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11 August 2015

Online at <https://mpra.ub.uni-muenchen.de/66057/>  
MPRA Paper No. 66057, posted 09 Mar 2017 09:12 UTC

# DEMOCRATIC TRANSITION AND FOREIGN DIRECT INVESTMENT: Transition Process Matters

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## Abstract:

This paper provides evidence on the relationship between foreign direct investment (FDI) and democratic transition. We propose first an econometric analysis of the determinants of the democratization process through a "probit" model. We consider a sample of 173 countries, with 44 that have experienced a democratic transition over the period 1980-2010. Our results reveal that variables related to human development and individual freedom facilitate the initiation of the democratic process in contrast to those related to social heterogeneity. In the second part, we study the impact of the democratic transition on FDI inflows. In order to avoid endogeneity, we limit the analysis to countries in transition and similar ones deduced from a matching process carried out after the first part. Our results confirm that democratic transitions lead to a significant increase in FDI inflows.

**J.E.L. classification:** F31, F21, C23, C25, F59.

**Keywords:** Democratic transition, foreign direct investment, matching.

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## **I. Introduction :**

The Arab Spring has allowed people to break the chains of dictatorship and to breathe the fresh air of freedom. Few analysts have predicted that such changes will blow in the Arab world and during such a short period. Initial objectives of these revolutions have focused exclusively on freedom, on employment, on improving the living conditions and the establishment of democracy.

Revolutions are a great hope but also a huge challenge. Some European and Latino American countries experienced this transition to democracy. We can mention as an example the decline of military rule in Argentina, the fall of fascism in the south of Europe, the end of the war in former Yugoslavia, the fall of the Berlin Wall, the democratization of the communist bloc.

Right out of dictatorships, countries faced to several problems that arise on the way of transition consolidation. Some difficulties and issues arose: what constitution and what electoral system to choose? How to ensure the independence of the media? How to redistribute wealth and fight against corruption? How to reorganize the economy and restore it after the dictatorship and the revolution? How to maintain a real social progress that ensures adherence to democracy?

The future of the political transition, stability and security will depend largely on the ability of the economy to create jobs and growth based on a renewed education system... In this sense, countries rely on foreign direct investment as one of the most important stimulus of growth and employment.

Countries in transition are often a source of opportunities for international growth for foreign companies. They offer new markets opened to the world and that still very competitive.

FDI occupy a prominently place in any development strategy and is a key instrument to ensure a better integration into the international economy increasingly globalized and a determining factor in terms of technology acquisition and improvement of competitiveness.

Countries in transition are rushing so fierce to enhance and diversify their economies in order to attract more investors and benefit from the advantages provided by the FDI. In this sense, a fundamental question arises: "Why a multinational firm chooses to establish a subsidiary in one country and not in another?"

The choice of location depends on the degree of adequacy of the company's objectives and attractiveness factors provided by the host country. In this regard, the host country must have number of determinants and prerequisites needed to attract foreign investors. In this sense, the result of this research will focus on enumerating the most important features in the process of attracting FDI.

The primary concern of our work is interested in identifying factors that encourage investors to locate in a particular country and not in another. To reach this identification, we have to correct the endogeneity problem using the matching method.

To reach this identification, we had first to correct the problem of endogeneity using the matching method. This correction was based on the regression of meaningful factors which are behind the trigger of the transition process. Our study is built on the work of Lipset (1959) and Barro (1999). We consider a set of economic, social and political variables affecting transition through a "probit" model. We consider a sample that includes 173 countries, with 44 in transition. The results are consistent with those of the basic models. The results obtained are consistent with those of the basic models. Economic variables, those related to human development and to individual freedoms facilitate the initiation of the democratic process in contrast to those related to social heterogeneity.

Subsequently, we limit the study to countries in transition and those similar deduced from the matching method. Therefore, our sample is composed of 77 countries with 44 in transition. At the end, a panel study will be used to identify among the economic, institutional and social factors, those that have a significant impact on FDI flows. The identification of factors will be based on the OLI paradigm initiated by Dunning (1977). Using a fixed effect model, the most significant determinants are those economic (GDP per capita, labor ...). However, the transition to democracy and the political and institutional variables do not affect investment inflows.

Our research will be organized as follows: The first part is devoted to the theoretical review of fundamental determinants of FDI and the specification of the model which required for quantifying the significant factors in attracting foreign capital. Before moving to the next part, we redress the endogeneity problem that can occur in the estimation. For this, we use the matching method to determine the sample of countries that will be used to study the origins of investment attraction. The matching is based on the estimation of determinant factors causing democratic change. Therefore, we will show a historical overview and a literature review of the transition and the main determinants behind the democratization process. To conclude, we will present data used, stylized facts and we will show the main results of factors causing transitions and thereafter the important features of the economic and political life, which are the origin of the entry of FDI.

## **II. FDI and transition:**

### **a. Theoretical Background**

Direct investment contributes to the economic growth of host countries and the achievement of major government's objectives (enlargement of the industrial infrastructure, employment, reduction of balance of payments constraints, etc). This justifies the attention provided to studies of attracting factors of FDI: capital flows are generally attracted by economic fundamentals of the host country (market size, economic and political stability, liberalization of trade policies, the state of infrastructure and institutions, etc). However, despite the growing importance for the international investment in transition economies, there is no unified theoretical framework to detect all determinants of FDI. The absence of a reference framework is often due to differences in the evolution of FDI approaches.

The literature classifies investment attraction factors as advantages specific to firms, to targeted sectors and those specific to host countries. A first attempt was made by Dunning (1977) who offers a comprehensive approach for explanatory factors of direct investment through the OLI paradigm, in which appears a combination of advantage (specific advantages, those of location and internalization factors). New theories of international trade enrich the analysis. The work of Brainard (1993) came to overcome deficiencies of the traditional theory. They put forward a classification of the determinants of FDI by the type of investment: horizontal and vertical FDI. Multinationals adopt a horizontal investment strategy where benefits which located near consumers are high and when firms can achieve economies of scale in the presence of intangible assets, of implementation costs relatively low and of strong demand on the host market. In contrast, we talk about vertical FDI when firms integrate the perspective of international division of the production processes. Multinationals divided their activities across countries depending on different comparative advantages.

