## Cheap Talk and Transparency: Explaining the Bilateral Trade Agreements With the EU

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## **Abstract**

What political factors explain the selection of countries for preferential trade agreements by the European Union? Applying a Cheap Talk model to the bargaining process between developing countries (the Sender) and the EU (the Receiver) this paper argues that in forming a PTA the EU is more likely to target countries that have high political and economic transparency relative to other developing countries. In highly transparent countries, indeed, the EU is able to monitor effectively whether or not these countries follow its forms of conditionality, which is assumed being the main rationale of the EU regionalism. Moreover, the economic and political transparency of developing countries plays a particularly important role in the probability of forming bilateral agreements with high degree of flexibility. This study quantitatively tests these hypotheses using an original database, which consists of 138 developing countries and contains data on institutional indicators. Empirical findings support the hypotheses.

**Key Words:** EU, trade agreement, domestic institutions, cheap talk, delegation model

## Introduction

What political factors explain the decision by the European Union to enter into preferential trade agreements with developing countries? In the post-war period, the European Union (henceforth, EU) has been the main actor responsible for the

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proliferation of preferential trade agreements (henceforth, PTAs).<sup>2</sup> During the first wave of regionalism in the 1950s, the EU was the most important trade bloc that was formed. The EU further contributed to the spread of regionalism by concluding the Yaounde' Agreements and the Lome' Treaties with the former colonies, respectively in the 1960s and in the 1970s. It is especially in the current wave of regionalism, however, that the EU has been central to the proliferation of PTAs. For instance, of the 109 notifications of PTAs to the World Trade Organization by 1st January 1995, no less than 76 were with the EU or between European partners (Pelkmans and Brenton, 1999).

Despite of the magnitude of the EU bilateralism and its importance for the international trade system, few studies have quantitatively analyzed the driving forces of this phenomenon. Moreover, to date most studies have focused almost exclusively on the economic drivers. According to Pelkmans and Brenton (1999), countries that have signed a PTA with the EU have five main economic features. First, these countries are economically much smaller than the EU. Second, their level of economic development is considerably below the EU average. Third, there are significant differences in the level of external protection between third countries and the EU. Specifically, the EU has much lower tariffs on industrial goods than third countries. Fourth, a large proportion of the developing countries (henceforth, LDCs) trade is already accounted for by the EU. Finally, third countries are commercially relatively unimportant for the EU countries.

Recent political literature has the merit of showing that regarding the formation of PTAs, economic explanations often obscure as much as they illuminate and that politics matter in states' decision to establish a PTA. For instance, Aggarwal and Fogarty (2007: 2) explore several potential explanations for EU regionalism, including the interplay among sectoral interests, interagency rivalries, the dynamic of systemic level factors, such as power balancing and nested institutions, and the vagaries of political and cultural identities. Moreover, Woolcok (2004: 3) claims that the political motivations of EU regionalism include not only foreign and security interests, but also the desire to promote economic development and thus stability in LDCs. The previous studies, however, suffer from two main shortcomings. First, they have largely neglected the impact of LDCs' domestic institutions in the EU's

<sup>&</sup>lt;sup>2</sup>Loosely, a preferential trade agreement is an arrangement that liberalize trade among members. Here, the term "preferential trade agreement" and the term "bilateral trade agreement" are used as synonymous.

selection of a trade partner. Second, they rely mainly on case-study analysis (Dur, 2007; Schimmelfenig and Sedelmeier, 2004), but do not implement any empirical testing based on a large-n sample.

This study addresses empirically the rationale for the "you-too" regionalism<sup>3</sup> of the EU, focusing on domestic institutions. Using a simple theoretical intuition that is broadly in line with the IPE literature, this paper argues that political and economic transparency in institutions of LDCs both increases the likelihood of PTA formation, making easier for the EU to monitor the fulfillment of the agreement, and leads to high degree of discretionary provisions, allowing the EU to correctly identify causes of deviations on the part of LDCs. This argument, based on a combination of information revelation and flexibility due to improved monitoring, is tested using an original dataset built by the author. The database covers 138 countries from 1990 to 2005.

The paper will contribute to the ongoing debate on EU regionalism, improving the previous literature in this area in three substantive and decisive ways. First, it focuses on the political drivers of the EU regionalism. Specifically, following the idea developed by Mansfield, Milner, and Pevehouse (2002; 2007), this study focuses on the domestic political institutions that may complement economic explanations of the selection of countries for trade agreements by the EU. Second, this paper takes into account a rich conceptualization of economic and political transparency that relies on comparative politics literature. Third, it provides an original measurement of the concept of flexibility by looking at the proportion of discretionary clauses included in the text of the PTA.

The paper is structured as follows. The following section develops the theoretical framework on which this study is built. The second part describes a Cheap Talk model that mirrors the bargaining process between the EU and a LDC. The third section analyses the results of the formal model and derives two testable hypotheses. The fourth part introduces the empirical model and explains the methodology that has been used to test the hypotheses. The fifth section shows the empirical results of the econometric analysis. The sixth part controls for the robustness of the results. Finally, some conclusions are drawn.

<sup>&</sup>lt;sup>3</sup>The expression "you-too" regionalism indicates the conditions set by the EU that impact upon the formation of bilateral trade agreements with LDCs.

# 1 Economic Conditionality and Adjustment Costs

The new wave of regionalism features arrangements that involve not only the reduction of barriers and what is generally defined as merchandise trade, but also arrangements that regulate trade-related areas. Agreements on issues such as services, investment, intellectual property, and temporary movement of labor are becoming common in PTAs. In this regard, the EU has been the most important driver. In a broad sense, the EU offers access to their large markets for goods in exchange for access to service markets in LDCs, their acceptance of rules governing investment and intellectual property rights, and their improvement of human rights (Global Economic Prospect, World Bank, 2005). In the literature this is known as a conditional agreement. Examples of conditionality include the Copenhagen conditions, in which the EU required former communist countries to achieve stability of institutions guaranteeing democracy, human rights, and minority rights, to create a functioning market economy, and to cope with competitive pressure and market forces (Grabbe, 1999) and the Barcelona Process, which set the rules of the economic cooperation between the EU and the Mediterranean countries (Baert, 2003).

