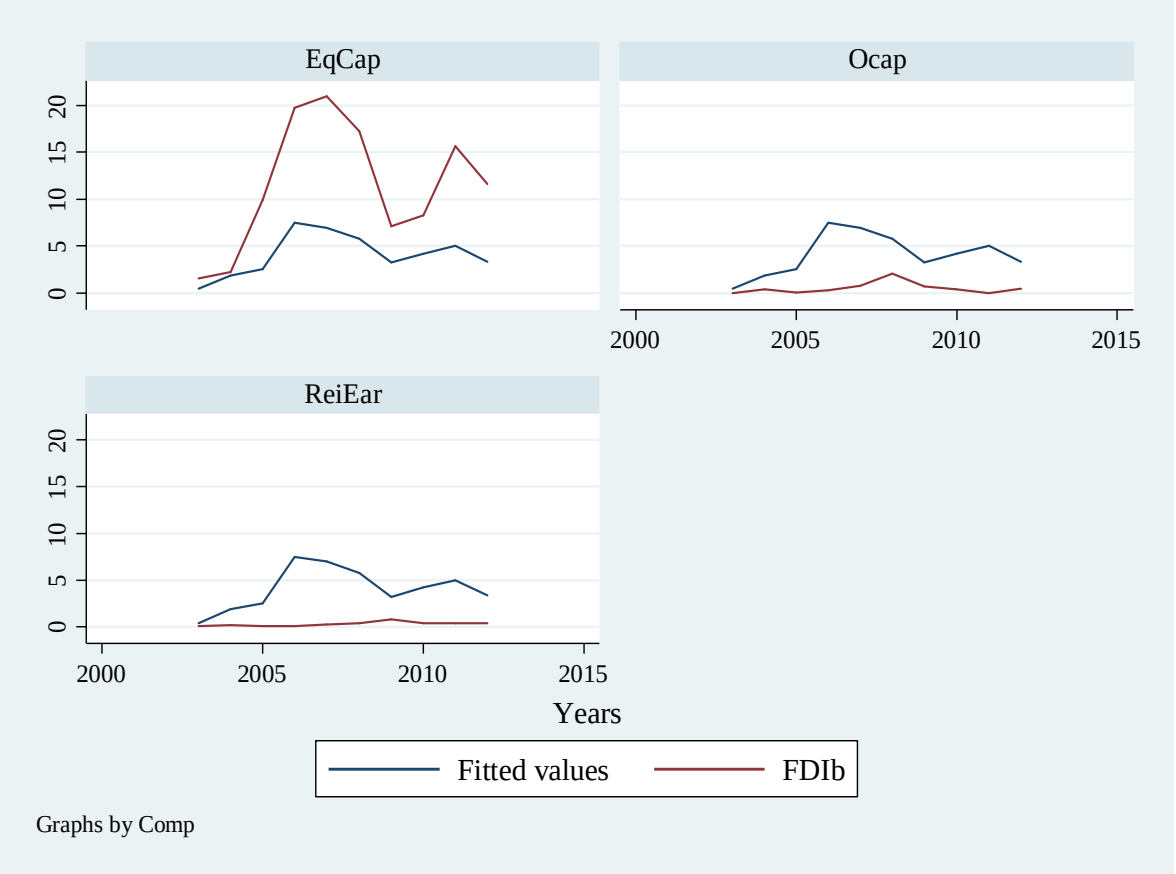

Figure 3: Fitted FDI versus Actual FDI

As can be seen from Figure 3, we have been more successful in capturing the movements of the actual values of reinvested earnings and intra-company loans (other capital) than equity capital. This is corroborated by the wider gap between the actual and the fitted values of the latter. On the other hand, a comparison of the fitted values with the actual values of other capital and reinvested earnings reveals a smaller gap. Therefore, one may conclude that the explanatory variables that explain the variations in the total FDI also explain the variations in reinvested earnings and other capital. However, the variations in equity capital may be linked to other macroeconomic fundamentals. The main reason underlying this imperfect prediction may be accounted for by the irreversibility of equity investment, such that once undertaken it cannot be abandoned easily. Therefore, foreign investment in the form of equity may be slow to react to changes in the value of the CR indices of Turkey and the EU. For example, a foreign investor who opens up a new business by building a factory with capital inflows spread out over one year or more cannot exit from the market easily in the case of sudden financial, political, or economic crises. However, reinvested earnings are the only component that arises particularly in the host country and may be very sensitive to the risk in the host or the home market by its very nature. Therefore, one may conclude that FDI in Turkey in the form of reinvested earnings is very sensitive to the CR index of Turkey and EU countries and the tax dummy representing a reduction in the overall taxation. In

other words, as the confidence index (CR index) of Turkey increases, foreign investors intend to hold their earnings in Turkey instead of possible repatriation to benefit from desired investment opportunities in the market. Furthermore, as the confidence index (CR index) of EU countries increases, foreign investors may choose to hold their earnings in Turkey in order to finance their expanded operations to meet the domestic demand in the host market. On the other hand, it is reasonable to accept that reinvested earnings are highly sensitive to the withholding tax rate, which has increased from 10% to 15% in the case of repatriation. That is to say, foreign investors tend to avoid higher taxes arising from repatriation and to hold their earnings in Turkey.