More recently, some authors have established studies on institutional determinants of FDI, especially in countries in transition and developing countries. Michalet (1997) argues that when the legal and regulatory environment is constantly changing arbitrarily, and there is an absence of a specialized court that ensures their compliance, companies are forcing to limit or to suspend their financial commitments. Other authors have focused instead on corruption and bad governance. They argue that the corruption increases administrative costs and therefore discourage the entry of FDI.

Most important advantages for the implementation of FDI are economic considerations. Treated determinants are often related to resources or assets available locally: those relating to market size and those related to production cost advantages. Factors attached to the available resources in the host country concern factors directly related to production, such as: raw materials, a skilled labor abundant and cheap, and innovative technology assets.

According to the European Bank for Reconstruction and Development (EBRD), direct investment flows are explained primarily by the size of the host country. It is an important determinant of FDI when multinationals are interested more often to countries with enormous demand. Furthermore high rates of growth may indicate a high efficiency and can attract more foreign investment.

Secondly, when in a territory, the basic infrastructure is developed, the cost of the investment and the exploitation are low, this increases the return on investment and therefore stimulates FDI. Where such infrastructure is lacking, the company is obliged to build itself such roads to deliver its product and this represents a loss of money and time and therefore a loss of competitiveness.

In addition, the degree of trade openness of the host country is considered as one of FDI encouragement. In general, the impact of trade openness is related to the type of foreign

investment. Higher trade barriers can attract horizontal FDI because they protect foreign investors in the local market against imports of competitors. Conversely, the multinational engaged in export-oriented investment, called vertical FDI, prefer to invest in a relatively open economy, because trade barriers increase transaction costs.

Finally, low cost labor is a key factor in attracting FDI especially in sectors with intensively labor use. Companies prefer locations with lower wage and high productivity labors. They are looking for locations with a balance between wages and profitability, and where social legislation and trade unions are weak or nonexistent. Similarly, multinationals are seeking for more labor qualities since these companies are more interested in a production intensive in capital and technology.

It is nevertheless important to note that the determinants of foreign direct investment flows are not only economic; it also involves factors related to the governance in the host countries, namely the control of corruption and the improving of the policy and regulatory frames.

Several recent studies examine the relationship between democratic rights and FDI. Busse (2004) argues that multinationals are more likely to be attracted by countries where democracy is respected. Other researchers have shown that the establishment of democratic system affects positively the FDI inflows: it provides restrictions on elected officials and thereby reducing the arbitrary action of government. Consequently, the risk of overturns and social disorders are reduced and therefore strengthens the protection of property rights. Li and Resnick (2003) emphasize the causal links between FDI and democracy and argue that democratic rights stimulate and improve the protection of property rights which subsequently stimulate FDI inflows.

However, other studies show that the existence of democracy can negatively affects investment inflow: Investors are seeking for more political stability that is provided by



dictatorships. It allows a continuity of activities in the same legal and political environment in contrast of democratic regime characterized by a continuous change. On the other hand, multinationals prefer to invest in autocratic countries where autocratic governments are in a position to offer generous incentives: protection against unions, tax incentives. They also offer the ability to retain and exploit monopoly positions in profitable sectors (natural resources).

Finally, several studies focus on country risks. Instability and disorders affect the behavior of multinational firms to relocate overseas and improve their profitabilities. Government stability, absence of internal conflict and ethnic tensions, warranty of democratic rights and respect of law and order are essential determinants of FDI flows. These factors reflect the effect of good governance on foreign investors. They feel reassured to invest in stable economic environments.

However, social and political instabilities predominate in the transition period. This manifests in the confiscation or the appropriation of property, the change in macroeconomic management and especially the changes in the regulatory environment. However, when the long-term prospects are very attractive, investors adopt an attitude of "wait and see". They reduce their presence to a minimum to maintain their presence and observe more closely the evolution of the country situation.

### **b. Model Specification**

The empirical literature had found mixed conclusions on fundamental determinants of FDI. Despite the theoretical frameworks, few potential factors provide robust empirical results. Chakrabati (2001) finds that the market size of host countries and the trade openness are robust. Other variables, according to this author, such as the cost of labor and the exchange rate are not significant.

One of problems often encountered in the empirical literature is related to endogeneity. For example, the market size of a country is usually measured by GDP per capita, and therefore the correlation between FDI and market size could result from an endogenous determination of this latter. This econometric problem can also be linked to omit variables that affect the dependent variable and the explanatory variables.

To validate the most important factors in attracting FDI, we estimate the following model.

This specification is derived from the Asiedu specification.<sup>4</sup>

$$\begin{aligned} \text{LnFDI}_{it} = & \alpha_0 + \alpha_1 \text{Transition}_i + \alpha_4 \text{GDPpc}_{it} + \alpha_5 \text{Inflation}_{it} + \alpha_6 \text{PopulationTot}_{it} \\ & + \alpha_7 \text{Infrastructure}_{it} + \alpha_8 \text{Export}_{it} + \alpha_9 \text{Education}_{it} \\ & + \alpha_{10} \text{Institution}_{it} + U_{it}. \end{aligned}$$

Variable	Définition	Source
<b>LnFDI<sub>it</sub></b>	The dependent variable in the model shows the log of total FDI net inflows. The data are in current U.S. dollars.	World Development Indicators & Global Finance (world bank(2011))
<b>GDPpc<sub>it</sub></b>	The logarithm of real GDP per capita in U.S. dollars.	World Development Indicators & Global Finance (world bank(2011))
<b>Inflation<sub>it</sub></b>	Inflation measured by the average annual change in the index of consumer prices.	World Development Indicators & Global Finance (world bank(2011))
<b>Population<sub>it</sub></b>	The logarithm of the total population. It is an estimation of the number of residents in mid-year.	World Development Indicators & Global Finance (world bank(2011))
<b>Infrastructure<sub>it</sub></b>	The logarithm of the number of telephone lines per capita.	The Quality of Government Dataset Codebook(2011)
<b>Export<sub>it</sub></b>	The ratio of exports on gross domestic product.	World Development Indicators & Global Finance (world bank(2011))

<sup>4</sup>Asiedu, Elizabeth and Donald Lien (2010) Democracy, foreign direct investment and natural resources. Journal of International Economics (Elsevier).