As recent studies have pointed out (Maur, 2005; McQueen, 2002; Holland, 2002), political conditionality has become on of the key issues between the EU and LDCs. The EU demands for greater accountability by LDCs have produced the adoption of a series of related principles applied and evaluated, such as good governance, democracy, human rights, and rule of law (Holland, 2002: 112). Conditionality can be categorized in several ways: between political and economic aspects; internal and external supervision; positive and negative sanctions. Political conditionality links rewards with both the expectations and the executions of policy in a LDC that promote the goals of democracy, human rights, and good governance. Economic conditionality links rewards with the adoption and promotion of specific microeconomic policies, such as structural adjustment programmes and liberation. Typically, both political and economic conditionality are intensively monitored by the EU (Holland, 2002: 119). Positive and negative forms of conditionality discount assured benefits for future required action with the threat of disciplinary sanctions in case specific policy guidelines are broken.

The underlying rationale for the EU using political and economic conditionality in negotiating bilateral trade agreements with third countries is three-fold. First, the EU aims to promote its rules with the partner country dictating a hegemonic harmonization of regulatory policies (Baldwin, 2000; Lawrence, 1995). As the former EC Trade Commissioner Pascal Lamy (2004) puts it, "we always use bilateral trade agreements to move things beyond WTO standards. By definition, a bilateral trade agreement is WTO-plus". In other words, the EU exports its own designed policies to gather bargaining power vis--vis the US at multilateral level, e.g. in the WTO round. The competition between the US and the EU on regulatory liberalization has been recognized by Zoellick<sup>4</sup> (2001; 5), who argues that "[free trade agreement] extends beyond the market because each of these agreements is setting the rules for the future. [...] The rule others (read the EU) are making without us (read the US) will determine the future" Second, by exporting its own regulatory standards, EU strengthens the international competitiveness of its firms. Specifically, the application of the EU regulations from a third country creates a competitive advantage for European producers making it more difficult for other producers, e.g. US producers, to sell their products. In this regard, the European Commission (2001) strives "to promote [...] regulatory approaches [...] compatible with international and European practices in order to improve market access and competitiveness of European products." Third, the EU aims to stabilize individually unsettled neighbours by connecting them more closely to the European bloc, and to encourage regional stability through integration (Maur, 2005: 1578). Good governance, for instance, has become a fundamental prerequisite for sustainable development (Holland, 2002: 121).

Despite of some limitations on the choice of their own domestic policies, there are several advantages for an LDC entering in an agreement with the EU. Forming a bilateral trade agreement with the EU enhances their policy credibility (Whalley, 1998; Winters, 1995). Using Winters' words (2002: 133), "entering a PTA entails political sunk costs, and if it requires liberal or sound policies to make sense, entry provides the government with a signal device, for only a government with liberal intentions would sign." Thus, in the presence of asymmetric information about the government, a PTA with the EU can improve credibility. Even Rodrik (1989: 756), who has been quite sceptical on the value of trade interaction for LDCs, admits that "harmonization in domestic laws and institutions entailed by deep integration presents and opportunity for reformist in LDCs to lock in their reforms and render them irreversible." Moreover, Maur (2005: 1578) argues that improving their existing regulatory framework along the EU template helps LDCs to correct the

 $<sup>^4\</sup>mathrm{Robert}$  Bruce Zoellick served as US Trade Representative from February 2001 to February 2005.

market failure so that they are able to cope at lower costs in the international system. Finally, according to McQueen (2002: 1383), an agreement with the EU can significantly dampen transaction costs and grant greater certainty of a regulatory framework in trade, not only with the EU, but also in trade with the rest of the word.

Increasing policy credibility and political and economic certainty as well as decreasing transaction costs are necessary conditions to attract investment and multinational corporations. In turn, attracting foreign capital and foreign companies allows LDCs access to knowledge, markets, and networks. In particular, financial support and technical assistance may bolster reforms resulting in a further improvement of credibility and political and economic certainty. Recent studies (Medvedev, 2006; Velde and Bezemer, 2004; Globerman, 2002; Chakrabarti, 2001) have indeed shown that PTA membership is associated with a positive change in net FDI inflows and financial aid<sup>5</sup> and that this positive change is stronger if a LDC enters a bilateral trade agreement with a developed economy. For instance, according to Benedict de Saint-Laurent, director of ANIMA, a network of inward investment agency for the Mediterranean countries, political and economic partnership with the EU has prompted economic, financial, and fiscal reforms in these countries, which have made their economy much more open (Economist, 12th - 18th July 2008, page 75).

According to the way things have been presented so far, both the EU and LDCs have a clear preference for forming a PTA. However, carrying out the reforms that the EU demands through political and economic conditionality involves adjustment costs. Thus, it may be expected that not every LDC is always ready to sustain them. More specifically, under circumstances where product and factor prices adjust immediately and resources can be reallocated without cost, the optimal policy would be the simultaneous removal of all distortions. However, in the real world things are more complicated than that. Indeed, resources cannot be reallocated instantaneously without incurring costs among different sectors of the economy (Nsouli et al., 2005: 741). Moreover, different markets adjust to policy changes and price signals at different speeds. For instance, the response of the production structure, investment, and ownership patterns to economic reforms tends to be much slower than the response to financial policies and reforms in such areas as privatization, tax, and trade.

<sup>&</sup>lt;sup>5</sup>For instance, Mediterranean countries received one billion euro, which reached two billion euro in 2004, in form of loans as result of the PTAs signed by the EU (Tovias and Ugur, 2002: 404).

There are several adjustment costs that an economy may face due to conditionalitydriven reforms.<sup>6</sup> First, since labor and capital are sector specific and thus not readily transferable between sectors, economic reforms generate short-term costs in term of unemployment and income distribution effect (Little et al., 1970; Gavin, 1996). Second, when the budgetary cost of reforms is high, as may be expected when an LDC wants to honour EU economic conditionality, a reform process may result in inflationary pressure (Dewatripont and Roland, 1992; 1994). Third, there is a general consensus that trade liberalization may lead to loss of government revenues, which are an important part of an LCD's budget, as trade taxes are reduced or eliminated (Baunsgaard and Keen, 2005). In turn, to maintain macroeconomic stability governments may be forced to cut social security and welfare or to raise taxes (Ebrill et al., 1999). Thus, if this is the scenario, the majority of the population may show a status quo bias that makes reforms unfeasible at both political and economic levels. Therefore, adjustment costs are not trivial in the decision of a developing economy to join a PTA with the EU. For instance, the negotiation between the EU and the African Caribbean Pacific countries (henceforth, ACP) for forming a trade agreement has been deadlocked since 2002. This stalemate is due to the fact that the EU is refusing to recognize regional differences across the ACP. Indeed, African and Pacific countries face quite larger adjustment costs in achieving the EU conditionality<sup>7</sup> than Caribbean countries do, making it difficult for them to join a PTA with the EU (Oxfam briefing paper, 2008: 6).

