International Center for Public Policy
Working Paper 18-12
July 2018

Can Tax Regulation and Administration Practices Impact Foreign Direct Investments?

Gohar S. Sedrakyan

International Center for Public Policy
Georgia State University | Andrew Young School of Policy Studies

International Center for Public Policy
Working Paper 18-12

Can Tax Regulation and Administration Practices Impact Foreign Direct Investments?

Gohar S. Sedrakyan

July
2018

International Center for Public Policy
Andrew Young School of Policy Studies
Georgia State University
Atlanta, Georgia 30303
United States of America

Phone: (404) 413-0235
Fax: (404) 651-4449
Email: paulbenson@gsu.edu
Internet: http://icepp.gsu.edu/

International Center for Public Policy
Andrew Young School of Policy Studies

The Andrew Young School of Policy Studies was established at Georgia State University with the objective of promoting excellence in the design, implementation, and evaluation of public policy. In addition to two academic departments (economics and public administration), the Andrew Young School houses seven leading research centers and policy programs, including the International Center for Public Policy.

The mission of the International Center for Public Policy is to provide academic and professional training, applied research, and technical assistance in support of sound public policy and sustainable economic growth in developing and transitional economies.

The International Center for Public Policy at the Andrew Young School of Policy Studies is recognized worldwide for its efforts in support of economic and public policy reforms through technical assistance and training around the world. This reputation has been built serving a diverse client base, including the World Bank, the U.S. Agency for International Development (USAID), the United Nations Development Programme (UNDP), finance ministries, government organizations, legislative bodies and private sector institutions.

The success of the International Center for Public Policy reflects the breadth and depth of the in-house technical expertise that the International Center for Public Policy can draw upon. The Andrew Young School's faculty are leading experts in economics and public policy and have authored books, published in major academic and technical journals, and have extensive experience in designing and implementing technical assistance and training programs. Andrew Young School faculty have been active in policy reform in over 40 countries around the world. Our technical assistance strategy is not to merely provide technical prescriptions for policy reform, but to engage in a collaborative effort with the host government and donor agency to identify and analyze the issues at hand, arrive at policy solutions and implement reforms.

The International Center for Public Policy specializes in four broad policy areas:

- Fiscal policy, including tax reforms, public expenditure reviews, tax administration reform
- Fiscal decentralization, including fiscal decentralization reforms, design of intergovernmental transfer systems, urban government finance
- Budgeting and fiscal management, including local government budgeting, performance-based budgeting, capital budgeting, multi-year budgeting
- Economic analysis and revenue forecasting, including micro-simulation, time series forecasting,

For more information about our technical assistance activities and training programs, please visit our website at https://icepp.gsu.edu or contact us by email at paulbenson@gsu.edu.

Can Tax Regulation and Administration Practices Impact Foreign Direct Investments?

Gohar S. Sedrakyan

International Center for Public Policy, Georgia State University

Abstract

We examine the impacts of the indicators contributing to the effectiveness of tax regulation performances described by the topic of Paying Taxes in Doing Business report on the foreign direct investment inflows. We further focus on the effects the same determinants have on two different modes of FDI: greenfield FDI and cross-border mergers and acquisitions (M&As). This study uses panel data of one hundred fifty-six countries across all regions. The methodology applies random effects econometric tool to conduct a global investigation on the relation between the level of tax regulation and administration performances and the types of FDI, with further more focalized extraction of information applied to seventeen geographic regions. The main findings suggest that while the high degree model does not detect strong significant relations between factors of tax administration and types of FDI; however, a more scrupulous analysis by regions reveals strong correlations between effective tax regulations and levels of foreign direct investment flows to host economies. Additionally, the study suggests that differentiated factors of tax administration and regulation tools should be considered due to the regional affiliation of a potential host economy to drive foreign investments. The results of the study can be used as a guidance for country administrators in assessment of those specific determinants that could lead to improvement of targeted types of FDI in their specific country as part of a given region. Also, the investors may find the results useful for the evaluation of tax regulations and administration performances in potential host countries in terms of targeted investments.

Keywords: foreign direct investments (FDI), greenfield FDI, mergers and acquisitions (M&As), tax administration, tax regulations

JEL Classification:

H3, F37; F38, G34

1. Introduction

The public sector literature contains comparatively more limited volume of papers addressing particularly the topics of tax administration performance in relation with the inflow of foreign direct investments (FDI) to destination (host) economies and specifically when addressing two different modes of investments: cross-border mergers and acquisitions and greenfield FDI. The clarity of this issue is particularly important as many low income countries and transition economies view the foreign direct investments as a positive factor in enhancement of economic development and, to some extent, a solution for their economic problems (Mencinger, 2003; Wang, 2009). To answer this question we analyze the attractiveness of various economies for FDI through the analysis of the Paying Taxes topic of Doing Business report. The Doing Business report created as a collaboration of the World Bank and PwC is an unprecedented statistical tool that groups public sector performance indicators into ten main topics, comprised of forty-one subtopics, describing performance of 190 economies (World Bank, 2018). The dual approach to assignment of rankings for each economy includes the scores for an ease of doing business and a distance to frontier (DTF), the latter describing the proximity to the most successful performance practices in a given subgroup.

This study investigates whether there is an effect and at what extent host economy's more effective tax regulation practices may impact the FDI inflow. The Paying Taxes topic of Doing Business supplies a useful quantified assessment of a range of tax administration performance measurements. While the DB reports are available throughout 2018, we choose the reports for the years 2009 to 2016, which correspond with the period of economic recovery and the latest available data on FDI. This study focuses on one hundred fifty-six economies further combining them into seventeen regions (Table 1).

First, we investigate the effects of tax regulation and management practices on FDI inflow. Second, we separately study the same effects on two different modes of FDI: cross-border mergers and acquisitions, followed by greenfield FDI. Usually, the greenfield investments are considered as being more productive for destination countries, as the investing company builds its operations from ground up as a new business. In case of cross border mergers and acquisitions (M&A) the transaction implies that parent company invests in some form of purchase of domestic entity, usually accompanied by the change of management and/or operations of acquired firm (Blonigen and Slaughter, 2001; Wang and Wong, 2009).

The methodology uses Random Effects model (RE). This strategy allows utilization of time-invariant performance characteristics as control variables and helps to define the qualitative impact of tax administration practices across different levels of FDI inflow distribution. This empirical approach is similarly applied to the investigations of M&A, and greenfield FDIs.

The contribution of this study is twofold. A comparative study of M&A and greenfield FDI is a fresh angle for a sought after topic of FDI, specifically, due to the data limitations on greenfield FDI, which have only been published since 2003. Additionally, the study contributes to the literature on the effects of public policies of tax regulations and administration on different types of FDI and adds in depth analysis of those determinants applied to seventeen world regions.

This paper is structured as follows. Section 2 offers a brief review of the literature. Section 3 discusses the variables used in the study. In section 4 an empirical model with the econometric strategy is presented. Section 5 offers discussion of the main results. Section 6 concludes and offers policy implications.

2. Literature Review

The vast economic literature on the effects of FDI on the economies of host countries, particularly developing or transition economies, mostly views it as a positive factor in enhancement of economic development and to some extent as a solution for their economic problems (Mencinger, 2003; Wang, 2009). From the public policy perspectives, the reports from international organizations, OECD, World Bank, highlight the notion of developing countries to consider FDI as the primary source of economic growth and modernization (OECD, 2002; Klein et al., 2001). Therefore, the governments of these countries, being ready for negotiations, encumber significant costs associated with the attraction of new investments (Carkovic and Levine, 2002; Ford et al., 2008). Some of the tools considered to incentivize foreign direct investors include tax holidays, exemptions from import duties, the provision of land for facilities, and direct subsidies (Hanson, 2001).

The international public economics literature on FDI studies mainly has consensus on demanding assessment of multifaceted factors of public administration as essential in deriving the true role of FDI in host countries. In this regard, in the literature some of the most common factors linked with the studies of FDI are: economic growth, GDP and/or GDP per capita, stock of domestic capital; human capital, level of economically active population or unemployed, cost of labor; government spending, real government consumption; international activities, export and import (Zhang, 2001; Mencinger, 2003; Omran and Bolbol, 2003; Akinlo, 2004; Asheghian, 2004; Chang, 2006; Hansen and Rand, 2006; Xu and Wang, 2007; Vu, 2008; Baharumshah and Almasaied, 2009; Moura and Forte, 2010).

Two main groups of thought can be defined when summarizing the literature on the relation of FDI and specific aspects of tax system. First group particularly suggests to focus on

different aspects that impact changes in tax ratios, particularly corporate income tax and tax on capital, and how it may impact FDI. This is a comparatively closer analyzed topic which concludes an inverse nature of this relation (Chakraborty and Basu, 2002; Mooij and Ederveen, 2003; Becker et al., 2012) Of that, Chakraborty and Basu (2002) used the quotient of import taxes in GDP supplemented with factors of unit labor cost and FDI to derive empirical results for economic growth in India. Becker et al. (2012) measure the effects of changes in corporate tax on quality and quantity of foreign direct investments. Their study of twenty-two European countries concludes that the governments should vigilantly consider not only the level of FDI inflows, but also the qualitative implications that an each inbound unit of capital may have on both income tax base and labor income.

While second, and smaller, group studies the topics closely associated with the specifics of tax administration (Dharmapala and Hines, 2009; Lawless, 2011; Martinez-Vazquez and Vulovic, 2011; Goodspeed et al., 2011). Thus, Lawless in 2011 analyses the relation of the FDI and tax system through the perspective of latter's complexity through studies of bilateral FDI relations between sixteen OECD FDI source countries and fifty-seven host countries. She estimates that a 10 percent reduction in tax complexity corresponds with a tax reduction by 1 percent. Dharmapala and Hines go one step further and look at tax heavens. Regardless of low tax rates, the primary concern of investors is a better quality of governance. The conclusion of their investigation draws a picture of a typical tax heaven where apart from low statutory tax rate it is also affluent with population below 1 million and high quality governance (Dharmapala and Hines, 2009).

3. Materials and Methods

Data.