<b>Education<sub>it</sub></b>	The expenditure on education in GDP.	World Indicators Development (world bank(2011))	Development & Global Finance
<b>Transition</b>	1 if the country is in transition. 0 if the country is not in transition.		
<b>Institution<sub>it</sub></b>	A measure of the degree of democracy in the institutions. The indicator of democracy is a scale of (0-1), 1 represents a country with fully democratic institutions.	The QoG Social Policy Dataset(2010)	

However, this model can include endogeneity problems. The endogeneity of regressors, due to a correlation with the error term, can involve significant biases in the estimation of behaviors. When both the explained variable and the regressors are continuous, several methods to detect the endogeneity and correct its effects are available. Yet, when among the variables, there are dichotomous variables; the resolution of endogeneity problems is more difficult.

In the following, we focus on solving the problem of endogeneity through the matching method. The work will proceed to a reduction in the sample size to be limited to countries in transition and those that have the same characteristics. This transformation provides an optimally capture of the effect of democratization on FDI.

### **c. Endogeneity issues:**

In order to identify the impact of the transition and changes that accompany it on the attraction of foreign financial assistance, we have taken into account countries in transition and those with similar characteristics but which have not experienced a democratic change.

Using the matching method, we define the control sample and similar countries that have not experienced democratic transition.

This statistical approach known as "Matching" provides techniques to solve the endogeneity problem by restricting the analysis of an economic phenomenon in a group of participants and non-participants correspondents, where they are selected by the basis on similarity in the observed characteristics.

**i. Principle of the method:**

The matching method is a method of evaluating widely used to estimate an average effect of treatment (For our research, the treatment is the fact of going through a transition). This method has become popular in several areas including statistics (Rubin 2006, Rosenbaum 2002), medicine (Rubin 1997), economics (Abadie and Imbens 2006; Dehejia and Wahba 1999; 2002), political science (Imai 2005; Sekhon 2004), Sociology (Morgan and Harding 2006).

The "matching" method attempts to match each individual treated with one or more untreated whose observable characteristics are the closest as possible to those of the treated individual. The approach provides techniques to simplify the problem of the choice of control groups since it is difficult to have non-participants with exactly the same values for all observed characteristics for any attendee. This method assumes that the only differences between the two populations (Country) treaties (having experienced a transition) and untreated comes from individual characteristics and treatment. If we control differences in characteristics, then there remains only the effect of treatment. Access to the program is represented by a random variable "T" for each individual "i";

- $T_i = 1$  if the individual access to the program (the country has knowed a transition)
- $T_i = 0$  otherwise.

Therefore, the results of the program will be measured through two variables:

- $Y_{1i}$  if the individual receives the treatment ( $T = 1$ )

- $Y_{0i}$  if the individual is not treated ( $T = 0$ )

## ii. Estimation:

The "propensity score" is the probability that a treatment (transition) is administered to an individual (country). Then, treated individuals are matched to individuals who are closest in terms of their value of estimated propensity score. When estimating, we are forced to make choices regarding the estimation model used and variables included in this model. In principle, a logistic or probit regression model estimates the probability of treatment. These models must include all the observed variables that influence the selection treatment and outcome. We use the logistic regression model to estimate the propensity score of a binary variable  $T$ .

- $T = 1$  if the country has undergone a transition
- $T = 0$  otherwise.

Before proceeding with the matching, we need to define variables used and this through a review of theoretical and empirical aspects of main determinants behind the democratic change.

## III. The determinants of democratic transition:

### a. Review of literature

The disappearance of authoritarian regime and the establishment of democracy present both a challenge and an opportunity.

Several questions arised: How do these similar results emerged from different backgrounds and regions, what are commonalities that could propel autocratic regimes in the four corners of the world to free elections whose outcome remains mysterious.

Clearly, many conditions have been met in some parts of the world, rather than elsewhere and which were originally triggered the transitional process. However, "What are these conditions?"

The recent wave of revolution revived old academic debates on the causes of transitions. These searches have not so far given any general theoretical condition of democratization despite the recent multiplication of cases.

Further, our work will be a list of the origins of transition in the literature. Remark to make is, above all, that there is no magic or perfect to start the transitional process.

**i. Economic factors :**

A whole area of the literature is focused on the impact of economic variables on the democratization process. The hypothesis is based on the work of Lipset (1959), which addresses a broad category of measures considered as determinants of democracy, including indices of wealth, urbanization and development. The key element of this hypothesis is that richer countries are more likely to promote democratic values and to adapt institutional norms. The idea synthesized that the improvement of living conditions is expected to increase the economic growth that will lead to the democratization of political regimes.

The French President François Mitterrand expressed the link between democracy and development, during the Conference of Heads of State of Africa and France (1990) in which he asserts that the road to democracy is freedom and at the same time development. He cites that "By taking the road of development, nations are engaged on the road to democracy."

Secondly, there is a close relationship between democratization and human capital development.

Foremost, the issue of education is particularly important. Be citizens, can be not only can be learned, but it must also be a shared desire to ensure the establishment of a common destiny.

Educated populations will become more conscious of the importance of the liberation from the chains of dictatorship. Through opinion surveys, Lipset arrives to a conclusion that "the most important factor that differentiates those who give answers pro-democracy to other is education." It transmits to people broader ideas, helping them to understand the need of tolerance, to make more difficult the adaptation of extremist ideas and to help at election time the exercise of rational choices.

Then, health is a main key in the process of transition through the growth and the development. The identification of the relationship between the transition and health are limited due to the complexity of the links between the latter and politics. Health is often associated to the quality of life characterized by the improvement of population health and poverty reducing. For this reason, three of the eight Millennium Development Goals (MDGs), endorsed in 2000 at the end of the Millennium Declaration of the UN, are dedicated to improving health.

Otherwise, Lipset (1959) notes that "the democratic state is a result of urban life and it was so natural that it appeared for the first time in Greece." He also asserts that democratic countries are more urbanized than authoritarian states.

Urbanization is a process characterized by the mutation of societies from an essentially agricultural population organized according to rural social structures, to a society predominantly urban, industrial and market-oriented. Factors that improve the quality of life are more common in cities than in rural areas: improved access to health services, infrastructure and information. Public policies apply more easily in urban areas.