To summarize, for an LDC there is a clear trade-off between the benefits of signing a PTA with the EU in terms of enhancing its credibility in the global economy and the adjustment costs that it has to face in carrying out the reforms that the EU dictate through the economic conditionality. This trade-off creates an incentive for an LDC to manipulate expectations, i.e. claiming to be ready to honour EU conditionality in order to secure a PTA with the EU, and pursue a time-inconsistent policy, i.e. delaying or never implementing reforms in order to avoid adjustment costs. The basic idea that is anticipated herein and that will be developed formally in the next section is a simple one. In general, it will be desiderable for an LDC to preannounce its future policies in term of honouring the EU economic conditionality, so that it can bolster as swiftly as possible its credibility in the market. However,

 $<sup>^6</sup>$ For an extensive analysis on the relationship between adjustment costs and economic growth, see Agenor (2004).

<sup>&</sup>lt;sup>7</sup>Fijian Minister Tavola stated that "as things stand now, the agreement is threatening to overwhelm our fragile economies" (cited in P. Dhondt, "Trade: Small Nations doubts about EU get bigger", Inter Press Service.

it may be impossible for the LDC to make any claim that precisely and credibly communicates its private information about its objectives. Indeed, an LDC would have incentive to lie to the EU, since by manipulating expectations it can achieve a more efficient outcome than telling the truth. Knowing this, the EU, which wants to maximize the probability of having its conditionality honoured, will never believe any claim from the LDCs. One way to overcome this problem for the LDC is to make imprecise claims, as the next section will show formally, which, however, require some specific features of domestic institutions of LDCs.

# 2 Explaining the "You-Too" Conditions: A Formal Model

Suppose there are a principal and n ( $n \ge 2$ ) agents. Agents are one of two possible types  $\theta i = good, bad$ . Each agent is a "good type" with probability  $\pi_i$ . The principal must select those agents who are of the "good type". The fundamental question of principal agent models can then be phrased as follows: How can the principal design institutions to select a good type agent (if one exists)? In bargaining literature, this problem is often termed adverse selection (McCarthy and Meirowitz, 2007: 277).

In this setting, the EU is the principal and LDCs are agents. The EU chooses between cooperate (C) with an LDC, which leads to the formation of a PTA, or not to cooperate (C), which is equivalent to the status quo (absence of a PTA). The expected payoff from a PTA with a "good type" LDC dominates the status quo,  $\alpha_i > \gamma_i$ . Indeed, in this case the EU can impose its conditionality and export its regulatory policies, as explained in the previous section. However, for the EU a PTA with a "bad type" LDC has a lower payoff than the status quo (absence of a PTA),  $\beta_i < \gamma_i$ . Indeed, since negotiating a PTA is a long and costly process (Koremenos, Lipson, and Snidal, 2001), the EU would incur losses of resources in establishing an agreement that does not work.

A "good type" agent is interested in forming a PTA with the EU to bolster its credibility in the international economic system. Thus, it is willing to implement economic and political reforms coherently with EU conditionality, though these reforms are domestically costly. Conversely, a "bad type" agent is not interested in employing economic and political reforms and so it would completely disregard EU conditionality once the agreement is reached. However, both "good type" and "bad

type" agents are better off in signing a PTA with the EU, since it is assumed that a PTA with the EU results in more credibility than no PTA at all, even without honoring its conditionality.

Since it is crucial for the solution of the model, the two possible LDC's types are expressed formally.<sup>8</sup> Consider a single-period model of unknown type where a given country's type is given by its (unobserved) target  $\overline{T}$  of fulfilling the political and economic conditionality required by the EU. Assume that  $\overline{T}$  represents the cumulative target of each single issue, e.g. trade liberalization, capital liberalization, etc. Assume that types (that is, values of  $(\overline{T})$  are uniformly distributed over [0, 10]. Consider T as the actual conditionality target achieved by a LDC and  $T^e$  as the expected conditionality target achieved by a LDC. Suppose that the agent assigns a loss not only if the actual achievements on conditionality parameters, T, deviate from the conditionality target, reflecting, for instance, a loss in credibility, but also if the expected achievements on conditionality parameters,  $T^e$ , deviate from the conditionality target, reflecting, for instance, public opinion costs for having failed to reform. It is assumed that the agent minimizes the single-period loss that is subject to the constraint:

$$C_t = -(T^e - T) \tag{1}$$

where  $C_t$  is the adjustment cost that the LDC has to face to fulfil the conditionality parameters required by the EU. Thus, the loss function of country A becomes:

$$L(T, T^e; \overline{T}) = -(T^e - T) + (\overline{T} - T)^2 + (\overline{T} - T^e)^2$$
(2)

This formula embodies the agent's distaste not only for the aforementioned deviations from the conditionality target, but also for an actual achievement on conditionality parameters that differs from the expected achievement. These two

<sup>&</sup>lt;sup>8</sup>This model is similar to the one used by Stein (1989) in an economic application of Cheap Talk to US Federal Reserve

scenarios need not to be compatible. Specifically, a policy that achieves the desired "internal balance", e.g. minimizing the adjustment costs, will not, in general, also produce the preferred "external balance", e.g. maximizing the credibility internationally. For instance, the agent may want to increase T to increase its credibility in the international economic system. However, in doing so it may fear incurring large adjustment costs that would lead to internal macroeconomic instability. In sum, taking into account this trade-off, a "good type" LDC for the EU is a country that prefers to bolstering its credibility even at the risk of harming its internal macroeconomic stability, e.g. tax haven countries that want to attract capital (Dharmapala and Hines, 2006). Conversely, a "bad type" for the EU is a country that will always favour internal macroeconomic stability over increasing its credibility in the international system, e.g. sub-Sahara African countries that are worried about jeopardizing their economies as a result of radical reforms.

Coherently with the preferences and strategies of principal and agents, the selection of an LDC trade partner from the EU may be described as a problem of optimal stopping (DeGroot, 1970). Specifically, it is assumed that the EU inspects the n agents and then selects one of them to form a PTA. To account for the fact that the EU has formed more than one PTA, it is assumed that once the EU has selected one LDC, the process will start again. The countries are to be shown to the EU in a random order and the EU has to inspect them sequentially. After having inspected any number r ( $1 \le n \le r$ ) of countries, the EU will be able to rank them from most preferable (rank 1) to least preferable (rank r). At any stage, the EU can either stop the inspection process and form a PTA with the LDC just inspected or continue and inspect another state. Once the EU has decided not to accept a particular LDC, it can never go back and select it at later stage of that process (but it can select that country in a new process). If the EU has not stopped and selected an earlier LDC, then it must accept the  $n^{th}$  country as trade partner.