Control variables

The economic development literature finds the level of development of legal institutions and specifically the security for property rights and intellectual property as being indirect determinants for countries' economic growth (Miletkov and Wintoki, 2012). We extend this notion to the studies of FDI and determine whether the existence of more effective tax regulation and administration practices in host countries may attract additional investments. Therefore, following the focus of the study we include ten variables describing performance of tax regulations for the period from 2009 to 2016 (Table2). The control variables are derived from the Paying Taxes topic of Doing Business ranking, a flagship report created as a collaborative effort of the World Bank and PwC teams, which assigns quantitative scores to the performance of tax regulations in 190 economies applied to a typical medium-size company[1]. From here, we create a selective dataset based on the full-set of data availability covering 156 economies. These economies are further grouped into seventeen regions (Table 1).

The first and most exhaustive control variable that describes the effectiveness of tax regulations and administration from a typical medium-size company standpoint the ease of paying taxes in a given economy (*DTF paying taxes*) is measured as a distance to frontier or to the best practice in this category. It is a comprehensive score reflecting a number of activities by a standardized company during the second year of operations such as number of taxes paid, the

[1] http://www.doingbusiness.org/Methodology/Paying-Taxes

method and the frequency of payment, the frequency of tax filing and the number of agencies involved, the taxes withheld, etc.

The variables representing the quotients of tax rates to the profit (Table 2): The *total tax and contribution rate (% of profit)* is a measurement, different from a statutory tax rate, that estimates the cost of all the taxes for a standardized medium-size business during second year of its operations. In general terms, it is sum of all payable taxes and contributions (sum of profit tax, labor tax and contributions, and other taxes) divided by commercial profit of the business for a given period. Since the total tax ratio as an aggregate variable does not clearly represent how the changes per each tax may impact the FDIs studied in the analysis, therefore while the variable is included in the model, however the effect of each tax ratio as percent of profit is considered when discussing the results. In regards to the some of outliers in the data set (Table 2). The min $[-0.4]$ in *profit tax rate (% of profit)* for France in 2016 is due to the method of estimation in the data source. The *other taxes (% of profit)* exceeding 100% is due to the following countries: Argentina for the period of 2015-2016, Burundi 2009-2011, Central African Republic 2009-2011, Comoros 2009-2016, Congo, Dem. Republic 2009-2013, The Gambia 2009-2014, and Sierra Leone 2009-2011. Further, this high ratio of *other taxes* exceeding 100 percent has a similar impact on the *total tax and contribution rate (% of profit)*. Belarus in 2009, Sri Lanka 2012, and Argentina for 2009-2016 also exceed the threshold of 100% of total tax and contribution rate as percent of profit.

In order to get more balanced dataset, the score for the explanatory variable *time (in weeks) to obtain VAT refund* is merged with two other measures provided in the Paying Taxes report- the indicator estimating whether VAT exists in a given economy and another one measuring VAT refund process per each case. Basically, these three variables are logically

combined, assigning to the cases with VAT and no refund practices the highest value of 100 assuming the most unfavorable terms for FDI. Meantime, the cases with no VAT and therefore no refund practices receive a 0 score, therefore assuming the most favorable conditions for FDI. Before all these modifications, the score for this variable was in the range $[1; 90]$ weeks, with lower scores describing better regulations practices for VAT refunds with the lowest in Sri Lanka. The countries included in the analysis with no VAT practices, and therefore assigned 0 score are Angola, Bahrain, Bhutan, Eritrea, Iraq, Kuwait, Liberia, Oman, Qatar, São Tomé and Príncipe, Saudi Arabia, South Sudan and the United States.

The variable defining CIT regulations practices, *the percentage of cases exposed to a corporate income tax audit (%)*, has also been modified to a more useful format for current model. Thus, the indicator is reported as a quartile with the efficient performances being in the lowest $[0\%; 24\%]$ quartile and the least efficient performances in the highest $[75\%; 100\%]$ quartile, therefore naturally creating four indices. Since, there are also countries that do not levy CIT, such as The Bahamas, Bahrain, Kuwait, Qatar, The United Arab Emirates, a score 0 is assigned to this countries summarizing the best CIT practices (no tax) for FDI. Overall this variable takes numbers in the range $[0; 4]$.

The factor of the *time to comply with a corporate income tax audit* is slightly modified by adding a score 0 describing practices of aforementioned countries which do not levy CIT.

The only non-tax related indicator adapted from the Doing Business report is the *DTF global*, the most comprehensive score for the overall doing business measure assessed through the closeness to the frontier and the best practices. The higher scores assume more business friendly environment in terms of overall regulations. A small modification here is related to a lack of data for some earlier periods. In this regard, the data for more recent periods is not

modified, however, for missing data we use the last available data for a case and extend it to the earlier periods.

The overview of more recent literature suggests the size of host country markets being one of the most popular explanatory variables of a country's propensity to attract FDI, specifically for studies of developing countries. In this regard researchers use some of the market related variables, such as GDP, population, GDP per capita, GDP growth and population (Agrawal, 1980; Schneider and Frey, 1985; Wheeler and Moody, 1992; Taylor, 2000; Nunnenkamp, 2002). Following this notion, in this analysis we use the *annual GDP per capita* in the US dollars and constant prices of 2010 retrieved from the World Indicators database published by the World Bank. To assess the real GDP for 2016, and due to the fact that only the global nominal GDP for 2016 is available at this time, the estimated quotient of its annual change in 2016 is further applied to the estimates of real GDP in 2010 prices for 2015[2].

The control variable *regions* is defined through the classification of economies used by the United Nations conference on trade and development report (Table 1). This variable is used for two purposes. First, we control for this explanatory variable, when introducing the general equation with the unobserved error term. Second, the sorting of the global panel dataset into regions allows further advancement in the regionally driven assessments for our investigation.

[2] https://wits.worldbank.org/CountryProfile/en/country/by-country/startyear/LTST/endyear/LTST/indicator/NY-GDP-PCAP-CD#

Dependent variables

This study focuses on three dependent variables which determine the levels of annual FDI in a host economy. We start with the *FDI inflow*, followed by two different modes of FDI: *cross-border mergers and acquisitions* and *greenfield FDI*. The updated data for all three variables is derived from the United Nations conference on trade and development online database. Here we specifically focus on the FDI performance from the start of this current economic cycle in 2009 till 2016, the latest available data on FDI flow. Due to the nature of this study we treat all FDI related variables that are equal to zero as valid cases, as we assume and further test the concept that poorly performed tax administration practices may negatively impact the decisions of investors, therefore not generating FDIs. The available literature studying the relation of FDI and GDP, with the latter being an independent variable, suggests a wide use of both variables as logarithms (Globerman and Shapiro, 2002; Gao, 2005). Following this notion, in this analysis all three dependent variables, FDI inflow, M&A, and greenfield FDI, as well as GDP per capita are measured in logarithms.

4. Methodology

This section describes the empirical strategy used to assess the impact of tax regulations related practices on the flow of foreign direct investments to host economies. The discussion of the control variables in the previous section suggests that some of the factors are time-invariant, due to their nature and statistical reporting style. The assessment through Hausman specification test confirms that random effects (RE) in comparison with fixed effects model would be the best fit to model this data, as it allows utilization of time-invariant panel data. In addition the Breusch and Pagan Lagrangian multiplier test for random effects also suggests advantage of the RE

model over Pooled OLS regression (Table 3). Another advantage of RE for this analysis is the possibility to control for unreported error or variance at country levels that is uncorrelated with other independent variables for the global model. Therefore, the model includes residuals at both levels. The high level residual is random effects.

We start the model with the following equations below. The equation below describes the model for assessment of FDI inflow relation with the Doing Business statistics on tax regulations. A similar approach and discussion is relevant to the models of greenfield FDI and mergers and acquisitions.

$$Ln\ FDI_{it} = \beta_{0t} + \alpha_1 Ln\ GDP_{it} + [\alpha_5 DB_1 + \cdots + \alpha_N DB_N] + \varepsilon_{it}{}^{3} \qquad [1]$$

As a note,

where,

$$\beta_{0t} = \beta_0 + \alpha_n X_{ij} + u_{ij} \qquad [2]$$

$$i = 1,2,\dots,156,\ t = 1,2,\dots,8,\ j = attributes\ to\ a\ type\ of\ time-invariant\ variable$$

X_{ij} is a general term that represents time-invariant explanatory variables used in this model. Thus, the following control variables are time-invariant: *Regions, % of cases for CIT audit, time to comply with CIT audit, and time to obtain VAT refund.*

From here, in order to assess the global equation, we combine equations [1] and [2], by replacing β_{0t} with the right part of equation [2].

Thus, the final equation used for the global analysis can be presented as the follows:

[3] The term $[\alpha_5 DB_1 + \cdots + \alpha_N DB_N]$ contains only time variant control variables

$$Ln\,FDI_{it} = \beta_0 + \alpha_1 Ln\,GDP_{it} + \alpha_2 Regions + [\alpha_3 DB_{1t} + \cdots + \alpha_N DB_{Nt}] + (u_{ij} + \varepsilon_{it}) \quad [3]$$

Where,

$Ln\,FDI_{it}$ -type of a studied FDI flow (FDI inflow, Greenfield FDI, and Mergers and Acquisitions) to a host

$Ln\,GDP_{it}$ - GDP per capita

DB_{1t} ... DB_{Nt} - set of vectors derived from Doing Business ranking, also includes the time-invariant variables mentioned in equation [2]

$Regions$ - includes 17 regions comprised of total 156 countries (Table 1)

u_i -uncorrelated with other independent variables error term

ε_{it} -error term of the estimation

i- -id of a country, i = 1, …, 156

t -time period, t=1, 2, …, 8.

It should be noted that the composite error term $(u_i + \varepsilon_{it})$ allows assessment of variation at both levels "micro" and "macro" and is reported as between and within errors, respectively. Additionally, if we use a term y_{itj} as a general interpretation for all independent variables in equations [1], then

$$Cov\,(y_{itj}, u_j) = 0 \text{ , where } t = 1,2 \ldots, 8 \text{ and } i = 1,2, \ldots, 156.$$

In other words, the unobserved effect u_t is uncorrelated with all other independent variables. Further, since the model includes time-invariant independent variables that define some

aspects of tax regulations, the GLS transformation of the RE model, while eliminating the serial correlation in the errors, allows observation of explanatory variables that are constant over time.