## **ii. Social structure:**

The degree of population heterogeneity, due to differences of ethnicity, language and culture can also influence the level of democracy. The usual assumption argues that more heterogeneity makes more difficult the maintaining of democracy.

The type of heterogeneity of a population (Ethnic, Religious and Linguistic) can influence political institutions and therefore the regime.

In multi-ethnic societies, political systems are highly sensitive to social fragmentation; Clans are not likely to abandon their authority or to share power with rival groups. This fragmentation maintains a state of extreme tension and a constant risk of civil war. Early studies claim that when heterogeneity is high, it is more difficult to sustain democracy.

On the other hand, the frequent transformation of the religious landscape is taken the form of fragmentation in fields and in places of worship, and it is reflecting more profoundly new ways to think, to communicate and to practice. This development is seen in a global context marked by crisis of legitimacy affecting traditional social and political organisation (parties, unions, churches). Democratization can be blocked by religions and dogmas that have a strong hierarchical structure. Huntington (1993) shows that the traditionally strong links between religious leaders and the state were still present in the country with confessions Catholic, Orthodox, and Muslim. These religions also tend to be hierarchical and resistant to change.

Lastly, if a democratization process aims to keep its promises to improve well-being, it must be able to count on the contribution of all its citizens. This cannot happen if women and girls are not able, in law or customary law, to participate fully in the political and economic life of the country. During the opening ceremony of the Conference of the 'International Association of Women Police' Asha-Rose Migiro, Deputy Secretary-General of the UN, states that 'When women are truly committed and empowered, all of society benefits.' Kofi Annan, former Secretary General of the United Nations, said, "Several studies show that there is no tool for development more effective than the empowerment of women.

It is irrefutable that the increase in the number of women elected to political office leads to increased political focus on the quality of life and reflecting the priorities of families and



minorities. Women's participation in political life is accompanied by profound positive impact on communities, legislatures, political parties and people's lives and contributes to increased efficiency of democracies.

### iii. Civil liberties

In public opinion, the respect of human rights is often presented as an aspect of fight for democracy. Javier Perez de Cuellar, Secretary General of the UN said in March 1990 "A full democratization of Europe will be a reaffirmation of the universal character of the Declaration of Human Rights." In this perspective, democracy and human rights are supposed growing at the same pace. They even become almost synonymous. According to the UNDP in its 2000 report, democracy is the only form of political regime that respects the existing five categories of rights: economic, social, political, civil and cultural rights.

Various types of policy interventions are needed to give substance to these rights in a democratic regime. The Freedom House index of civil liberties is the broadest concept, which concerns freedom of speech, of press, of religion and a variety of legal protections index. Civil Liberties variables are positively correlated with democratization. This result suggests that the economic and social forces that promote democracy are similar to those that promote civil liberties.

To identify causal relationships between the various factors mentioned in the literature and democratic transition, we have used a qualitative model ie model "probit". The use of this discrete choice model is due to the dichotomous nature of our dependent variable. We consider a sample that includes 173 countries, with 44 in transition.

To identify the origins of the transitions, we estimate the following model:

$$\begin{aligned} Transition_{it} = & \alpha_0 RealGDPpc_{it} + \alpha_1 Education_{it} + \alpha_2 Ruralpop_{it} + \alpha_3 Healthindex_{it} \\ & + \alpha_4 Torture_{it} + \alpha_5 ReligFractionaliz_{it} + \alpha_6 Freedomspeech_{it} \\ & + \alpha_7 Pressliberties_{it} + \alpha_8 WomenParticipation_{it} + U_{it} \end{aligned}$$

Where **i** indicates the country and **t** referred to the year. These indices are used for all variable.

Variable		Source
<b>Transition<sub>it</sub></b> (dichotomous variable)	Transition <sub>it</sub> = 0 if country <sub>i</sub> has not know a transition in the period between 1981-2010 1 if country <sub>i</sub> is in transition from 1981 to 2010.	Modeling Transitions to and from Democracy Jay Ulfelder et Mike Lustik (2005)
<b>RealGDPpc<sub>it</sub></b>	The logarithm of GDP per capita	World Development Indicators & Global Development Finance (world bank(2011))
<b>Education<sub>it</sub></b>	The percentage of female students enrolled at primary level relative to the total number of students (enrollment in public and private schools).	World Development Indicators & Global Development Finance (world bank(2011))
<b>Healthindex<sub>it</sub></b>	It represents the prevalence of HIV for males aged between 15 and 24 years.	World Development Indicators & Global Development Finance (world bank(2011))
<b>Ruralpop<sub>it</sub></b>	Measure the rural population. The index is calculated as the difference between total population and urban population	World Development Indicators & Global Development Finance (world bank(2011))
<b>Torture<sub>it</sub></b>	Torture is rated on a scale of three classes: (0) practiced frequently. (1) Performed occasionally. (2) Not performed.	The Quality of Government Dataset Codebook(2011)
<b>ReligFractionaliz<sub>it</sub></b>	It reflects the probability that two people chosen at random from a given country do not belong to the same religious group.	The Quality of Government Dataset Codebook(2011)
<b>Freedomspeech<sub>it</sub></b>	Variable calculated from four components: Laws and Regulations, pressures and political controls, economic influences and repressive actions. The scale ranges from 0 (Less free) to 10 (very free).	The Quality of Government Dataset Codebook(2011)
<b>Pressliberties<sub>it</sub></b>	It represents censorship, intervention and part of the government in the media (including radio, TV, Internet, and national news agencies) is as follows: (0) Complete (1) a few times (2) Never	The Quality of Government Dataset Codebook(2011)

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<b>WomenParticipation<sub>it</sub></b>	<p>Measure the position of women in political and economic life:</p> <p>(0) None of the political and economic rights of women are guaranteed by law.</p> <p>(1) The political and economic equality are guaranteed by law. However, there are significant limitations in practice.</p> <p>(2) The political and economic equality are guaranteed by law and practice more or less visible.</p> <p>(3) The political and economic equality is guaranteed by law and in practice.</p>	<p>The Quality of Government Dataset Codebook(2011)</p>
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## IV. Data and main results

After discussing the main theories of democratic transition, and having identified of the various determinants of the transitional processes, the work will attempt to validate possible correlations between the probability of the transition birth and the factors already mentioned. The work uses a "probit" model estimated on a database collected during the period 1981-2010 on a sample of 173 countries.