<sup>&</sup>lt;sup>9</sup>I owe this suggestion to Randy Calvert.

<sup>&</sup>lt;sup>10</sup>For simplicity, the model makes no claim regarding the cost of each inspection and regarding the discount rate for a delay in forming a PTA.

# 3 Analysis

## 3.1 Political and Economic Transparency

The basic feature of this model and the reason for formulating it in the above terms is that the only relevant information that the EU obtains about each LDC is its relative rank among those that have already been inspected. As explained above, the EU ranks LDCs according to the probability of being "good type" or "bad type". However, since agent types constitute private information, the EU can only observe the signal from the agents, but not the actual types. This produces a two-stage selection process. First, since the worst scenario for the principal is to form a PTA with a "bad type" agent, the EU will not stop if it is not able to observe any signal from the agent under inspection. Second, intuitively the EU will not stop if the signal observed indicates the agent as a "bad type". In sum, the EU will stop optimally if it is able to observe a signal from the agent and if that signal communicates credibly that the agent is a "good type".

Since the EU is not able to observe  $\overline{T}$ , the signal is given by the level of  $T^e$  that the agent claims during the bargaining process. More specifically, the EU's decision to form a PTA is affected by the claim the agent makes during negations regarding its expected conditionality target. However, by finding equilibria of the model, it is shown that this claim is credible only if LDCs have a high level of political and economic transparency that mitigates the asymmetric information problem. Specifically, political and economic transparency plays a role in both stages of the selection process. First, LDCs with low political and economic transparency have no chance of being selected because they are not able to send any credible signals to the EU regarding their T. Indeed, since  $T^e$  relies on private information, the EU has no way to monitor the actual compliance of the conditionality target. Second, political and economic transparency allows the EU to distinguish between "good type" and "bad type" agents by designing incomplete contracts, i.e. PTAs with flexibility in terms of target of conditionality.

<sup>&</sup>lt;sup>11</sup>It is assumed that  $\gamma_i$  is sufficiently greater than  $\beta_i$ , to discourage the EU from forming a PTA with a LDC exclusively on the basis of the a priori probability  $\pi_i$ .

## 3.2 Solution Concepts

Proposition 1 and Proposition 2 formally summarize this two-stage selection process.

**Proposition 1.** If the agent attempts to make a precise claim of its target T, the EU will not believe this claim. An LDC's precise claims regarding its target T are not informative for the EU regarding which type of agent the LDC is.

Since both agent types find it optimal to engineer a surprise in the conditionality target, it has an incentive to try to manipulate expectations (see Appendix A for a formal proof). Specifically, during the bargaining process a LDC will use target claims in attempt to induce the EU to expect a conditionality target that is higher than the target that it will reach. The reason for the LDC's wish to do so is that EU conditionality is expected to send a signal to investors that the country is a good investment risk, indicating that it is working to create a safe environment for investors. Similar to the role Vreeland (2004: 8) ascribes to the IMF, EU conditionality is expected to produce a "seal of approval" for an LDC, bringing in what is called "catalytic finance". As long as the global market and investors use the claims of conditionality target in forming their expectations on the credibility of LDCs, LDCs have an incentive to overstate this target.

This proposition implies that time-inconsistent policies would lead to higher utility than time-consistent ones for both agent types. Indeed, an agent that makes an agreement with the EU to receive something, i.e. to gather credibility in the international economic system, against the promise of some domestic reforms in accordance with EU conditionality would be tempted to renege and not to implement or to implement only partially these reforms. Since the EU is aware of this incentive and since, like the IMF (Stone, 2007), the EU wishes to maximize its conditionality, the EU will be unwilling to trust in conditionality claims. This proposition suggests that a PTA between the EU and a LDC can never be a complete contract; i.e. a contract in which there are no degrees of freedom or ex post discretion (Schropp, 2008: 57). Indeed, a complete contract with a precise conditionality target does not

<sup>&</sup>lt;sup>12</sup>This model implies that the EU's own capacity to retaliate against those LDCs that do not enforce the agreement is limited (Maur, 2002). For instance, the exit cost for withdrawing from a PTA is usually perceived as too high by the EU (McQueen, 2002: 1382). Thus, the EU wants to be sure to select its partners carefully in the first place. Hence, the type of signals that an LDC is able to send is central in the model.

allow the EU to understand if the agent is a "good type" or a "bad type" due to the lack of signal. Thus, in this case the EU will not stop, but will continue inspect other LDCs.

**Proposition 2.** Imprecise claims from an agent, i.e. announcing a target range, can be credible and hence informative for the EU regarding which type the agent is.

Proposition 2 suggests that an LDC may credible communicate which target it is ready to fulfil during the enforcement phase only by giving a range (see Appendix A for a formal proof). When claims are made for discrete ranges, if an agent lies about its intentions, it has to lie by a discrete amount, whereas precise claims are continuous (Drazen, 2000: 213). Using Drazen's words (2000: 213), "the impossibility of marginal lying (italics not in the text) means that truthtelling may be preferred to lying, since a large lie may reduce welfare relative to telling the truth." Simpler still, by giving a range can an LDC credibly claim to be a high "conditionality target" type, increasing in this way its probability of forming a bilateral trade agreement with the EU.

In the bargaining literature the idea of range is closely linked to the concept of flexibility. According to Milner and Rosendorff words (2001: 830), flexibility is "any provision of an international agreement that allows a country to suspend the concessions it previously negotiated without violating or abrogating the terms of the agreement." A recent body of literature (Fearon 1998; Koremenos, Lipson, and Snidal 2001; Kucik and Reinhardt, 2008) emphasizes the uncertainty that states face about the future costs of compliance. Such uncertainty creates the time-inconsistency problem that negatively affects cooperation between the EU and an LDC, endangering the prospects for a bilateral trade agreement in the present. To overcome this problem, almost every international agreement allows members the opportunity to temporarily escape contractual commitments without incurring excessive retaliation from other partners or without incurring renegotiating costs once they have been forced to withdraw from the agreement. In doing so, flexibility may encourage states to enter into cooperative agreements and sustain those commitments over time (Kucik and Reinhardt, 2008).

There are two main provisions that are used in the trade agreement to allow

flexibility: anti-dumping protection and safeguard clauses.<sup>13</sup>. The problem with flexibility is that domestic politics constitute private information, as do domestic political changes. Thus, there could be an incentive for LDCs to misrepresent their private information in order to achieve a more favourable outcome in the bargaining process with the EU. If the EU perceives that monitoring the domestic politics of a third country would not be feasible or would be too expensive, it will not allow the inclusion of the flexibility clauses in the agreement in the first place. Indeed, the higher the political and economic transparency of the third states, the lower the asymmetries of information are and, in turn, the more the third state is credibly capable of communicating about "exceptional circumstances" that may occur domestically to undermine its capacity for compliance. In this favourable scenario, the EU is indeed expected to stop sampling and to form a bilateral agreement that includes flexibility clauses.