The same RE model is further adjusted for investigation of the effects through their distribution by regions. Therefore, equation [3] is further adapted to the model that is partitioned into seventeen regions (Table 1).

$$Ln\ FDI_{ti}^{\rho} = \beta_0 + \alpha_1 Ln\ GDP_{ti}^{\rho} + \left[\alpha_5 DB_{ti}^{\rho} + \cdots + \alpha_N DB_{Ni}^{\rho}\right] + (u_{ij}^{\rho} + \varepsilon_{it}^{\rho}) \qquad [4]$$

Where,

ρ -stands for a region, $\rho = 1,2..,17$.

Here, again, the analysis is conducted with the attention to the so-called "between" or macro level, where countries of the same region are compared, and "within" or micro level, where a particular country information is compared for 8 periods. The results are reported for 5 percent, also for 1 percent and 10 percent significance.

5. Results

Overall, the global scale analysis of the relation between the indicators of the level of effectiveness in tax regulation and different types of FDI did not reveal very strong correlations (Table 3). Thus, when focusing on the first column of Table 4 which describes a general relation of FDI inflow and control variables characterizing effectiveness of tax regulations, the analysis defines only a significant relation with ln GDP per capita, which is a widely accepted determinant for FDI found in the literature. Similarly, the analysis by modes of FDI, greenfield FDI and cross-border M&A, are also sensitive to the level of national income for choosing a host

country for investments. The only tax related control variable that has significant impact on two modes of FDI is the time to deal with taxes in hours per year, with a highest significance degree of 1 percent associated with greenfield FDI. M&A performs the most responsiveness to this global mode responding to two other tax related variables, such as DTF paying taxes and number of payments per year suggesting that, in general, the countries with more effective systems of tax regulations have better chances to attract these types of investments.

In general, when the sensitivity of types of investments to the determinants of tax regulations are compared by regions, the *greenfield FDI* noticebly is the most susceptable across all explanatory variables, included in the model [4] (comparison of Tables 5, 6 and 7). Thus, the greenfield investors in eleven regions are sensitive to *DTF global* (versus only 8 for FDI inflow and 2 for M&A), in nine regions are sensitive to *time per hours* (versus only 6 for FDI inflow and 3 for M&A) and in eight regions are sensitive to *number of payments* (versus only 4 for FDI inflow and 7 for M&A). The *FDI inflow* is the most sensitive to *GDP per capita* (10 regions, versus 8 for both M&A and greenfield FDI) and the *time to comply with CIT audit* (9 regions, versus 8 for both M&A and greenfield FDI). If summarized, the *FDI inflow* is the most sensitive to GDP per capita (10 regions), time to comply with CIT audit (9 regions), and DTF global (8 regions). Those investors who pursue *greenfield FDI* deals are the most sensitive to DTF global (11 regions), time (9 regions), and number of payments, time to comply with CIT audit and GDP per capita (8 regions each). The investors who are interested to conduct cross-border mergers and acquistions first pay attention to the GDP per capita and time to copmly with CIT audit (8 regions each), number of payments per year (7 regions), and the other taxes to profit ratio and time to obtain VAT refund (6 regions each).

The analysis by regions reveals very valuable and important specifics on the aspects that are more typical for investors in those regions and also by types of investments. Starting with the preliminary data for the analysis and onward, there are large discrepancies by regions, therefore a supplied supplemental descriptive statistics (only means of variables) table divided by regions provides additional insights to better communicate the study results (Table 8).

Across the seventeen regions studied in the paper the highest volume of all three types of FDI analyzed in the paper are directed to the North America region followed by East Asia. Caribbean region gets the lowest FDI inflow and greenfield FDI, while the lowest mergers and acquisitions are reported in Central Africa. Another region with the lowest FDI is East Africa. The overall best tax and business practices are assumed in the Other Developed Europe and North America regions, respectively. At the time of study the regions that needed the most improvements in terms of tax administration and business regulations are Central Africa and West Africa regions, respectively. The highest level of national income is reported in Other Developed Europe followed by North America region. The countries with the lowest GDP per capita are located in West Africa and a little higher income in East Africa. The regions with the highest total tax rates are Central Africa, West Africa, East Africa and South America, respectively. In all four cases other taxes contribute the highest share of the levied tax burden (Table 8).

As a general trend the countries across all regions have higher degree of investments in mergers and acquisitions, except for Central Africa region, where greenfield FDI exceeds transactions in mergers and acquisitions. This notion of higher level of greenfield investments is observed for all ten countries across this region (Tables 5, 6, and 7).

In the *European Union* the investors pay very close attention to the level of GDP. Thus, the level of economic development is the most important determinant for FDI inflow and mergers and acquisitions (the latter with the highest 1 percent significance). Additionally, the CIT audit related administrative measures, such the cases of CIT audit and time to comply with CIT audit, play significant role for mergers and acquisitions and greenfield investments. The greenfield investors also pay closer look at the tax rates. Interestingly, adding additional cases for CIT audit, therefore moving up in the quartile, leads to higher investments across all types analyzed in this paper, while an additional hour spent on complying with CIT audit leads to significant reductions in both M&A and greenfield investments. The comparatively more convenient environment for doing business also plays a significant role in attracting greenfield investments in the EU.

In *Other Developed Europe* in addition to the high level of national income, the investors look for the overall effectiveness of tax regulations and administration described by the DTF paying taxes indicator. An additional percentile increase in this score leads to a larger increase in both FDI inflow and mergers in acquisitions. Greenfield investments are not sensitive to aforementioned characteristics, but rather to the overall easiness of doing business, described by DTF global, where a small improvement in this indicator translates into a significant increase in greenfield investments. Additionally, the change in the number of payments and quartile of cases considered for CIT audit, both have a reverse impact on greenfield investments.

Similar to two previous regions, investors in *North America* look for a strong economy especially if the FDI inflow and mergers and acquisitions are addressed. Interestingly, North America region is one of those regions where investments in mergers and acquisitions are more sensitive to the tax administration and regulation variables described by our model. Although

only Canada levies value added tax in this region, this indicator describing efficiency of tax administration for VAT refunds is a significant characteristic of an economy in securing FDI inflows, and mergers and acquisitions. Additionally, mergers and acquisitions are sensitive to the change in number of payments, time to comply with CIT audit and all the tax rates, while being more susceptible to ratios of profit tax, and labor tax and contributions to total profit. Greenfield FDI is more driven by annual number of payments, time spent on preparation, filing and payment of major taxes and overall ease of doing business in this economies, described by a high score of DTF global.

Other Developed Economies region studied in the paper is less prone to the tax administrative variables described in the model. The FDI inflow is secured by a high degree of DTF global or the overall favorable conditions to conduct business; however, this relation is quite weak as it is described only by 10 percent significance level. The efficiency of bureaucratic system leading to a reduction in numbers of payments is the most significant tool for stimulating mergers and acquisitions, and greenfield investment flows to this region. Greenfield FDI is also sensitive to the level of economic developement in this region.

FDI inflows in *North Africa* region are mainly driven by the level of national income per capita, comparatively lower other taxes in Morocco and Egypt and profit tax in Algeria. This region has not been attracting large volume of transaction in mergers and acquisitions, except for modest investments in Tunisia, Morocco, and Algeria. Therefore, M&A in this region is not sensitive to the model described in the study. Meantime, the greenfield FDI across all countries of this region, while being comparatively lower than M&A during some periods, has been more continuous over the all studied periods. Similar to the proneness of FDI inflow to the tax rates,

greenfield FDI is also sensitive to this indicators as well as to the time to comply with CIT audit. Interestingly the latter indicator is very broad for this region with lowest 2 weeks in Algeria and highest 60 weeks in Sudan.

The following tax regulatory and administrative tools help insure FDI inflow to *West Africa* region, such as the overall efficiency of tax regulations described by DTF paying taxes, annual number of payments, both the cases and the time for CIT audit, and level of national income per capita. Although, similar to North Africa region, on average the level of M&A is higher for West Africa region (due to regular M&A in Nigeria and one-time large M&A in Togo (2014), Liberia (2010 and 2014), and Guinea (2014)), the continuity of foreign direct investments over the years is secured by greenfield FDI. The greenfield FDI in this region is driven by the overall effectiveness of tax regulations (DTF paying taxes), number of payments and time spent per year, time to obtain VAT refund and level of national income per capita. Interestingly, the time to obtain VAT refund has a positive correlation with the level of greenfield FDI. This can be described since out of sixteen countries eleven, while levying VAT, do not offer VAT refunds, e.g. Nigeria, Ghana, Côte d'Ivoire, etc., despite of that foreign investors still consider them as potential host economies.

Central Africa region is the only area where greenfield FDI exceeds M&A inflows. Therefore, FDI inflow and greenfield FDI are more susceptible to the model described by equation [4]. Both types of FDI are sensitive to annual number of payments, and time spent to file and pay taxes, and level of national income per capita. FDI inflow is also impacted by regulations and administrative norms related to CIT audit, while greenfield FDI is more sensitive to the effectiveness of tax regulations and timing of VAT refund. Similar to West Africa,

notwithstanding that seven out of ten economies in this region do not offer VAT refund scheme, the foreign investors consider them as host economies.

The comparatively more regular M&A investments in *East Africa* during last years are observed in Ethiopia, Kenya, and Mauritius. The M&A investments in this region are sensitive to CIT related tax regulations, where the time to comply with CIT audit is not as broad as in some of the previous regions and ranges from 1.5 to 20.5 weeks. Overall, FDI inflow and greenfield FDI are sensitive to a wider range of variables of tax regulations. Thus, in both cases we observe receptiveness to almost all control variables for tax administration described in the model and plus DTF global and GDP per capita. The positive correlation of DTF global suggests that those economies with more business friendly practices have better chances to get FDI. Notwithstanding the unusual reverse relation between GDP per capita and both FDI modes and after analyzing the data it becomes clear that this region has a disperse range of GDP per capita $[409.40\ USD; 13{,}542.23 USD]$ in Madagascar and Seychelles for 2016, respectively. Meantime, the lower GDP does not lead to elimination or reductions in the analyzed types of FDI, on the contrary, some countries with lower GDP per capita get higher FDI inflow (Ethiopia, Tanzania, Madagascar vs Seychelles or Mauritius).