### a. Transition determinants:

#### i. Dependent variable:

Transition<sub>it</sub> is our dependent variable. It is a dichotomous variable:

Transition<sub>it</sub> =

- 0 if country i has know a transition in the period between 1981-2010
- 1 if country i is in transition from 1981 to 2010.

The country is considered as a country in transition when it had known a policy change allowing the passage from an authoritarian state to a democracy.

According to T. L. Karl and P. Schmitter (1991), the change can be made by:

- Pacts: elites shall agree between them to move away from authoritarianism.
- Imposition: elites use their forces to establish an opposition.
- Reforms: mass is mobilized in a compromise with the absence of violence.
- Revolution: mass gets up with weapons to bring down the government.

According to the study period (1981-2010), selected transition countries belong to the third wave of transition. The rest of countries in the sample have non-democratic regimes (monarchy, military rule, civil war ...).

Using a variable indicating the type of governing regime (Hadenius and Teorell, 2007), we remove all the countries being democratic before our study period (1981-2010) to make the sample more homogeneous.

## ii. Explanatory Variables :

- **RealGDPpc<sub>it</sub>**: The logarithm of real GDP per capita. This variable is a measure of wealth and economic performance of a country. According to the hypothesis of Lipset (1959), a high level of GDP per capita increases the probability of the establishment of democratic. Therefore, we expect a positive significance.

To measure the human development, we refer to three indices:

- **Education<sub>it</sub>**: represents the performance of the education sector. Lipset (1959) argues that a better cultivated population is more likely to trigger the democratic process. The relationship between the variable and democratization is assumed to be positive.
- **Healthindex<sub>it</sub>**: is a measure of health development. The increase of the number of infected people reflects the deterioration of the health's level. Empirical studies show a significant negative relationship between this indicator and the level of democracy.
- **Ruralpop<sub>it</sub>**: refers to people living in rural areas. It is calculated as the difference between total population and urban population. Lipset argues that democratic countries are more urbanized than dictatorial or authoritarian states. Therefore, the sign may be negative between our measurement and transition.
- **Pressliberties<sub>it</sub>**: is an index of press freedom. Several researches say that media have immense power to influence the public opinion and thus circulate the principles of democracy among populations. We therefore expect a positive correlation.

- **ReligFractional<sub>it</sub>**: expresses the religious fractionation. When the percentage is high, the society is more segmented (Alesina et al. (2003)). The empirical studies show that countries in transition are a little less fragmented than countries that have remained autocratic. The fractionation has a negative impact on the index of democracy.
- **Freedomspeech<sub>it</sub>**: measures the freedom of expression. It has often been one of the first steps towards democracy. In the majority of empirical results, this variable is positively related to democratic change.
- **WomenParticipation<sub>it</sub>**: represents equality rights of women in economic and political life. The idea shared in empirical works is that the success of the democratization process depends on the contribution of all citizens namely the full participation of women in the political and economic life.
- **Torture<sub>it</sub>**: represents the use of torture against opponents. International conventions and treaties emphasize that the abolition of torture presents a leap forward to the democratic process. The expected relationship for the indicator is positive.

### iii. Results

VARIABLES	(1) Transition	(2) Transition	(3) Transition
<b>Pressliberties</b>		0.0410*** (0.00898)	0.0401*** (0.00926)
<b>ReligFractionaliz</b>		-0.935*** (0.0966)	-0.644*** (0.102)
<b>Freedomspeech</b>		0.190*** (0.0341)	0.105*** (0.0353)
<b>Womenparticipation</b>		0.317*** (0.0470)	0.220*** (0.0477)
<b>Torture</b>		-0.246*** (0.0339)	-0.264*** (0.0352)
<b>RealGDPpc</b>	0.125*** (0.00973)		0.0811*** (0.0127)
<b>Healthindex</b>	-0.295*** (0.0321)		-0.295*** (0.0366)
<b>Education</b>	0.0523*** (0.00925)		0.0717*** (0.0117)
<b>Ruralpop</b>	-1.63e-09*** (3.27e-10)		-1.70e-09*** (3.68e-10)
<b>Constant</b>	-5.978*** (0.484)	-0.860*** (0.0818)	-5.935*** (0.609)
<b>Observations</b>	5,108	3,803	3,769

The above table shows results of the probit estimation of the three following regression:

- The first is devoted only to relations between transition and economic factors:
  - The results show that all variables in the model are significant. The coefficient of gross domestic product per capita is positive and significant, which means that direct democracy is an ordinary good that is more consumed in the richest societies. The most prosperous countries are more likely to experience a transition.
  - Indices of human development are also significant: HIV prevalence and rural population affect negatively the realization of transition. The access to education is always positive and provides evidence of the link between education and democracy highlighted by Glaeser et al. (2006). The results lead us to assert that educated and

healthy population living in rural environment is ready to accept democratic principles and eradicate dictatorship.

On the other hand, the second regression focuses on the relationship between social and civil derminants on democratization:

- The coefficient of "torture" is significant. Although we expected a positive sign consistent with the literature, we found a negative relationship between the use of torture and transition. However, the negative sign may be warranted. Authoritarian regimes, by their police devices, have often used major forces and acts of torture to face claims and change's incentive or a possible overthrow of the regime. Autocratic forces are the standard way to crush the opposition and to seize the throne.
- The coefficient of the religious fragmentation is negative and significant, as it is predicted by theory. The result is cohesive with the idea of Aghion et al (2004) which states that in more fragmented societies, a group may impose control over other groups and impose restrictions on their political freedom.
- Freedoms of speech and press are significantly positive. This confirms that these rights allow informing, inspiring and encouraging people to change and at the same time to assess and support the level of democracy.
- The same results are also reflected in the participation of women confirming the hypothesis that the transition and consolidation of democracy requires the participation of all the people namely the total contribution of women in political and economic life of the country.

Finally, the third regression brings together the two previous estimates. We found the same results previously obtained. From these regressions, variables that are used, are then integrated into the matching method to correct the endogeneity problem.

## **b. Matching: Data and results**

The stata command that had used is psmatch2, it calculates an approximation of standard errors for the treatment effects assuming that the observations are independent, the weight is fixed. We assume also that there are a homoskedasticity of the outcome variable and its variance in the outcome does not depend on the propensity score.