It is worthwhile to stress that political and economic transparency plays a crucial role herein in both the bargaining phase and the enforcement phase of a PTA. In the latter phase, political and economic transparency has an impact upon the degree of flexibility of a PTA between the EU and an LDC. This follows naturally from Bayesian updating, as the sources of any given defection can be seen as coming from either forced emergency measures or opportunism, and is in line with previous studies in the field (Svolik, 2006). In the former phase, political and economic transparency allows LDCs to bargain incomplete contracts and, in doing so, these countries are able to send a credible signal as to which type of agent they are. Put in other words, the inclusion of flexibility in trade agreements allows LDCs not only to increase gains from cooperation (Svolik, 2006), but also disclose their types to the EU.

<sup>&</sup>lt;sup>13</sup>All EU trade agreements include safeguards (Woolcock, 2007: 7) There are three forms of safeguards. Permanent safeguards take the form of a reaffirmation of the EU's rights under the WTO. Transition safeguards are those that grant the EU (and its preferential partners) rights to impose import controls should the FTA lead to an unexpected rapid increase in imports during its implementation. Finally, there are special safeguard measures that the EU uses for sensitive sectors such as agriculture, and offers as special and differential treatment for developing countries.

<sup>&</sup>lt;sup>14</sup>Every EU agreement with a LDC contains such expression

<sup>&</sup>lt;sup>15</sup>In case of opportunism, the EU can adopt some forms of retaliation against the LDCs, e.g. reducing or suspending financial aid (McQueen, 2002), raising tariffs in sensitive sectors (Maur, 2005), or making a more severe use of rules of origin (De Melo *et al.* 2004; Chase, 2008).

## 3.3 Hypotheses

As explained above, the EU emphasizes economic and political conditionality in forming a trade agreement with an LDC. In relation to EU conditionality, an LDC is credibly able to communicate only a range (never a precise value) of the target that it may fulfil during the enforcement phase of the agreement. From a contractual point of view, this implies that the inclusion of breach clauses, which allow some forms of flexibility in the compliance, is necessary for the establishment of a bilateral trade agreement between the EU and an LDC. However, including flexibility entails the EU being able to monitor the domestic conditions under which the trading partner is allowed to make use of the discretionary powers accorded to it in the agreement. This is likely to happen only if the third country has high political and economic transparency. In fact, countries with low political and economic transparency are not able to bargain flexible contracts with the EU. Thus, where counties have low levels of political and economic transparency, the EU is not able to distinguish through cheap talk between countries that are serious partners and countries that are free-riders aiming to use the EU to bolster their credibility in the global system. In this scenario, LDCs have no chance of being selected by the EU to form a PTA. Conversely, LDCs with high political and economic transparency are able to bargain incomplete contracts and in this way they are able to send a credible signal showing that they are serious partners. Moreover, as their political and economic transparency increases, LDCs are able to include in the agreement a higher degree of flexibility, maximizing their welfare from PTAs. Accordingly, two related hypotheses can be made as follows:

H1: The probability of the EU and a third country forming a PTA is likely to increase as the political and economic transparency of this third country rises.

H2: The degree of flexibility of a PTA between the EU and a third country is likely to increase as the political and economic transparency of this third country rises.

# 4 Empirical Analysis: Models and Case Selection

In the previous sections, the EU bilateralism has been described as a process of selection related to domestic institutional features of LDCs. Due to this selection character of the causal mechanism, some estimation problems occur. In order to

deal with these issues and to test the previous hypotheses, the following Heckman selection model has been built:

Outcome Equation: 
$$y_i = \alpha X_i + \varepsilon$$
 (3)

Selection Equation: 
$$z_{it} = \beta U_i + \gamma V_i + \delta Z_i + \zeta W z_{it-1} + \varepsilon.$$
 (4)

Where y and z are the dependent variables respectively of the outcome equation and selection equation, X is a vector of a LDC's features that influence the level of PTA's flexibility, U is the vector of the explanatory variables that affect the EU's decision to form a PTA, V is a vector that affect the country A's decision to form a PTA, and Z is a vector of characteristics of the relationship between the EU and country A, and  $Wz_{t-1}$  is a spatial weight matrix constructed from the number of preferential trade agreements in the sample. Spatial lags of a dependent variable fulfill a similar function as lagged dependent variables in models that account for serial correlation. Instead of simply lagging the dependent variable in time, values on the lagged dependent variable are brought into the regression based on the (inverse of) distance variable. A positive coefficient would indicate that countries indeed are driven to seek preferential agreements if their neighbors are doing so to avoid the trade diversion effect (Hirschman, 1981; Grossman and Helpman, 1995; Baldwin, 1996; Haggard; 1997). Moreover,  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$ , and  $\zeta$  are vectors of parameters and  $\varepsilon$  is the error term.

## 4.1 Outcome Equation

The dependent variable (henceforth, DV) of the outcome equation is the variable  $PTA\ FLEXIBILITY_{ijt}$ . This variable is built upon Epstein and O'Halloran (1999: 90-112) measurement of executive discretion.<sup>17</sup> It is the discretion in applying legal provisions that a trade agreement leaves to each member country as it results from reading the statutes. More specifically,  $PTA\ FLEXIBILITY_{ijt}$  is the proportion of provisions in the trade agreement that delegate policy authority to member states.

<sup>&</sup>lt;sup>16</sup>For a similar approach, see (Manger, 2006; Egger and Larch, 2007).

<sup>&</sup>lt;sup>17</sup>Another application of this method has been implemented by Franchino (2001) for describing the delegating power of in the EU.

It's a continuous variable that range between 0 and 1 and it proves to have good variations among different PTAs. Appendix B provides a more detailed explanation of the method that has been implemented to obtain this variable <sup>18</sup>.

The main independent variables of the Outcome Equation are variables that measure political and economic transparency. Due the difficulties of capturing domestic institutions, political and economic transparency has been operationalized in three different ways: using the level of corruption, of government effectiveness, and of rule of law. CORRUPTION is a proxy for the predictability of a country's legal environment and of irregular practices that can have major importance during the stipulation of a contract. GOVERN. EFFECT. takes account of the direct relationship between the capability of government to credibly commit itself in implementing policies and the transparency of the economic environment of a given society. RULE OF LAW is a proxy of effective contract enforcement, of the extent to which laws are observed and enforced fairly and competitively, and more broadly of respect for the rule of law. All three indicators are built upon Kaufmann et al. (2006) dataset. Since Kaufmann's indicators are available from 1996 to 2005, data on corruption and rule of law have been integrated by Political Risks Services Group (ICRG, 2006) for the 1990-1996 period. For Government Effectiveness, the most recent data available has been used for the previous period.