All types of FDI analyzed in the paper are sensitive to the model [4] applied to *Southern Africa* region. Among ten countries of the region, the largest driver of M&A is South Africa, and Mozambique and Botswana at some level, while in the case of greenfield investments the picture is more coherent across years. Other countries usually experience single rounds of M&A flows at a point of time (e.g. Malawi in 2014). Thus, apart from the level of national income, the administrative regulations related to the effective time management for taxpayers, such as time to file and pay taxes and time to comply with CIT audit, are the most essential for FDI inflow.

Investors through mergers and acquisitions also study the tax rates, while the greenfield investors in addition to the aforementioned determinants demand overall more business friendly economic conditions (DTF global).

The investigation of *East Asia* region does not reveal useful information regarding the tax indicators, in part due to the smaller number of observations for this region with only two countries: South Korea and China. The model for FDI inflow estimates a significant relation with DTF global, which is a conclusive indicator for the ease of doing business and overall business friendly regulations in the region. The variables for the types of FDI suggest regular inflow of FDI to this region and, in general, the inflow through M&A being higher than that of greenfield investments.

The FDI variables for *South Asia* are very responsive to the determinants of tax regulations and administration in the region. The FDI inflow in general is impacted by the number of annual payments and the time to file and pay taxes. The time to obtain VAT refund is positively correlated with FDI inflow suggesting that in despite to the tax regulations in India or Maldives, where levied VAT is not refunded, and longer waiting period in Pakistan (79 weeks) to get VAT refund, the highest FDI inflow is still directed to India followed by Iran and Pakistan. Similar observations can be obtained for DTF global for this region, where countries with a lower score experience higher FDI inflow, which is reflected by the negative sign of the correlation coefficient. Similar notion of analysis is applied when discussing the negative signs of correlation coefficients for DTF paying taxes, GDP per capita and DTF global for mergers and acquisitions, and greenfield FDI. Meantime, a reduced number of annual payments and time for filing tax returns and paying taxes has a significant impact for driving both M&A and greenfield FDI transactions.

Almost all tax regulation and administration related variables have a significant impact on FDI in *West Asia*. Thus, the FDI inflow is greatly impacted by the ratios of taxes that ought to be paid, time to obtain VAT refund, time to comply with CIT audit and DTF global. Both mergers and acquisitions, and greenfield FDI are significantly impacted by time comply with CIT audit. Additionally, the timing for VAT refunds and the fact of having higher GDP per capita also play a role in attracting M&A to this region. Greenfield investments also focus on the DTF global or at more business friendly economies. This is the region, where the majority of countries do not levy VAT and/or CIT. Thus, Bahrain, Kuwait, Qatar, and the United Arab Emirates do not levy both taxes.

Almost all variables included in the model have a significant impact on FDI inflow in *South America* region, while tax ratio related variables are not very strong determinants (only 10 percent significance level), all other variables (DTF Paying taxes and number of payments) fit at 1% significance level. Interestingly, the mergers and acquisitions is not as sensitive to the effective tax regulations and the only topic of interest is the number of annual payments. In addition two other variables of general nature describing the economies drive M&A here: the national income and DTF global. Meantime, in the case of greenfield investments the susceptibility to the effective tax regulations is much wider.

The most significant factor of our model for FDI inflow to *Central America* is the time to comply with CIT audit. This is one of the regions with comparatively reasonable range of 2.5 to 28 weeks for dealing with the bureaucracy related to audits. Both mergers and acquisitions and greenfield investments are impacted by the tax ratios, time to file and pay taxes, and time to obtain VAT refund. In addition to that the cases for CIT audit, GDP per capita and DTF global are very significant determinants for greenfield investments.

The FDI inflow and mergers and acquisitions to *Caribbean* region is largely impacted by the factors of tax regulations and administration and specifically by time to complete, file and pay taxes, tax rates, and factors of CIT administration. FDI inflow is also impacted by DTF paying taxes, as a comprehensive score for overall effectiveness of tax administration. While greenfield FDI in addition to the time for tax filing and cases for CIT, is also impacted by the level of economic development. While the FDI inflow for this region is continuous across years; there are no merger and acquisition transactions for number of countries, such as Antigua and Barbuda, The Bahamas, Barbados, Dominica, Grenada, and St. Lucia. Jamaica and Haiti have had only single instances of M&A inflows. Greenfield investments, while being comparatively low, ensure more sustainable flow of foreign direct investments in these countries.

In *South-East Europe* the most significant determinants for FDI inflow is the number of cases for CIT audit, where the negative sign suggests that the economies with lower number of cases are more favorable for investors (the lowest is in Serbia with number of cases ranging in 0-25% of all cases). Mergers and acquisitions are more focused on tax regulation and administration determinants including annual number of payments, tax rates, and time to obtain VAT refund. While investments in greenfield FDI consider factors, such as the time to complete, file and pay taxes and time to obtain VAT refund (again Serbia being the lowest and most effective in time for obtaining VAT refund in 14.7 weeks and therefore securing the highest M&A and greenfield FDI in the region).

In the *CIS* region the factors that determine the FDI inflow are tax rates and specifically labor tax and contributions, and other taxes, time for both to obtain VAT refund and to comply with CIT audit, GDP per capita and DTF global. While for mergers and acquisitions the most significant variables are number of annual payments, cases for CIT audit and the level of

economic development. The investments in greenfield FDI are determined by the DTF Paying taxes, time to obtain VAT refund, GDP per capita and DTF global. Interestingly, the negative sign for correlation coefficient of both DTF paying taxes and DTF global suggests that greenfield FDI are not necessarily directed to the most efficient economies in terms ease of doing business or most efficient tax administration and regulations.

6. Conclusions and Policy Implications

Our study confirms that decisions related to foreign direct investments are complex. The model we use for the analysis that includes variables describing tax administration effectiveness, scaled determinants for tax regulations and tax ratios proved to be useful in the analysis of the relation with the FDI inflow and two modes of FDI, such as cross-border mergers and acquisitions and greenfield FDI. This notion of complexity is multiplied when an investigation is conducted on a region-by-region basis. New details are revealed that may contradict with the generally accepted strategies applied by governments to improve FDI inflows. Therefore, the public policy decisions regarding specific types of FDI may focus on discrepant scope of government and specifically tax regulations and administration factors typical for given regions. For instance, in some regions the increase in annual number of cases considered for CIT audit may be viewed by investors as a negative factor for investments, as it may require additional time or resources to deal with the audit (West Africa and South-East Europe). In other regions, the same factor may be viewed as positive for investments, as it may be considered as an additional level of created accountability that would result in avoidance of financial problems in long-term (European Union, Central Africa, South America and Caribbean). If the types of investments are considered, the most thought through in terms of tax specifics investments seem

to be greenfield FDI, since our investigation estimated the highest level of relations between tax administration factors and the model describing greenfield FDI, of which the DTF global, for the overall business friendly regulations, and then time to file and pay taxes were two most significant determinants. FDI inflow and mergers and acquisitions are highly impacted by the level of economic development of a host country, followed by the time to comply with CIT audit, which is a measure describing effectiveness of tax administration. Therefore, public policies in any given country could be "catered" to attract or increase those types of FDI that they are most interested. Another takeaway is that the general information about the trends for public policies in tax management applied investments is very limited and sometimes can be misleading (as previously discussed) to consider for regional specific topics. Therefore a region-by region analysis would be the most useful for developing strategies to attract FDI.

This study can potentially become a helpful tool for government administrators who are looking for possibilities to improve foreign direct investment inflows in their countries. The study findings can guide through the decisions on which types of investments would be comparatively easier to attract for a given economy with already existing tax regulations at specific level of performance. Also it may be helpful to find out those specific tax administration and regulation areas improvement of which would result in higher investment flows. For instance if assumed that São Tomé and Príncipe as a lower middle income country in Central Africa region wants to attract greenfield FDI, their government administrators will consider Table 6 and determine which factors are the most significant for their region. They can reduce time to comply with CIT audit from 9 weeks, which is their economy's current performance (found in the Paying Taxes topic of Doing Business), to 3 weeks, which is the best performance for the region registered in Cameroon. Also, they can increase the number of cases for audit from 0-25%

(current performance) to 25-50% per year, as it seems that the investors are interested in higher surveillance ratio of CIT audit. Similarly, this study can guide investors, since it outlines the main tax regulation factors by regions that have already been considered by other investors and may reduce their cost for conducting this specific type of investigation of targeted economies or economic regions.

References

Agarwal, J. P.,1980. 'Determinants of Foreign Direct Investment: A Survey'. W*eltwirtschaftliches Archiv*, 116, pp. 739–773.

Akinlo, A., 2004. 'Foreign direct investment and growth in Nigeria, an empirical investigation'. *Journal of Policy Modeling*, 26: pp. 627 – 639.

Asheghian, P., 2004. 'Determinants of economic growth in the United States: the role of foreign direct investment. *International Trade Journal*, 18 (1): pp. 63 – 83.

Baharumshah, A. and Almasaied, S., 2009. 'Foreign direct investment and economic growth in Malaysia: interactions with human capital and financial deepening'. *Emerging Markets Finance and Trade*, 45 (1): 90-102.

Becker J., Fuest C. and Riedel C., 2012. 'Corporate tax effects on the quality and quantity of FDI'. *European Economic Review* vol. 56, issue 8, pp. 1495-1511

Blonigen, B. and Slaughter, M., 2001. "Foreign-Affiliate Activity and U.S. Skill Upgrading," *Review of Economics and Statistics*, 83, pp.362–376.

Carkovic, M. and Levine, R.,2002. 'Does foreign direct investment accelerate growth?' in: Does Foreign Direct Investment Promote Development? Ed. T. Moran, E. Graham and M. Blomstrom, Washigton.

Chakraborty, C. and Basu, P., 2002. 'Foreign direct investment and growth in India: a cointegration approach'. *Applied Economics*, 34: pp.1061 – 1073.

Chang, S., 2006. 'The dynamic interactions among foreign direct investment, economic growth, exports and unemployment: evidence from Taiwan'. *Economic Change &Restructuring*, 38 (3/4): pp. 235 – 256.

Dharmapala D. and Hines J. R. Jr., 2009. 'Which countries become tax havens?' *Journal of Public Economics*, vol. 93, issues 9-10, pp. 1058-1068.

Ford, T., Rork, J. and Elmslie, B., 2008. 'Foreign direct investment, economic growth, and the human capital threshold: evidence from US states'. *Review of International Economics*, 16 (1): pp. 96 – 113.