The sample on which we work includes 173 countries, including 44 countries in transition period (1981-2010).

The treatment variable is the transition variable defined as follows:

- If the country is in transition, transition = 1 and therefore  $T = 1$ ,
- If the country is not in transition, transition = 0 and thus  $T = 0$ .

For each year of transition, the countrie involved in the democratic change is used to determine its untreated corresponding.

The variable used as propensity score is EDUCATION<sub>it</sub>. This variable indicates the percentage of female students enrolled at primary level by the total number of students ie enrollment in public and private schools.

The control variables are those used previously:

- RealGDPpc<sub>it</sub>: The logarithm of gross domestic product per capita.
- Healthindex<sub>it</sub>: HIV prevalence for males aged between 15 and 24 years.
- Ruralpop<sub>it</sub>: refers to people living in rural areas.
- Pressliberties<sub>it</sub>: The index of press freedom.
- ReligFractionaliz<sub>it</sub>: expresses the religious split.

Through matching, we obtain at the end a sample of 77 countries, including 44 countries in transition. After constructing the sample which consists of countries in transition and those that are similar, the following part will focus on identifying impacts of democratic change on the attraction of foreign investments seen as a key of economic recovery.



## c. FDI and Transitions

The determination of the relationship between FDI and specific characteristics of transition has often been the subject of several research projects such as Dunning (1988) and Mucchielli (1991).

These authors show that relocation's decisions of multinational firms are based on the presence of specific characteristics for minimizing costs and improving productivity and profitability in the host country. These factors are economic, social and institutional.

The objective of this chapter is to validate the determinants of FDI, especially those related to transition countries. Our sample is composed of 77 countries, including 44 in the transition period from 1981 to 2010.

### i. Dependent variable :

The variable that we want to explain in this part is the log of FDI inflows. This variable presents net inflows of investment needed to acquire an interest or to control the management of a company operating in an economy other than that of the investor. It is represented by the sum of the capital, reinvested earnings and other capital of short and long term.

Through the regression, we try to measure the sensitivity of capital flows facing the democratic transition. Several reasons led us to choose this index:

- The majority of previous studies are using this variable to explain the determinants of FDI.
- The availability of data.
- This variable effectively captures the movements of foreign investment in the world.

### iii. Explanatory variables :

• **Transition:** Over the entire period, this variable takes into account the effect of differences between the countries likely to know a transition and those, which are similar.

• **GDPpc<sub>it</sub>:** It is a measure of growth reached by a particular country. A high growth rate defines a high efficiency and hence motivates the arrival of foreign investment. However, we must keep in mind that the high growth rates can be stimulated by FDI (Mcmillan (1995)).

- **Inflation<sub>it</sub>**: A theoretical conception of Aseidu (2002) shows a negative relationship between FDI and increased inflation. Irregular increase prices and increase production costs have a negative impact on FDI (Brewer 1993 and Urata and Kawai 2000).
- **Infrastructure<sub>it</sub>**: It approximates the infrastructure development. It measures the number of telephone lines per capita. Studies have shown that this variable is positively correlated with FDI (Asiedu, 2003). Foreign investors prefer economies with well-developed network of roads and airports, water supply, availability of uninterrupted power and telephone lines and internet access. A weak infrastructure increases the cost of implementation of activities and reduces the rate of return. We expect that countries with good infrastructure attract more FDI (Morisset, 2000; Alfaro et al. 2005).
- **Population<sub>it</sub>**: it estimated the market size and quantified the total population. Empirical studies affirm the existence of a positive and significant relationship between market size and FDI inflows. Indeed, when the economy is larger, the foreign investor is hoping to find easier an outlet for its products, which is necessary to achieve high profits (Agarual (1980)).
- **Export<sub>it</sub>**: It measures the degree of trade openness and refers to the free movement of goods and services (imports and exports). Studies have found a positive correlation between openness and FDI (Chakrabarti, 2001; Morisset, 2000).
- **Educexpend<sub>it</sub>**: measuring public spending for education. This variable may indicate an improvement in the education level among the population and reflects skills and qualities of workmanship. This variable was identified as a strongly determining factor of FDI inflows, especially in fields of computers and new information technologies.
- **Institution<sub>it</sub>**: The variable is based on three key interrelated:
  - The absence of corruption which takes into account bribes, jobs reserved and ‘favors for favors’,
  - The rule of law and order namely the strength and the impartiality of the judiciary power and the respect of public law,
  - The quality of the bureaucracy and the enforcement of contract.

Acemulgo (2001) argues that institutional improvement, especially in terms of the transparency of transactions and the fight against corruption, reassures investors and thus increases the entry of FDI.

The expected sign is positive.

To identify the effect of the transition on the FDI, we add the following variable:

- **transition\_effect:** Our variable is derived from the first part. It differentiates between the situation before and after transition and therefore distinguishes the specific effect of democratic change on FDI inflows. The sign is ambiguous. First, the transition is accompanied by a strong instability, a breakdown of infrastructure, the deterioration in terms of trade and the balance of payments and a complete halt of economic activity. However, the transition allows the establishment of a democratic regime where rules the respect for law, the fight against corruption and the availability of information. The transition is also followed by major reforms, tax and regulatory policy planning and macroeconomic projects. These changes are prompting investors to locate in countries in transition.

**Is dummy variable:**

transition\_effect<sub>it</sub>

- **transition\_effect= 0 if the country did not know or did not transition.**
- **transition\_effect= 1 for country in transition from the year of initiation of the process.**

**iv. Results:**

VARIABLES	(1) lnFDI
Traitement_Matching	0.669*** (0.188)
Transition	-0.486** (0.192)
Transition_effect	0.610*** (0.234)
GDPpc	0.545*** (0.0592)
Population	1.016*** (0.0448)
Export	0.0319*** (0.00307)
Educationexpend	0.0123** (0.00498)
Inflation	-0.000413*** (0.000127)
Institution	0.425 (0.368)
Infrastructure	0.0260*** (0.00765)
Constant	-3.549*** (0.875)
Observations	734
R-squared	0.658

The coefficient associated to the variable related to the gross domestic product per capita "GDPpc" is significantly positive. The sign obtained confirms that an increase in GDP per capita reflects a rapid growth of the national economy and provides an environment conducive to investment. This result is relevant in several studies (Gliberman and Shapiro (2002) and Asiedu (2008)). The negative sign of the coefficient associated to inflation is expected. High inflation is likely to increase the risk premium to the foreign investors and transaction costs. This can therefore hinder FDI entries. This is consistent with work Aseidu (2008).