The measure of political and economic transparency for potential EU partner countries increases as the values of the three indicators, which have been rescaled from 0 to 5, increases. Moreover, the Pearson test suggests that these indicators show significant (at 95 per cent level) correlation with each other (around 0.8 for each variable). Thus, three different models, each one including only one of the three variables, have been used to test the two hypotheses in order to avoid the collinearity problem.

Other control variables are  $DEMOCRACY_{it}$ ,  $COLONY_{it}$ ,  $TRADE_{ijt}$ , and  $US\ PTA_{it}$ .  $DEMOCRACY_{it}$  is a 7 point scale measuring the nature of the regime of the selected country i in time t-1. It has been built upon the Polity IV dataset. This variable captures the idea that democratic regimes trust each other (Weart, 1998; Dixon, 1994; Russett, 1993). Thus, the more a country is democratic, the more the EU trusts this country. In turn, this is expected to have a positive impact

<sup>&</sup>lt;sup>18</sup>I owe this suggestion to Robert Thomson.

upon the degree of flexibility.  $COLONY_{it}$  scores 1 if country i has been a colony of an EU member; 0, otherwise. Indeed, former colonies have often maintained close tie with the colonizer and this is expected to affect the capability of the EU to monitor these countries. In turn, this is likely to affect positively the level of flexibility.  $TRADE_{ijt}$  is the log of the value of exports from the EU<sup>19</sup> to the third country i and from the third country to the EU in year t-1 in constant (t+n) dollars. This is the most common way in which the trade flows between pairs of countries are measured in the economic literature. The amount of trade is expected to influence the number of anti-dumping clauses. Since anti-dumping clauses has been presented as a index of flexibility in trade agreements, as trade between the EU and a LDC increases, so does the level of flexibility.  $US\ PTA_{it}$  scores 1 if the selected country has signed a PTA with the US in t-1 or before. It may be expected that a LDC, which has a PTA with US, has a stronger bargaining power in negotiating an agreement with the EU, since it has already gained the access to a very important market. Thus, that LDC should be able to sign a PTA with high degree of flexibility.

## 4.2 Selection Equation

The dependent variable of the selection equation is a dichotomous variable. Specifically,  $PTA_{ijt}$ , is a dummy variable which equals 1 if country i and EU are in a PTA in year t; 0, otherwise. The dependent variables differ from 0 not only in the years in which the PTA is signed, but also in the years in which the agreement is in force. Even in the case of the Selection Equation, the main independent variables are variables that measure political and economic transparency that have been described in the previous section. Regarding the EU control variables, two covariates control for the economic health of the selected country. GDP PER  $CAPITA_{it}$  measures the minimal value in terms of GDP per capita of the selected country i year t-1. This variable is a proxy for the level of development of the selected country that is supposed to have a positive impact on the probability of signing a PTA.  $GDP_{it}$ measures the GDP of the selected country i year t-1. This variable captures the idea that the larger a country is, the higher is the benefit in joining an RIA (Baier and Bergstrand, 2004). Regarding the political variables,  $ALLIANCE_{ijt}$  scores 1 if country i is ally with at least one EU member in time t-1; 0, otherwise. This variable controls for the possibility that the EU signs a PTA with a third country

<sup>&</sup>lt;sup>19</sup>Note that the EU is considered the sum of all the member countries in that particular year, i.e. 12 member until 1993, 15 members from 1994 to 2003, and 25 from 2004.

for foreign policy reasons. Finally,  $DEMOCRACY_{it}$ ,  $COLONY_{it}$ , and  $US\ PTA_{it}$  have been previously described. The lower the score on  $DEMOCRACY_{it}$ , i.e. the more democratic a regime is, the more likely the EU should be to form a preferential agreement. Furthermore, former colonies have often maintained close tie with the colonizer and this is expected to make the formation of a PTA more likely. Finally, US PTA captures the idea that the EU may react to a PTA signed by the US with a third country, e.g. Mexico, not to loose trade with this country (Dur, 2007) or to push its own regulatory standard in the international system (Drezner, 2007).

Regarding third country control variables,  $TRADE\ DEPENDENCE_{it}$  measures the LDC's share in total export to the EU in year t-1. This variable captures the fact that developing country will be more likely to form agreements with their most important trade partners.  $GATT\ WTO_{it}$  scores 1 if country i is a member of GATT/WTO in year t-1; 0 otherwise.  $DISPUTE\ WITH\ THIRD\ PARTY_{ijt}$  scores 1 if the selected country was involved in a GATT/WTO dispute with the EU in time t-1. It captures the argument that the EU does not join a PTA with third country with which it has a trade dispute. These two variables control for the argument that members of GATT/WTO may find it convenient to form a PTA with the EU in order to gain bargaining power within these multilateral institutions (Mansfield et al., 2002; 2004; 2005).

Regarding characteristics of country pairs,  $TRADE_{it}$  has been previously described. As trade between the EU and the third country increases, the traditional trade gains from tariffs removal increases for the third country. Furthermore,  $DISTANCE_{ijt}$  measures the log of distance in kilometres between the Brussels and the capital of the third country i. Indeed, several authors (Krugman, 1992; Baier and Bergstrand, 2002) claim that the formation of PTAs is more likely among countries that are geographically proximate. Table 1 below summarizes the descriptive statistics of the variables and their sources.

#### [Table 1 about here]

As mentioned above, the model is tested for a large number of countries. The unit of observation consists of all un-directed dyads between the EU and 138 LDCs that have available data on institutional indicators. This model is known as unbalanced in the literature. The un-direct dyads have been chosen since the first country

in the dyad is considered the country that is targeted, whereas the second it is the EU. Accordingly, the number of observation of each year is 138 and the analysis involves 16 years from 1990 to 2005.