Goodspeed T., Martinez-Vazquez J. and Zhang L., 2011. "Public Policies and FDI Location: Differences between Developing and Developed Countries." *Public Finance Analysis*, Vol. 67, No. 2, pp. 171-191

Hanson, G., 2001. 'Should countries promote foreign direct investment?' *G-24 Discussion Paper Series*, number 9.

Hansen, H. and Rand, J., 2006. 'On the casual links between FDI and growth in developing countries'. *World Economy*, 29 (1): pp. 21 – 41.

Klein, M., Aaron, C. and Bita, H., 2001. "Foreign Direct Investment and Poverty Reduction". *World Bank*, Policy Research Working Paper 2613.

Lawless M., 2013. 'Do Complicated Tax Systems Prevent Foreign Direct Investment?' *Economica*, 80, pp.1–22.

Martinez-Vazquez J. and Vulovic V., 2011. "Tax Structure in Latin America: Its Impact on the Real Economy and Compliance." *International Studies Program*, Andrew Young School of Policy Studies, Georgia State University, WP 11-22.

Mencinger, J., 2003. 'Does foreign direct investment always enhance economic growth?' *Kilkos*, 56 (4): pp. 491 – 508.

Miletkov, M. and Wintoki, M.B., 2012. 'Financial development and the evolution of property rights and legal institutions'. *Emerging Markets Review*, 13, pp. 650–673.

Moura, R. and Forte, R., 2010. 'The Effects of Foreign Direct Investment on the Host Country Economic Growth - Theory and Empirical Evidence'. *FEP Working Papers*, n. 390.

Mooij R. De and Ederveen S., 2003. 'Taxation and Foreign Direct Investment: A Synthesis of Empirical Research'. *International Tax and Public Finance*, 10, pp. 673–693.

Nunnenkamp P., 2002. 'Determinants of FDI in Developing Countries: Has Globalization Changed the Rules of the Game?' *Kiel Institute for World Economics*, Working Paper No. 1122

OECD, 2002. 'Foreign direct investment for development: maximizing benefits, minimizing Costs'. OECD, Paris

Omran, M. and Bolbol, A., 2003. 'Foreign direct investment, financial development and economic growth: evidence from Arab countries'. *Review of Middle East Economics and Finance*, 1 (3): pp. 231 – 249.

Schneider, F. and Frey, B. S., 1985. 'Economic and Political Determinants of Foreign Direct Investment'. *World Development*, 13 (2), pp.161–175.

Taylor, C.T., 2000. 'The Impact of Host Country Government Policy on US Multinational Investment Decisions'. *World Economy*, 23 (5), pp. 635–647.

Xu, G. and Wang, R., 2007. 'The effect of foreign direct investment on domestic capital formation, trade and economic growth in a transition economy: evidence from China'. *Global Economy Journal*, 7 (2): pp. 1 – 21.

Zhang, K., 2001. 'How does foreign direct investment affect economic growth in China?' *Economics of Transition*, 9 (3): pp. 679 – 693.

Wang M. and Wong M. C. S., 2009. "What Drives Economic Growth? The Case of Cross-Border M&A and Greenfield FDI Activities." *KYKLOS*, Vol. 62 – 2009 – No. 2, 316–330

Wheeler, D. and Mody, A.,1992. 'International Investment Location Decisions: The Case for U.S.Firms'. *Journal of International Economics*, 33 (1/2), pp. 57–76.

Wooldridge J.M., 2008. "Introductory Econometrics: A Modern Approach". *South-Western Cengage learning*, 4e, pp. 489-493

World bank, 2018. 'Doing Business - Measuring Business Regulations'. *World Bank Group*, retrieved 04/2018, online at http://www.doingbusiness.org/rankings

https://blogs.worldbank.org/opendata/new-country-classifications-income-level-2017-2018

http://www.doingbusiness.org/Custom-Query

https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online.html

http://taxsummaries.pwc.com/ID/tax-summaries-home

http://unctad.org/en/pages/home.aspx

Appendices

Table 1. List of Countries included in the study divided by regions*

Country	UN regional Distribution	WB regional distribution	Country	UN regional Distribution	WB regional distribution	Country	UN regional Distribution	WB regional distribution	Country	UN regional Distribution	WB regional distribution	Country	UN regional Distribution	WB regional distribution
Austria	European Union	OECD	United States	North America	OECD	Congo, Rep.	Central Africa	SSA	Nepal	South Asia	Asia	Mexico	Central America	LAC
Belgium	European Union	OECD	Australia	Other Dev. economies	OECD	Equatorial Guinea	Central Africa	SSA	Pakistan	South Asia	Asia	Trinidad and Tobago	Central America	LAC
Bulgaria	European Union	ECA	Israel	her Dev. econom	OECD	Gabon	Central Africa	SSA	Sri Lanka	South Asia	Asia	Panama	Central America	LAC
Croatia	European Union	ECA	Japan	her Dev. econom	OECD	Rwanda	Central Africa	SSA	Bahrain	West Asia	MENA	Antigua and Barbuda	Central America	LAC
Cyprus	European Union	ECA	New Zealand	her Dev. econom	OECD	Comoros	East Africa	SSA	Iraq	West Asia	MENA			
Czech Republic	European Union	OECD	Algeria	North Africa	MENA	São Tomé and Príncipe	Central Africa	SSA	Jordan	West Asia	MENA	Bahamas, The	Central America	LAC
Denmark	European Union	OECD	Egypt, Arab Rep.	North Africa	MENA	Djibouti	East Africa	MENA	Kuwait	West Asia	MENA	Barbados	Central America	LAC
Estonia	European Union	OECD	Morocco	North Africa	MENA	Eritrea	East Africa	SSA	Lebanon	West Asia	MENA	Dominica	Central America	LAC
Finland	European Union	OECD	South Sudan	North Africa	SSA	Ethiopia	East Africa	SSA	Oman	West Asia	MENA	Dominican Rep.	Central America	LAC
France	European Union	OECD	Sudan	North Africa	SSA	Kenya	East Africa	SSA	Qatar	West Asia	MENA	Grenada	Central America	LAC
Germany	European Union	OECD	Tunisia	North Africa	MENA	Madagascar	East Africa	SSA	Saudi Arabia	West Asia	MENA	Haiti	Central America	LAC
Greece	European Union	OECD	Benin	West Africa	SSA	Mauritius	East Africa	SSA	Turkey	West Asia	ECA	Jamaica	Central America	LAC
Hungary	European Union	OECD	Burkina Faso	West Africa	SSA	Seychelles	East Africa	SSA	El Salvador	Central America	LAC	St. Lucia	Central America	LAC
Ireland	European Union	OECD	Cabo Verde	West Africa	SSA	Tanzania	East Africa	SSA	Yemen, Rep.	West Asia	MENA	Nicaragua	Central America	LAC
Italy	European Union	OECD	Côte d'Ivoire	West Africa	SSA	Uganda	East Africa	SSA	Argentina	South America	LAC	Albania	South-East Europe	ECA
Latvia	European Union	OECD	Gambia, The	West Africa	SSA	Angola	Southern Africa	SSA	Bolivia	South America	LAC	Bosnia and Herzegovina	South-East Europe	ECA
Lithuania	European Union	ECA	Ghana	West Africa	SSA	Botswana	Southern Africa	SSA	Brazil	South America	LAC			
Luxembourg	European Union	OECD	Guinea	West Africa	SSA	Lesotho	Southern Africa	SSA	Chile	South America	OECD	Macedonia, FYR	South-East Europe	ECA
Malta	European Union	MENA	Guinea-Bissau	West Africa	SSA	Malawi	Southern Africa	SSA	Colombia	South America	LAC	Montenegro	South-East Europe	ECA
Netherlands	European Union	OECD	Liberia	West Africa	SSA	Mozambique	Southern Africa	SSA	Ecuador	South America	LAC	Serbia	South-East Europe	ECA
Poland	European Union	OECD	Mali	West Africa	SSA	Namibia	Southern Africa	SSA	Ecuador	South America	LAC	Armenia	CIS	ECA
Portugal	European Union	OECD	Mauritania	West Africa	SSA	South Africa	Southern Africa	SSA	Guyana	South America	LAC	Azerbaijan	CIS	ECA
Romania	European Union	ECA	Niger	West Africa	SSA	Swaziland	Southern Africa	SSA	Paraguay	South America	LAC	Belarus	CIS	ECA
Slovak Rep.	European Union	OECD	Nigeria	West Africa	SSA	Zambia	Southern Africa	SSA	Peru	South America	LAC	Georgia	CIS	ECA
Slovenia	European Union	OECD	Senegal	West Africa	SSA	Zimbabwe	Southern Africa	SSA	Suriname	South America	LAC	Kazakhstan	CIS	ECA
Spain	European Union	OECD	Sierra Leone	West Africa	SSA	China	East Asia	Asia	Uruguay	South America	LAC	Kyrgyz Republic	CIS	ECA
Sweden	European Union	OECD	Togo	West Africa	SSA	Korea, Rep.	East Asia	OECD	Venezuela, RB	South America	LAC	Moldova	CIS	ECA
Iceland	Other Dev. Europe	OECD	Burundi	Central Africa	SSA	Bangladesh	South Asia	Asia	Belize	Central America	LAC	Russian Federation	CIS	ECA
Norway	Other Dev. Europe	OECD	Cameroon	Central Africa	SSA	Bhutan	South Asia	Asia	Costa Rica	Central America	LAC			
United Kingdom	European Union	OECD	Cent. African Rep.	Central Africa	SSA	Iran, Islamic Rep.	South Asia	MENA	United Arab Emirates	West Asia	MENA	Tajikistan	CIS	ECA
Switzerland	Other Dev. Europe	OECD	Chad	Central Africa	SSA	India	South Asia	Asia	Guatemala	Central America	LAC	Ukraine	CIS	ECA
Canada	North America	OECD	Congo, Dem. Rep.	Central Africa	SSA	Maldives	South Asia	Asia	Honduras	Central America	LAC	Uzbekistan	CIS	ECA

Sources: UN Conference on Trade and Development report, 2018 and World Development Indicators, World Bank, 2018

*SSA-Sub-Saharan Africa, ECA-Europe & Central Asia, MENA-Middle East & North Africa, LAC-Latin America & Caribbean