Similarly, the "Population" is positively related to FDI inflows, asserting that the foreign investor has the hope to find a market for its products in large economies, necessary to achieve high profits

(Agarual (1980)). The coefficient of the variable 'Educxpend' is positive and significant, confirming that the qualified workforce is a key determinant of foreign investment. Indeed, investors are increasingly looking for more qualified workforces for companies which focus to the production of intensive technology goods.

The degree of trade openness measured by 'Export' is positively related to FDI inflows. Our results are consistent with those of Morisset (2000) and Chakrabarti (2001). Investors are attracted by economies with a strong trade and characterized by low trade restrictions.

For countries in transition, despite the instability and the economic decline during the democratic change, traditional factors of FDI attraction are still valid. The coefficient associated to "Transition" is significantly negative. This explains that transition's countries receive less FDI compared to similar countries. This can be explained by the presence of a social tensions and instability.

However, the fact that the variable "transition\_effect" is positively related to FDI argues that democratic transitions lead to an improvement of the economic, political and institutional situations. This consolidation creates a favorable climate for investors and thus leads to increased FDI inflows.

## **V. Conclusion:**

The purpose of this research is to identify determinants of foreign investment in transition period. We were interested to FDI as the most useful and the most persistent factor for economic recoveries. Governments of countries in transition as well as international institutions are concerned by the recent wave of democratic transition and their common interest is to ensure the success of the democratic process. It is interesting to understand this phenomenon, its origins and the expected benefits.

As we mentioned above, the transition of great hope but also a huge challenge. The success of the transition thus requires the mobilization of a number of resources which are necessary in the pursuit of political and economic reconstruction projects. Among the means, we focused on foreign investment and their determinants.

The "World Investment Report" 2012 made by the UNCTAD shows that despite the economic crisis, the largest increases in FDI are registered by the former transition countries namely South America which makes an excellent year (+ 34%) driven by Brazil, Colombia and Chile.

South Asia posted also a growth well above the world average, to 26% for \$ 117 billion of FDI, with the super performance of Indonesia, Malaysia and Singapore. These results are of great hope for the countries currently in transition.

Not surprisingly, the Arab Spring has dealt a heavy blow to foreign direct investment. Between 2010 and 2011, FDI flows to North Africa have indeed decreased from 13.6 billion to 5.8 billion, with a sharp drop of -57%. The main cause of the overall decline is the instability in Egypt and Libya. Tunisia has recorded a decline in foreign direct investment (FDI) of 29% in 2011, according to data collected from the Tunisian Agency for Promotion and Foreign Investment (FIPA). According to the same source, foreign investment in 2011 reached approximately 857 million euros against 1.2 billion euros in 2010.

However, signs of a rebound in economic activity appeared in early 2012: the first quarter, GDP and direct investment foreign (FDI) are increasing.

It is noteworthy that short-term risks are high and negatively oriented, with a deeper recession than expected in Europe, an increase in social tensions, capacity constraints and delays in funding that could curb the fiscal stimulus. However, the hope and the potential recovery remain favorable but it is necessary to adopt a program of structural reforms to promote private investment. A baseline scenario which assumes the continuation of macroeconomic stability, the improving of the governance and the business climate, labor market reforms and the education system and strengthening the financial sector.

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## VII. Annexes

### **Annexe I: Countries in transition**

Country_code	Country_name	Year_transition	Type_transition
PER	Peru	1981	5
BOL	Bolivia	1982	4
SLV	El Salvador	1982	2
HND	Honduras	1982	
ARG	Argentina	1983	5
TUR	Turkey	1983	2
GRD	Grenada	1984	
GTM	Guatemala	1984	3
BRA	Brazil	1985	
URY	Uruguay	1985	1
PHL	Philippines	1987	
BGR	Bulgaria	1989	2
DEU	Germany	1989	5
PRY	Paraguay	1989	2
ALB	Albania	1990	
CHL	Chile	1990	
COM	Comoros	1990	1
CZE	Czech Republic	1990	3
FJI	Fiji	1990	
HUN	Hungary	1990	5
NIC	Nicaragua	1990	4
POL	Poland	1990	3
ROU	Romania	1990	
BGD	Bangladesh	1991	
BEN	Benin	1991	
RUS	Russian Federation	1991	
COG	Congo, Rep.	1992	5
MLI	Mali	1992	
SVN	Slovenia	1992	
THA	Thailand	1992	
BDI	Burundi	1993	
MDG	Madagascar	1993	
MNG	Mongolia	1993	
PAN	Panama	1994	
ZAF	South Africa	1994	
UKR	Ukraine	1994	
TZA	Tanzania	1995	
GHA	Ghana	1996	
MEX	Mexico	1997	4
ARM	Armenia	1998	
DJI	Djibouti	1999	
IDN	Indonesia	1999	
HRV	Croatia	2000	
SEN	Senegal	2000	

## **Annexe II : Descriptive Statistics:**

<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
<b>Transition</b>	5152	.2562112	.4365822	0	1
<b>RealGDPpc</b>	5152	23.83187	2.150379	18.46663	29.61958
<b>Healthindex</b>	5108	.6087314	1.097865	.1	6.5
<b>Education</b>	5151	47.54533	2.781885	0	62.02687
<b>Ruralpop</b>	5152	1.70e+07	8.11e+07	0	8.27e+08
<b>Pressliberties</b>	5152	4.462539	2.836336	0	9
<b>ReligFractionaliz</b>	5040	.4395505	.2334893	.0022857	.8602599
<b>Freedomspeech</b>	3834	.9551382	.7260003	0	2
<b>Womenparticipation</b>	5152	1.502523	.5198388	0	3
<b>Torture</b>	5152	.7084627	.7104772	0	2

## **Annexe III: Matching estimations:**

probit Transition RealGDPpc Healthindex Education Ruralpop Pressliberties ReligiousFractionaliz