A similar scenario applies to intra-company loans (other capital), so that other capital is expected to be equally sensitive to sudden financial, economic, or politic risks arising in the home or the host country or changes in the tax rate. It is reasonable to argue that foreign investors tend to extend more funds to the subsidiaries in which they have more confidence in investing. Therefore, an increase in the CR index of Turkey may enhance the total FDI in Turkey by way of the other capital (loans) component. Likewise, an increase in the CR index of EU countries may be perceived as a good signal by banks and financial institutions and therefore may facilitate the borrowing opportunities of foreign investors in these countries. As a result, as the confidence index of EU countries increases, foreign investors extend more funds to Turkey. On the other hand, it is reasonable to assume that a lower corporate tax may stimulate foreign investors abroad to extend more funds to Turkey in order to benefit from low-cost new investment opportunities.

5 – Summary and Concluding Remarks

For two decades, FDI has been one of the key topics debated by both the theoretical and the empirical international trade literature due to its role in globalization and national economic development. Despite the growing interest in FDI, the questions of what really motivates foreign investors to invest in a certain country remains unanswered and a controversial issue. Moreover, previous studies have overwhelmingly treated aggregated FDI as unidimensional rather than multidimensional. In reality, FDI is rather multidimensional in that it is composed of components (equity capital, reinvested earnings, and other capital), each with its intrinsic characteristics in response to the same economic fundamentals, such as growth, institutional quality, exchange rate, taxes, market size, skill abundance, etc. Therefore, the main objective of this study was to seek the major determinants of each sub-component of the total FDI inflows in Turkey separately to avoid a distorted empirical prediction concerning the total FDI, which is greatly neglected in the FDI literature.

Accordingly, we found that the CR index of both Turkey and EU countries and the tax dummy for 2006 representing the overall corporate tax rate reduction have a positive significant impact on the aggregated FDI. On the other hand, we could not find any effect of other variables, namely the real exchange rate and export to import ratio, on the total FDI. Furthermore, we attributed the positive impact of the CR index of Turkey on the total FDI to the growing confidence of foreign investors investing in Turkey, which is greater than ever before. On the other side, we attributed the positive effect of the CR index of EU countries on the total FD to the better borrowing

opportunities arising in these countries, since, as the confidence index of EU countries increases, banks and financial institutions may feel more confident about lending funds to the companies in these countries. As a result, an increase in the confidence level of these countries may create the potential FDI in Turkey. Moreover, we found that foreign investors are sensitive to the 2006 corporate tax arrangements in two ways. First, they increase their foreign investments in Turkey in the case of a reduction in the main corporate tax rate to avoid higher tax payments. Second, they decrease possible repatriation in the case of a higher withholding tax rate.

However, one may wonder about the sensitivity of each independent component to the same set of explanatory variables. We, therefore, plotted fitted values versus actual values to determine how each component responds to the same variables. Our study exclusively focuses on the time period in which all three components of FDI are simultaneously available. In this context, while component-specific factors should be taken into consideration, there could be some further though equally strong factors that could commonly affect them. In other words, although each type of FDI serves a different purpose, they may be subject to correlated disturbances.

We conclude that we obtained a better fit for both reinvested earnings and other capital, while we could not capture the equity component with the same variables. We attributed this surprising result to the nature of the equity component, which is irreversible. Conversely, variations in reinvested earnings and other capital can be explained by the CR index of Turkey and the EU countries and the tax dummy for 2006. In other words, as the confidence index of both Turkey and the EU countries increases, foreign investors intend to hold their earnings in Turkey to expand their operations by taking advantage of better borrowing opportunities. On the other hand, they intend to decrease repatriation to avoid the higher withholding tax rate, which has increased from 10% to 15% in the case of possible repatriation. With respect to intra-company loans (other capital), foreign investors tend to extend more funds to the subsidiaries in which they have more confidence in investing. Therefore, an increase in the CR index of Turkey increases the potential total FDI in Turkey through the greater other capital component. Again, as the confidence index of EU countries increases, foreign investors extend more funds to Turkey due to the facilitated borrowing opportunities. Moreover, an overall reduction in the corporate tax rate represented by the tax dummy 2006 may also be a stimulus for foreign investors abroad to extend more funds to Turkey in order to benefit from low-cost new investment opportunities.

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