Table 2. Variables, definitions and data sources: description and descriptive statistics

Variables	Mean	Min	Max	Data Sources
Dependent Variables				
FDI Inflow	8,252.13	-26,340.2	391,104.00	UN Conference on Trade and Development
FDI in M&A	2,759.18	-55,040.07	360,797.2	UN Conference on Trade and Development
GreenfieId FDI	89.42	0	1,933.00	UN Conference on Trade and Development
Independent Variables				
Indicators of Tax regulations				
DTF Paying taxes	65.66	0	100	Doing Business
Payments- Number of payments per year	29.31	3	147	Doing Business
Time (hours per year)	278.57	0	2600	Doing Business
Total Tax Rate (% of profit)	46.68	7.4	339.1	Doing Business
Profit Tax Rate (% of profit)	16.04	-.4	58.9	Doing Business
Labor Tax & Contributions (% of profit)	17.80	0	68	Doing Business
Other Taxes (% of profit)	12.84	0	272.3	Doing Business
Time to Obtain VAT Refund (weeks)	48.13	0	100	Doing Business
Cases for CIT Audit (quartile of cases)	1.74	0	4	Doing Business
Time to Comply with CIT Audit (hours)	13.29	0	96	Doing Business
Other Control Variables				
Regions	9	1	17	UN Conference on Trade and Development
GDP per Capita	13,488.49	218.28	110,137.8	World Development Indicators
DTF Global	58.86	0	89.3	Doing Business

Number of observations	1,248

Table 3. Tests for defining Random Effects as the best fit model

Breusch and Pagan Lagrangian multiplier test for random effects

Breusch and Pagan Lagrangian multiplier test for random effects

lnFDIinflow[Country,t] = Xb + u[Country] + e[Country,t]

Estimated results:

	Var	sd = sqrt(Var)
lnFDIin~w	7.164419	2.676643
e	2.284074	1.511315
u	3.447013	1.856613

Test: Var(u) = 0

chibar2(01) = 1399.80

Prob > chibar2 = 0.0000

Hausman test for random effects

.

	Coefficients (b) fixed	Coefficients (B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
DTFglobal	.0004629	.0004629	0	0
DTFPayingt~s	.0002635	.0002635	0	0
Payments	.0020437	.0020437	0	0
Time	.0012027	.0012027	0	0
Totaltaxrate	.2470412	.2470412	0	0
Profittax	-.2432664	-.2432664	0	0
Labortaxan~s	-.2333198	-.2333198	0	0
Othertaxes	-.2445423	-.2445423	0	0
ln_GDP	.9910888	.9910888	0	0

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(0) = (b-B)'[(V_b-V_B)^(-1)](b-B)

= 0.00

Prob>chi2 = .

(V_b-V_B is not positive definite)

Table 4. General results for FDI simulations

Explanatory Variables	*Dependent Variables*		
	FDI Inflow	M&A	Greenfield FDI
_Cons	-0.654	-11.353***	-2.774**
	(1.665)	(1.879)	(0.924)
DTF Paying taxes	0.006	0.033**	0.924
	(0.012)	(0.015)	(0.005)
Number of Payments	0.0002	0.021**	0.002
	(0.007)	(0.009)	(0.002)
Time	0.001	0.002**	0.001***
	(0.001)	(0.001)	(0.000)
Total Tax Rate	0.402	1.188	-0.161
	(0.942)	(1.184)	(0.316)
Profit Tax	-0.389	-1.163	0.156
	(0.942)	(1.184)	(0.316)
Labor Tax & Contributions	-0.365	-1.151	0.177
	(0.943)	(1.185)	(0.317)
Other Taxes	-0.399	-1.181	0.163
	(0.942)	(1.184)	(0.316)
Time to Obtain VAT Refund	0.002	0.001	-0.003
	(0.005)	(0.005)	(0.003)
Cases for CIT Audit	-0.085	0.142	-0.043
	(0.181)	(0.191)	(0.127)
Time to Comply with CIT Audit	0.010	-0.003	-0.001
	(0.011)	(0.012)	(0.007)
Regions	-0.006	-0.126***	-0.032
	(0.029)	(0.030)	(0.020)
Ln GDP per Capita	0.558***	1.184***	0.588***
	(0.136)	(0.149)	(0.082)
DTF global	0.015	0.011	-0.001
	(0.011)	(0.013)	(0.004)
Number of obs.	1248	1248	1248
Number of groups	156	156	156
R-sq:			
within	0.0022	0.0085	0.0191
between	0.2874	0.5494	0.3626
overall	0.2075	0.412	0.342
Error:			
sigma_u:	1.8302	1.8825	1.3201
sigma_e:	1.5106	1.9041	0.4930
rho:	0.5948	0.4943	0.8776
Wald chi2(13)	63.68	206.58	124.61

Table 5. Results for FDI inflow simulation sorted by regions

	European Union	Other developed Europe	North America	Other developed econom.	North Africa	West Africa	Central Africa	East Africa	Southern Africa	East Asia	South Asia	West Asia	South America	Central America	Caribbean	South-East Europe	CIS
_Cons	-0.272	0	0	249.627	27.908	-6.689	-36.152***	1.532	-24.582**	0	27.587***	-20.275	-20.907***	1.165	-9.662*	-5.445	-7.803***
	(13.091)	omitted	omitted	(427.652)	(19.007)	(4.262)	(5.202)	(1.885)	(10.127)	omitted	(3.967)	(13.007)	(2.674)	(10.098)	(5.724)	(20.788)	(1.923)
DTF Paying taxes	-0.098	1.963***	-.112	.561	-.022	.068**	.045	.023	.073	.168	-.053	.021	.025	-.024	0.107**	.031	0.017
	(0.088)	(0.5196)	(0.144)	(0.750)	(0.104)	(0.029)	(0.048)	(0.019)	(0.078)	(0.111)	(0.033)	0.020926	.0174579	(0.042)	(0.044)	(0.032)	(.0194)
Number of Payments	-0.020	0.828	-0.275	0.427	-0.082	0.045**	0.207***	0.041**	0.090	0.201	-0.085***	0.051	.0087	-0.035	0.013	0.015	-.001
	(0.031)	(1.268)	(0.522)	(2.520)	(0.091)	(0.023)	(0.038)	(0.015)	(0.057)	(0.216)	(0.024)	(0.082)	(.011)	(0.031)	(0.029)	(0.014)	(0.007)
Time	-0.005	-0.219	0.006	-0.075	0.006	0.003	0.011***	0.011***	0.014**	0.015	-0.005***	-0.008	.004***	-0.004	0.012***	0.005	.001
	(0.006)	(0.492)	(0.033)	(0.123)	(0.008)	(0.002)	(0.003)	(0.002)	(0.005)	(0.016)	(0.002)	(0.010)	(0.001)	(0.005)	(0.005)	(0.003)	(0.001)
Total Tax Rate	-3.100	7.963	0.414	-9.134	14.695*	2.374	4.887	2.621**	-2.374	3.378	-4.512	-17.453**	-2.429*	-0.970	7.193***	2.284	-2.708*
	(3.183)	(17.130)	(1.583)	(11.952)	(7.784)	(1.687)	(3.642)	(1.249)	(3.086)	(4.332)	(3.575)	(7.497)	(1.457)	(2.827)	(2.523)	(1.477)	(1.455)
Profit Tax	3.066	-7.340	-0.422	9.817	-14.623*	-2.342	-4.831	-2.603**	2.343	-3.317	4.513	17.527**	2.417*	1.168	-7.082***	-2.291	2.717*
	(3.182)	(15.937)	(1.570)	(12.105)	(7.729)	(1.683)	(3.645)	(1.244)	(3.085)	(4.301)	(3.573)	(7.512)	(1.449)	(2.808)	(2.537)	(1.478)	(1.457)
Labor Tax & Contributions	3.065	-6.392	-0.879	11.370	-14.900*	-2.397	-5.182	-2.590**	2.731	-3.270	4.698	17.433**	2.479*	1.099	-6.867***	-2.25376	2.714*
	(3.184)	(16.643)	(1.543)	(12.931)	(7.788)	(1.693)	(3.647)	(1.249)	(3.082)	(4.235)	(3.584)	(7.490)	(1.461)	(2.815)	(2.516)	(1.477)	(1.456)
Other Taxes	3.150	-5.515	-0.153	9.052	-14.523*	-2.364	-4.884	-2.636**	2.427	-3.835	4.530	16.502**	2.462*	0.922	-6.985***	-2.316	2.730*
	(3.182)	(14.794)	(1.612)	(11.702)	(7.740)	(1.687)	(3.643)	(1.249)	(3.085)	(4.583)	(3.575)	(7.363)	(1.457)	(2.839)	(2.526)	(1.531)	(1.456)
Time to Obtain VAT Refund	0.0292	11.440	17.526*	16.910	0.037	.004	0.034***	-0.007**	0.012	0.158	0.012**	0.066***	-.053***	-0.0002	-0.009	-0.018	-.013***
	(0.032)	(8.938)	(10.369)	(12.779)	(0.035)	(.0080	(0.008)	(0.003)	(0.024)	(0.249)	(0.006)	(0.019)	(.008)	(0.014)	(0.010)	(0.016)	(.004)
Cases for CIT Audit	1.559*	4.738	0	-767.284	0.041	-0.618*	2.069***	0.363	-0.020	0	-0.618	0.703	.882***	-1.135**	0.523*	-1.047***	-.110
	(0.851)	(63.373)	omitted	(593.360)	(0.759)	(0.352)	(0.253)	(0.279)	(0.488)	omitted	(0.352)	(0.446)	(.275)	(0.542)	(0.270)	(0.400)	(.210)
Time to Comply with CIT Audit	-0.074	19.652	-34.628*	34.923	0.032	0.066**	-0.010	-0.082**	0.267***	1.079	0.066	0.039*	-.149***	.218***	-.029*	0.040	.168***
	(0.054)	(20.447)	(20.303)	(26.365)	(0.066)	(0.027)	(0.017)	(0.037)	(0.066)	(5.038)	(0.027)	(0.023)	(.028)	0.054326	(0.016)	(0.057)	(.062)
Ln GDP per Capita	1.651**	-45.868**	25.456*	10.658	-3.671*	.794*	1.867***	-.406 ***	2.217***	-7.154	-.011	1.347	.712***	.266	-.220	1.266	2.008***
	(0.734)	(18.803)	(14.756)	(18.524)	(1.966)	(0.440)	(0.285)	(0.114)	(0.604)	(6.669)	(0.208)	(0.916)	(.182)	(0.749)	(0.239)	(2.519)	(.238)
DTF global	-0.006	-0.710	0.323	1.325*	0.135	.003	.189***	0.048***	-0.020	0.583*	-0.278***	0.167*	.372***	0.010	-0.004	-0.017	-.051***
	(0.033)	(1.130)	(0.276)	(0.767)	(0.136)	(.027)	(0.037)	(0.014)	(0.041)	(0.322)	(0.029)	(0.097)	(.016)	(0.065)	(0.012)	(0.033)	(.015)
Number of obs.	228	24	16	32	48	128	80	80	80	16	64	88	96	64	80	40	88
Number of groups	28	3	2	4	6	16	10	10	10	2	8	11	12	8	10	5	11
R-sq:																	
within	0.012	0.703	0.810	0.260	0.260	0.157	0.155	0.329	0.051	0.477	0.193	0.137	0.033	0.072	0.183	0.215	0.148
between	0.356	1	1	1	1	0.309	0.991	0.991	0.866	1	0.996	0.892	0.988	0.999	0.960	1	0.948
overall	0.158	0.759	0.976	0.553	0.553	0.269	0.991	0.926	0.639	0.984	0.922	0.601	0.565	0.840	0.666	0.864	0.831
Error:																	
sigma_u:	1.692	0	0	0	0	0.759	0	0	0	0	0	0	0	0	0	0	0
sigma_e:	2.380	2.288	0.257	3.034	3.034	0.797	1.319	0.359	0.808	0.303	0.532	1.756	.408	0.793	5.724	0.378	0.557
rho:	0.336	0	0	0	0	0.476	0	0	0	0	0	0	0	0	0	0	0
Wald chi2(13)	12.47	283.24	.	.	23.53	27.2	197.02	836.99	118.7	0	601.26	113.04	2601.96	266.88	133.44	171.24	369.82