Iteration 0: log likelihood = -2884.7701

Iteration 1: log likelihood = -2654.8549

Iteration 2: log likelihood = -2649.1864

Iteration 3: log likelihood = -2649.1508

Iteration 4: log likelihood = -2649.1508

Probit regression                    Number of obs     =    4996  
    LR chi2(5)         =    471.24  
    Prob > chi2        =    0.0000  
 Log likelihood = -2649.1508           Pseudo R2         =    0.0817

Transition	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
RealGDPpc	.110798	.0104206	10.63	0.000	.0903739	.131222
Healthindex	-.2358257	.0306498	-7.69	0.000	-.2958982	-.1757531
Education	.0257166	.0062286	4.13	0.000	.0135088	.0379244
Ruralpop	-1.42e-09	3.31e-10	-4.29	0.000	-2.07e-09	-7.71e-10
Pressliber~s	.0376047	.0073384	5.12	0.000	.0232216	.0519877
Religiousfractionaliz	-.8500959	.0900542	-9.44	0.000	-1.026599	-.6735929
_cons	-3.109974	.2543795	-12.23	0.000	-3.608549	-2.6114

- psmatch2 Transition , n(1) pscore(Education)out(RealGDPpc Healthindex Ruralpop Pressliberties ReligiousFractionaliz ) cal(1) logit

Variable	Sample	Treated	Controls	Difference	S.E.	T-stat
RealGDPpc	Unmatched	24.5194906	23.5882117	.931278958	.068212075	13.65
	ATT	24.5194906	23.7921122	.727378368	.251524636	2.89
Healthindex	Unmatched	.342575758	.710337323	-.367761566	.035173348	-10.46
	ATT	.342575758	.24030303	.102272727	.033009568	3.10
Ruralpop	Unmatched	13825093.1	18317945.8	-4492852.73	2641169.1	-1.70
	ATT	13825093.1	9802456.48	4022636.59	6710353.75	0.60
Pressliberties	Unmatched	4.87348485	4.31120783	.562277014	.090477268	6.21
	ATT	4.87348485	4.45606061	.417424242	.268375529	1.56
Religiousfractionaliz	Unmatched	.379188228	.46187932	-.082691092	.007415625	-11.15
	ATT	.379188228	.446136131	-.066947903	.025932054	-2.58

Note: S.E. does not take into account that the propensity score is estimated.

psmatch2: Treatment assignment	psmatch2: Common support	On support	Total
Untreated	3,676		3,676
Treated	1,320		1,320
Total	4,996		4,996

### **Annexe V : Sample Deducted After matching:**

	Nom_pays	Année d'appariement	traitement
1	Sri Lanka	1981	0
2	Peru	1981	1
3	Venezuela, RB	1982	0
4	Kazakhstan	1982	0
5	Trinidad and Tobago	1982	0
6	Honduras	1982	1
7	Bolivia	1982	1
8	El Salvador	1982	1
9	Guyana	1983	0
10	Venezuela, RB	1983	0
11	Turkey	1983	1
12	Argentina	1983	1
13	Angola	1984	0
14	Timor-Leste	1984	0
15	Guatemala	1984	1
16	Grenada	1984	1
17	Sri Lanka	1985	0
18	Ecuador	1985	0
19	Brazil	1985	1
20	Uruguay	1985	1
21	Lithuania	1987	0
22	Philippines	1987	1
23	Greece	1989	0
24	Uganda	1989	0
25	Colombia	1989	0
26	Germany	1989	1
27	Paraguay	1989	1
28	Bulgaria	1989	1
29	Gabon	1990	0
30	Lithuania	1990	0
31	Cote d'Ivoire	1990	0
32	Micronesia, Fed. Sts.	1990	0
33	Sudan	1990	0
34	Costa Rica	1990	0
35	Equatorial Guinea	1990	0
36	Hungary	1990	1
37	Romania	1990	1
38	Czech Republic	1990	1
39	Comoros	1990	1
40	Nicaragua	1990	1
41	Albania	1990	1

42	Chile	1990	1
43	Fiji	1990	1
44	Poland	1990	1
45	Burkina Faso	1991	0
46	Switzerland	1991	0
47	Nepal	1991	0
48	Benin	1991	1
49	Bangladesh	1991	1
50	Russian Federation	1991	1
51	Sierra Leone	1992	0
52	Costa Rica	1992	0
53	Papua New Guinea	1992	0
54	Egypt, Arab Rep.	1992	0
55	Congo, Rep.	1992	1
56	Mali	1992	1
57	Thailand	1992	1
58	Slovenia	1992	1
59	Myanmar	1993	0
60	Mauritius	1993	0
61	Samoa	1993	0
62	Burundi	1993	1
63	Madagascar	1993	1
64	Mongolia	1993	1
65	Bhutan	1994	0
66	Lithuania	1994	0
67	Azerbaijan	1994	0
68	Panama	1994	1
69	South Africa	1994	1
70	Ukraine	1994	1
71	Nepal	1996	0
72	Ghana	1996	1
73	Belgium	1997	0
74	Mexico	1997	1
75	Palau	1998	0
76	Armenia	1998	1
77	Kenya	1999	0
78	Togo	1999	0
79	Indonesia	1999	1
80	Djibouti	1999	1
81	Costa Rica	2000	0
82	Belarus	2000	0
83	Senegal	2000	1
84	Croatia	2000	1

### Annexe VI : Descriptive Statistics:

Variable	Obs	Mean	Std. Dev.	Min	Max
LnFDI	1934	18.77712	2.862155	2.302585	26.07078
Traitement_Matching	2310	.6562771	.4750528	0	1
pays_en_transition	2310	.5584416	.4966804	0	1
effet_transition	2310	.3640693	.4812724	0	1
logPIBpc	2162	7.303887	1.273359	4.46596	11.09284
logPopulation	2310	15.81331	1.722936	11.23131	19.28532
ExportPIB	1968	34.64622	21.46489	.1829688	166.3635
Educepend	1500	21.33241	19.68218	0	94.97369
Inflation	1990	73.41219	543.2735	-29.17266	13611.63
QualitGovernment	1432	.4839499	.1857824	.0555556	1
Telephonelines	2298	2717815	7302782	500	5.48e+07