Mirroring the formal model previously presented, the empirical analysis follows a two-stage process. In the first stage, we endogenize EU decision to select a LDC using the level political and economic transparency as main explanatory variable. The estimated probability of selection is then used as a regressor in the second stage for analysing the impact of political and economic transparency on the degree of flexibility included in the trade agreement. The causal mechanism previously set implies that political and economic transparency allows LDCs bargaining more flexible PTAs with EU. However, since the degree of flexibility of a PTA impact upon its probability of being signed, excluding countries that do not have a PTA with EU would cause severe estimation bias that might lead to wrong inferences. Thus, the econometric logic of the Heckman model nicely fits this theoretical conundrum. Indeed, it allows conditioning the estimated mean function in the second stage on the selection process of first stage. Moreover, it allows assuming that for a LDC the probability of being selected by the EU bears an influence on the likelihood to sign a PTA that includes flexibility provisions. Furthermore, to account for the duration dependence of the dependent variable in the selection model, natural cubic splines (with three knots) are included.<sup>20</sup> Finally, since the dataset is a panel, to control for potential heteroskedasticity across countries, the robust Huber-White sandwich estimator is employed.

# 5 Empirical Findings

As previously stated, the first stage of the Heckman model test whether or not LDCs form a PTA with EU, analyzing the universe of cases. All three operationalizations support the argument that high political and economic transparency of an LDC increases the probability of forming a PTA with the EU with the coefficients having the right sign and being statistically significant at the 0.01 levels (see Table 2). Since in the logit model the value of the coefficients is not meaningful, looking exclusively at the sign and the significance of the coefficient does not allow us to know the effect of the main explanatory variables on the probability of forming an RIA. Thus,

<sup>&</sup>lt;sup>20</sup>For the purposes of saving space, splines are reported in the econometric analysis.

the predicted probabilities are showed in Table 3 below. The impact of the three variables on the probability of forming a PTA is noteworthy. RULE OF LAW proves to have the strongest effect, moving from a standard deviation below the mean to a standard deviation above the mean increases the likelihood of having a trade agreement between the EU and a LDC by 6.2 per cent. CORRUPTION and GOVERN. EFFECT. increases the likelihood of having a trade agreement between the EU and a LDC respectively by 4.2 per cent and 4.1 per cent, moving from a standard deviation below the mean to a standard deviation above the mean. Finally, the sign of all the control variables, which are statistically significant in the models, is in line with previous studies giving added plausibility to the findings.

[Table 2 about here]

[Table 3 about here]

Since a probit model is implemented in the first stage, this allows verifying the number of PTAs correctly predicted. In the context of McFadden's motivation of qualitative choice models, if the predicted probability of a PTA for a country pair exceeds one-half, this suggests that we should observe a PTA for the country pair. The model predicts 19 of the 23 country pairs with PTAs with a sensitivity of 80 per cent. The model predicts some agreements (e.g. between the EU and Turkey) that Baier and Bergstrand (2004) model, which has a similar specification, did not predict. Four PTAs between the EU and LDCs were not predicted: Algeria, Egypt, Lebanon and Syria. Finally, our qualitative choice model also allows us to identify for which country dyads bilateralism might be considered insufficient. Following Baier and Bergstrand (2004: 57), bilateralism is named insufficient if a PTA is predicted but does not exist (yet). Of 115 country dyads without a PTA, 2 pairs were not predicted correctly: Ukraine and Yugoslavia. Overall, the model correctly classifies 97.44 per cent of the dyads. Table 4 summarizes these finding graphically.

#### [Table 4 about here]

The second stage of the Heckman model tests the impact of political and economic transparency on the degree of flexibility of a PTA, analyzing a self-selected sample. Even in the outcome equation, all three operationalizations support the argument that high political and economic transparency of an LDC increases the level

of flexibility of a PTA between the EU and a LDC with the coefficients having the right sign and being statistically significant at the 0.01 levels. *GOVERN*. *EFFECT*. proves to have the strongest effect; if Government Effectiveness rises by 1 unit, the degree of flexibility of a PTA increases by 11 per cent. In case of *RULE OF LAW* and *CORRUPTION*, if these variables increase by 1 unit, the level of flexibility of a PTA rises respectively by 8 per cent and 7 per cent.

Among the other control variables, which are all statistically significant, TRADE, DEMOCRACY, and US PTA have the expected sign, whereas COLONY has the opposite sign than the one expected. As a preliminary speculation, this results my be driven by the fact that former colonies of European countries have less bargaining power than other LDCs due to their trade dependence from EU market and so they are less effective in bargaining flexible agreements. This explanation is consistent with the formal model presented in this paper that assumes that EU wishes to minimize flexibility in order to maximize the probability that a LDC honors its conditionality.

To conclude, two final considerations summarize the empirical findings. First, there is strong support for the first hypothesis. High political and economic transparency allows a LDC to bargaining a flexible agreement in term of conditionality target, since it may credibly communicate the domestic conditions under which it is not able to fulfill (some of) the EU conditionality. Bargaining a flexible agreement, i.e. with a discrete range of conditionality target, is central, since it allows a LDC to credibly claim to be a high conditionality target, increasing the probability of being selected by the EU to form a PTA. Second, results demonstrate the superiority of the Heckman model over competing specifications. Specifically, since  $\varrho$ , which measures the correlation between the errors of the first and second stage, differs significantly from 0, a Heckman model is the only efficient and unbiased estimator in light of the theoretical model developed in this paper.

## 6 Robustness Checks

To check the robustness of the empirical results, a series of changes to the base models were made. First, I estimated the models using a direct dyads dataset. Second, I included year dummies and other control variables that we did not include in the main model to account for common external shocks, such as financial crises.

Third, I dropped the variables that are not statistically significant in the main model. Finally, I included some additional control variables that may affect the likelihood of forming a preferential arrangement. Since one of the arguments explaining why LDCs decide to entry in a PTA with the EU is to "lock-in" reforms, as previously mentioned, the variable  $REFORM_{it}$  measures the difference of the score in the Economic Freedom Word index (2007) from 1990 to 2005 for each LDC i. Positive values imply that a country has implemented economic reforms during this period and this is expected to have a positive impact on the probability of forming a trade agreement with the EU. Despite of its importance, this variable is not included in the original models because it is available only for a sub-sample of the countries in the dataset.  $POTENTIAL\ EU\ CANDIDATE_i$  scores 1 if a LDC i is an EU potential candidate; 0, otherwise. Potential EU candidates, e.g. former communist countries, sign often a bilateral trade agreement before joining the EU few years later. GDP  $GROWTH_{it}$  denotes the value of economic growth of LDC i in year t-1. This variable allows us to gauge the economic health of dyads and thus capture the argument that an economic downturn increases the probability of a PTA being formed (for this argument, see for example Mattli, 1999).  $TRADE\ DISPUTE_{ijt}$ scores 1 if the EU and a LDC was involved in a GATT/WTO trade dispute with each other in time t-1; 0, otherwise. In case of trade dispute, the probability of joining the same trade bloc is likely to decrease.  $LANDLOCKED_i$  scores 1 if LDC i is landlocked; 0, otherwise.  $ISLAND_i$  scores 1 if LDC i is an island; 0, otherwise. The last two variables control for the fact that states without access to the sea and islands are more likely to form a PTA to overcome their geographical disadvantages. For all these cases, the results are roughly comparable to these presented and are available upon request.