Note: *, ** and *** represent estimates significantly different from zero at 10%, 5% and 1% respectively.

Table 6. Results for cross-border M&A simulation sorted by regions

	European Union	Other developed Europe	North America	Other developed economies	North Africa	West Africa	Central Africa	East Africa	Southern Africa	East Asia	South Asia	West Asia	South America	Central America	Caribbean	South-East Europe	CIS
_Cons	-24.681**	0	0	303.676	-13.750	-10.141	-1.329	5.135	-41.027**	0	42.585***	-24.803	-11.539	17.559	-11.365	45.321	-14.57
	(11.715)	omitted	omitted	(327.068)	(21.871)	(7.035)	(3.514)	(6.174)	(18.756)	omitted	(8.478)	(15.733)	(10.452)	(24.899)	(7.407)	(95.618)	(5.924)***
DTF Paying taxes	-0.026	0.402*	-0.428	.017	.079	.042	.001	.002	.070	-0.554	-0.155**	.038	-.169**	.030	.065	.172	.084
	(0.075)	(0.211)	(0.360)	(.574)	(.120)	(.049)	(.032)	(.061)	(.144)	(1.419)	(0.070)	(.076)	(.068)	(.104)	(.057)	(.146)	(.060)
Number of Payments	0.010	-0.610	-2.858**	-4.121**	.052	.068*	.002	-.065	.094	-0.434	-.123**	.126	-.126***	-.093	.037	.117*	.047**
	(0.026)	(0.516)	(1.309)	(1.927)	(.105)	(.038)	(.025)	(.049)	(.105)	(2.772)	(.050)	(.099)	(.045)	(.077)	(.037)	(.064)	(.021)
Time	-0.002	-0.179	.120	.010	.006	.002	-.001	-.006	.011	-0.173	-.015***	.010	.0003	.029***	-.012**	-.004	.003
	(0.005)	(0.200)	(.082)	(.094)	(.009)	(.004)	(.002)	(.006)	(.009)	(0.206)	(.004)	(.012)	(.002)	(.011)	(.006)	(.016)	(.004)
Total Tax Rate	1.200	8.710	8.312**	-3.122	10.043	4.330	-.229	5.233	-9.401*	5.849	8.571	-8.804	2.105	-15.892**	-6.287*	16.575**	.067
	(2.641)	(6.968)	(3.968)	(9.141)	(8.957)	(2.833)	(2.460)	(4.090)	(5.716)	(55.519)	(7.641)	(9.068)	(5.696)	(6.970)	(3.271)	(6.794)	(4.482)
Profit Tax	-1.177	-8.730	-8.200**	2.866	-9.797	-4.356	.249	-5.196	9.452*	-7.257002	-8.556	8.759	-2.051	15.822**	6.306*	-16.386**	-.013
	(2.640)	(6.482)	(3.936)	(9.258)	(8.894)	(2.827)	(2.462)	(4.075)	(5.714)	(55.124)	(7.635)	(9.094)	(5.662)	(6.923)	(3.283)	(6.796)	(4.488)
Labor Tax & Contributions	-1.181	-8.746	-7.930**	4.200	-10.143	-4.374	.228	-5.209	9.785*	-6.171	-8.385	8.582	-2.210	15.917**	6.559**	-16.419**	-.092
	(2.643)	(6.769)	(3.870)	(9.889)	(8.961)	(2.844)	(2.463)	(4.092)	(5.709)	(54.274)	(7.659)	(9.059)	(5.709)	(6.941)	(3.256)	(6.792)	(4.486)
Other Taxes	-1.198	-10.415*	-6.702*	8.118	-9.994	-4.322	.230	-5.216	9.481*	0.883	-8.569	8.923	-2.148	15.723**	6.290*	-17.360**	-.048
	(2.640)	(6.017)	(4.043)	(8.949)	(8.906)	(2.834)	(2.461)	(4.091)	(5.713)	(58.745)	(7.640)	(8.906)	(5.693)	(6.994)	(3.268)	(7.041)	(4.484)
Time to Obtain VAT Refund	0.007	10.550***	57.988**	15.336	.005	-.002	-.002	.008	.089**	2.002	.016	.078***	.011	-.085**	.014	-.128*	-.007
	(0.031)	(3.635)	(26.000)	(9.773)	(.041)	(.013)	(.005)	(.009)	(.045)	(3.192)	(.013)	(.023)	(.031)	(.034)	(.013)	(.074)	(.011)
Cases for CIT Audit	1.456*	-39.951	0	-600.028	1.076	.056	.096	-2.715***	.353	0	-.161	-.767	.042	-1.804	-.016	.241	1.802***
	(0.844)	(25.776)	omitted	(453.801)	(.873)	(.571)	(.171)	(.915)	(.904)	omitted	(.684)	(.539)	(1.073)	(1.337)	(.350)	(1.841)	(.646)
Time to Comply with CIT Audit	-0.090*	25.475***	-114.078**	26.116	-.047	.0149	.0114	.305**	.212*	52.983	-.039**	.070***	.029	.176	.052***	.050	-.239
	(0.054)	(8.316)	(50.909)	(20.164)	(.076)	(.044)	(.011)	(.121)	(.123)	(64.574)	(.016)	(.027)	(.109)	(.134)	(.020)5	(.262)	(.191)
Ln GDP per Capita	3.181***	-25.924***	82.445**	19.688	.862	.492	.132	-.156	2.369**	-21.033	-.933**	1.965*	1.899***	-2.150	.329	-7.268	1.518**
	(0.709)	(7.648)	(37.000)	(14.168)	(2.262)	(.717)	(.192)	(.373)	(1.119)	(85.472)	(.446)	(1.108)	(.713)	(1.847)	(.310)	(11.584)	(.732)
DTF global	-0.020	-0.317	0.640	-.706	-.036	.056	.005	.012	.117	-2.120	-.310***	.083	.179***	.085	.012	.059	-.075
	(0.028)	(0.460)	(0.693)	(.587)	(.157)	(.045)	(.025)	(.046)	(.076)	(4.131)	(.061)	(.117)	(.061)	(.161)	(.015)	(.152)	(.047)
Number of obs.	224	24	16	32	48	128	80	80	80	16	64	88	96	64	80	40	88
Number of groups	28	3	2	4	6	16	10	10	10	2	8	11	12	8	10	5	11
R-sq:																	
within	0.005	0.779	0.777	0.460	0.068	0.084	0.022	0.0378	0.012	0.403	0.167	0.005	0.033	0.069	0.182	0.324	0.137
between	0.641	1	1.000	1	0.998	0.125	0.876	0.987	0.878	1	0.999	0.862	0.988	0.965	0.976	0.999	0.926
overall	0.425	0.966	0.886	0.552	0.577	0.096	0.165	0.410	0.371	0.744	0.807	0.391	0.565	0.634	0.433	0.462	0.520
Error:																	
sigma_u:	1.770	0	0	0	0	1.365	0	0	0	0	0	0	0	0	0	0	0
sigma_e:	1.962	0.936	.645	2.321	2.025	1.499	.936	1.491	1.975	3.880	1.464	2.312	2.540	1.957	1.396	1.762	1.762
rho:	0.449	0	0	0	0	.453	0	0	0	0	0	0	0	0	0	0	0
Wald chi2(13)	32.46	1526.07		23.41	47.67	10.59	13.21	46.52	39.58		213.49	48.15	107.91	88.40	51.25	23.20	81.24

Note: *, ** and *** represent estimates significantly different from zero at 10%, 5% and 1% respectively.

Table 7. Results for greenfield FDI simulation sorted by regions

	European Union	Other developed Europe	North America	Other developed economies	North Africa	West Africa	Central Africa	East Africa	Southern Africa	East Asia	South Asia	West Asia	South America	Central America	Caribbean	South-East Europe	CIS
_Cons	-.388	0	0	-5.376	-1.781	-9.685***	-6.025***	-2.908	-20.682**	0	28.442***	-8.887	-12.033***	3.974	-1.856	56.797**	-3.266**
	(3.172)	omitted	omitted	(25.640)	(5.868)	(2.691)	(2.204)	(1.994)	(9.743)	omitted	(3.946)	(6.339)	(2.044)	(5.581)	(3.078)	(24.799)	(1.540)
DTF Paying taxes	0.004	.048	-.016	.018	.010	.045**	.012	.055***	.089	0.039	-.081**	.033	-.062***	.002	.032	-.056	-.029*
	(0.013)	(.068)	(.040)	(.045)	(.032)	(.022)	(.020)	(.020)	(.075)	(0.057)	(.033)	(.031)	(.013)	(.023)	(.024)	(.038)	(.016)
Number of Payments	0.003	-.396**	.438***	-.300 **	-.007	.052***	.028*	.068***	.038	-0.112	-.069***	-.002	-.041***	-.026	-.014	-.026	-.008
	(0.004)	(.166)	(.145)	(.151)	(.028)	(.016)	(.016)	(.016)	(.055)	(0.110)	(.023)	(.040)	(.009)	(.017)	(.015)	(.017)	(.005)
Time	.0002	.079	-.018**	.003	.004	.003**	.003**	.003	.011**	.011	-.009***	-.003	-.001*	.006***	.004*	-.008*	-.0003
	(0.001)	(.064)	(.009)	(.007)	(.002)	(.002)	(.001)	(.002)	(.005)	(0.008)	(.002)	(.005)	(.000)	(.003)	(.002)	(.004)	(.001)
Total Tax Rate	-.808**	1.725	-.142	-.499	3.997*	-.430	2.702*	2.251*	-4.885*	-1.592	-3.381	-1.912	-.972	-4.662***	-1.007	.582	-1.294
	(.409)	(2.239)	(.439)	(.717)	(2.403)	(1.372)	(1.543)	(1.321)	(2.969)	(2.201)	(3.557)	(3.653)	(1.114)	(1.562)	(1.359)	(1.762)	(1.165)
Profit Tax	.792*	-1.831	.107	.499	-4.082*	.422	-2.699*	-2.272*	4.940*	1.594	3.379	1.914	.944	4.750***	1.077	-.646	1.256
	(.409)	(2.083)	(.435)	(.726)	(2.386)	(1.370)	(1.544)	(1.316)	(2.968)	(2.185)	(3.554)	(3.664)	(1.107)	(1.552)	(1.364)	(1.763)	(1.167)
Labor Tax & Contributions	.825**	-1.722	-.544	.655	-4.176*	.378	-2.752*	-2.239*	5.137*	1.565	3.522	1.942	.988	4.789***	1.104	-.622	1.282
	(.410)	(2.175)	(.428)	(.775)	(2.404)	(1.376)	(1.545)	(1.322)	(2.966)	(2.151)	(3.565)	(3.650)	(1.116)	(1.556)	(1.353)	(1.762)	(1.166)
Other Taxes	.811**	-.953	.111	.645	-4.015*	.431	-2.699*	-2.237*	4.994*	1.628	3.376	2.352	.962	4.571***	1.084	-.491	1.280
	(.409)	(1.933)	(.447)	(.702)	(2.390)	(1.372)	(1.544)	(1.321)	(2.968)	(2.329)	(3.556)	(3.588)	(1.113)	(1.568)	(1.359)	(1.826)	(1.166)
Time to Obtain VAT Refund	.002	-.847	.485	.753	.017	.009**	.015***	-.002	.014	-0.054	.006	.007	.025***	-.019**	-.004	-.162***	-.011***
	(.015)	(1.168)	(2.876)	(.766)	(.011)	(.004)	(.003)	(.003)	(.023)	(0.127)	(.006)	(.010)	(.006)	(.008)	(.005)	(.019)	(.003)
Cases for CIT Audit	1.114***	-21.381***	0	-25.883	.180	-.116	.518 ***	-1.290***	-.212	0	-.451	-.124	-.056	-1.261***	.287**	-.280	.242
	(.408)	(8.282)	omitted	(35.575)	(.234)	(.167)	(.107)	(.296)	(.469)	omitted	(.318)	(.217)	(.210)	(.300)	(.145)	(.478)	(.168)
Time to Comply with CIT Audit	-.079***	4.374	-.928	1.129	-.043**	.017	-.024 ***	.199***	.082	-1.668	-.0136*	.027**	.066***	.123***	.009	-.005	-.025
	(.027)	(2.672)	(5.631)	(1.581)	(.020)	(.013)	(.007)	(.039)	(.064)	(2.560)	(.007)	(.011)	(.021)	(.030)	(.008)	(.068)	(.050)
Ln GDP per Capita	.390	-1.124	1.079	2.471**	.551	.698***	-.142	-.658***	0.460	1.762	-.632***	.345	1.238***	-1.162***	-.395***	-5.028*	1.492***
	(.259)	(2.457)	(4.093)	(1.111)	(.607)	(.223)	(.121)	(.120)	(.581)	(3.388)	(.208)	(.446)	(.139)	(.414)	(.129)	(3.004)	(.190)
DTF global	-.010**	.379***	.130*	.004	.067	.023	.087***	.071***	.105***	-0.016	-0.208***	.088*	.110***	.100***	.003	.030	-.041***
	(.005)	(.148)	.077	.046	.042	.020	.016	.015	.039	0.164	0.029	.047	.012	.036	.006	.040	.012
Number of obs.	224	24	16	32	48	128	80	80	80	16	64	88	96	64	80	40	88
Number of groups	28	3	2	4	6	16	10	10	10	2	8	11	12	8	10	5	11
R-sq:																	
within	0.078	0.546	0.898	0.457	0.295	0.012	0.020	0.005	0.039	0.751	0.102	0.020	0.022	0.036	0.073	0.253	0.208
between	0.253	1.000	1.000	1	0.999	0.701	0.962	0.998	0.746	1	0.996	0.881	0.993	0.999	0.967	1.000	0.935
overall	0.245	0.987	0.998	0.981	0.851	0.539	0.682	0.898	0.435	0.994	0.892	0.604	0.932	0.931	0.719	0.897	0.838
Error:																	
sigma_u:	.963	0	0	0	0	.219	0	0	0	0	0	0	0	0	0	0	0
sigma_e:	.289	.299	.071	.182	.570	.558	.525	.423	.508	0.154	.556	.807	.400	.378	.493	.460	.387
rho:	.917	0	0	0	0	.134	0	0	0	0	0	0	0	0	0	0	0
Wald chi2(13)	25.95	3193.97	.	971.6	199.91	80.25	143.88	589.52	51.62		421.16	114.39	1130.70	690.99	171.38	234.75	388.81

Note: *, ** and *** represent estimates significantly different from zero at 10%, 5% and 1% respectively.

Table 8. Descriptive statistics by regions (only means)

	European Union	Other developed Europe	North America	Other developed economies	North Africa	West Africa	Central Africa	East Africa	Southern Africa	East Asia	South Asia	West Asia	South America	Central America	Caribbean	South-East Europe	CIS
Dependent Variables																	
FDI Inflow	14,836.30	10,606.35	138,788.50	14,675.73	2,084.85	865.73	717.82	615.52	2,610.52	65,704.94	5,234.09	3,998.76	9,873.28	4,680.13	456.28	956.34	5,043.96
M&A	6,610.13	6,153.20	78,589.79	2,615.01	111.77	43.96	3.64	23.51	594.48	9,193.68	782.26	501.04	1,132.30	679.38	39.30	55.90	164.29
Greenfield FDI	181.10	52.96	1,020.06	159.06	33.44	9.18	4.81	14.11	26.11	644.63	110.64	89.96	67.34	64.70	3.74	30.80	51.34
Independent Variables																	
DTF Paying taxes	78.02	87.26	85.05	79.09	62.54	48.91	42.01	67.33	71.58	69.80	63.00	85.74	54.47	60.47	67.46	60.73	58.25
Number of Payments	15.04	15.42	9.50	16.31	26.83	46.02	42.06	30.18	31.79	11.06	33.86	16.31	25.72	35.17	36.46	47.83	37.88
Time (hours per year)	197.56	96.17	154.50	183.25	287.96	333.38	459.50	180.07	224.64	285.36	273.16	129.25	628.70	273.77	189.89	305.08	323.06
Total Tax Rate (% of profit)	42.38	32.63	36.28	39.95	49.17	63.35	80.18	59.51	29.79	52.08	40.97	23.43	53.70	45.61	39.58	26.95	48.41
Profit Tax (% of profit)	12.97	14.08	17.98	26.45	13.40	12.42	22.89	20.83	19.70	13.95	20.12	8.07	16.96	21.55	21.87	9.35	11.21
Labor Tax & Contributions (% of profit)	27.42	16.77	11.18	11.49	23.62	19.94	17.39	9.53	4.33	33.01	11.88	14.35	17.13	18.00	9.87	14.80	25.02
Other Taxes (% of profit)	1.98	1.78	7.10	2.00	12.15	30.99	39.90	29.17	5.75	5.11	8.98	1.01	19.59	6.05	7.86	2.80	12.18
Time to Obtain VAT Refund (weeks)	15.10	17.07	7.00	16.00	77.03	81.28	78.54	49.15	26.30	55.25	46.09	18.43	89.51	60.64	59.85	25.84	62.29
Cases for CIT Audit (quartile)	1.32	2.00	2.50	1.50	1.83	1.81	2.70	2.00	1.60	1.00	2.38	1.36	1.42	1.75	1.60	2.40	1.73
Time to Comply with CIT Audit (hours)	1.32	8.43	11.50	9.70	17.75	14.09	23.90	10.15	9.48	6.25	30.88	19.05	13.38	11.44	15.75	16.70	5.55
DTF global	72.22	79.40	82.59	79.50	53.02	45.64	42.21	50.96	54.66	71.09	55.14	61.78	57.35	61.30	57.32	62.80	59.91
GDP per Capita	32,428.30	69,135.89	49,306.51	41,729.63	2,855.72	1,014.71	3,325.99	2,711.64	3,183.79	14,432.80	2,857.10	21,170.99	7,929.26	5,258.67	9,920.98	5,303.05	4,368.65
Number of obs.	224.00	24.00	16.00	32.00	48.00	128.00	80.00	80.00	80.00	16.00	64.00	88.00	96.00	64.00	80.00	40.00	88.00
Number of groups	28.00	3.00	2.00	4.00	6.00	16.00	10.00	10.00	10.00	2.00	8.00	11.00	12.00	8.00	10.00	5.00	11.00