## 7 Conclusion

The contributions of this paper to the ongoing debate on the formation of PTAs are four-fold. First, this paper confirms that domestic variables are important drivers in the formation of trade agreements. Specifically, high economic and political transparency of LDCs makes them more likely to reach a trade agreement with the EU. In this sense this paper is in line with the empirical findings of recent studies that have stressed the importance of domestic institution in economic cooperation (Mansfield et al. 2002; 2007; 2008). Second, this work offers an argument to support the claim that the opportunity to temporarily escape their contractual obligations without incurring excessive retaliation from other partners may encourage states to enter

into a larger number of agreements as well as into deeper cooperative agreements. As several recent studies have showed (Svolik, 2007; Kucik and Reinhardt, 2008), formal provisions for breaking treaty commitments may counter intuitively boost cooperation relative to what would otherwise be possible. Third, this paper carries out the first empirical analysis to explain the rationale of the bilateral trade agreements, providing original insights about regionalism literature. Indeed, the goodness-of-fit of the proposed model has proved to be quite good, explaining the formation of 80 per cent of the EU bilateral trade agreements. Fourth, this study provides a first attempt to operationalize a legal component of PTAs, i.e. flexibility, through a careful content analysis of the treaties' provisions.

Additional research on the influence of institutions on the formation of PTAs should address at least three central issues that remain unresolved. First, subsequent analyses should take into account a further refinement in the measurement of the dependent variable. More specifically, further studies should take into account the wide range of trade-related sectors that are covered in the PTAs between the EU and LDCs. Second, it should be addressed the "Me-Too" conditions as well. Indeed, this paper has dealt mainly with the EU rationale for forming a bilateral trade agreement, largely disregarding the drivers of PTAs formation from the point of view of LDCs. Finally, since the EU is competing with the US in the global economy and since both the US and the EU rely on trade agreements as an instrument of foreign policies, it would be interesting to analyse the main differences and similarities between trade agreements that the US and the EU form with LDCs.

# 8 Appendix A

# 8.1 Proof of Proposition 1

Partial differentiation shows that:

$$\bullet \ \frac{\partial T}{\partial L} = 0$$

$$1 - 2(\overline{T} - T) = 0$$

$$2T = 2\overline{T} - 1$$

$$T = \overline{T} - \frac{1}{2}$$

$$\bullet \ \frac{\partial T^e}{\partial L} = 0$$

$$-1 - 2(\overline{T} - T^e) = 0$$

$$2T^e = 2\overline{T} + 1$$

$$T^e = \overline{T} + \frac{1}{2}$$

QED

# 8.2 Proof of Proposition 1

If 
$$L(V - \frac{1}{2}), (V + \frac{10}{2} - \frac{1}{2}; V) = L(V - \frac{1}{2}, \frac{V}{2} - \frac{1}{2}; V),$$

we get:

$$-(V + \frac{10}{2} - \frac{1}{2} - V + \frac{1}{2}) + (V - V + \frac{1}{2})^2 + (V - V + \frac{10}{2} + \frac{1}{2})^2 =$$

$$= -(\frac{V}{2} - \frac{1}{2} - V + \frac{1}{2}) + (V - V + \frac{1}{2})^2 + (V - \frac{V}{2} + \frac{1}{2})^2.$$

Making the appropriate calculations on the left and right hand side, we get:

$$-\left(\frac{10}{2} - \frac{V}{2}\right) + \frac{1}{4} + \left(\frac{V}{2} - \frac{9}{2}\right)^2 = -\left(-\frac{V}{2}\right) + \frac{1}{4} + \left(\frac{V}{2} + \frac{1}{2}\right)^2.$$

Hence, simplifying:

$$-20 + 81 - 1 - 18V - 2V = 0.$$

This is verified for,

$$V = \frac{60}{20} = 3$$

QED

# 9 Appendix B

The number of provisions,  $P_i$ , in treaties is given by the number of their articles (including annexes). Thus, differently from Franchino (2004), numbered paragraphs, subparagraphs, and indents have not been counted. Two main reasons have driven this decision. First, to get rid of several discretionary decisions, since distinguishing part of the article is more difficult in the case of a PTA than it is in the case of EU piece of legislation. Second, as table below shows, there is a good variation in the number of articles across PTAs.

The definition of discretionary provision, Di, is any provision that gives to the trade partner of EU the authority to temporarily suspend the compliance of a specific PTA article. Examples of what flexibility is include:

- Exceptional macroeconomical or financial circumstances
- Exceptional measures of limited duration
- Serious difficulties that produces social problems
- Serious balance of payment difficulties
- Serious internal circumstances affecting rule and order
- Serious international tension
- Safeguard measures for infant industries

For each country i, the Flexibility Index (FI),  $F_i$ , is given by the following ratio:

$$F_i = \frac{D_i}{P_i} \tag{5}$$

Table 5 provides more details for each PTA signed by EU with a LDC.

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Table 1: Descriptive statistics of the variables. Sources: (1) World Trade Organization, the Tuck Trade Agreements Database, and the McGill Faculty of Law Preferential Trade Agreements Database; (2) World Bank - Quality of Institutions Dataset (Kaufman, 2006) - (3) Energy Information Administration - International Energy Annual (Shackman, 2005); (4) CEPII dataset (2005); (5) COW dataset; (6) Freedom House Dataset (2006); (7) WTO website; (8) Horn and Mavroidis dataset (2006); (9) Economic Freedom Word index (2007); (10) Compiled by the author

Variable	Mean	Std. Dev.	Number of Obs.	Source
PTA DUMMY	0.01	0.1	2,146	(1)
SPATIAL PTA	0.01	0.008	2,146	(1) (4) (10)
PTA FLEXIB.	0.35	0.16	165	(10)
CORRUPTION	2.13	0.65	2,146	(2)
RULE OF LAW	2.12	0.68	2,146	(2)
GOVERN. EFFECT.	2.14	0.65	2,146	(2)
TRADE	11.90	3.60	2,146	(4)
TRADE DEP.	0.005	0.014	2,146	(4)
GDPPC	2.53	4.02	2,146	(3)
GDP	2.33	1.53	2,146	(3)
ALLIANCE	0.05	0.21	2,146	(5)
GATT/WTO	0.60	0.49	2,146	(7)
DISPUTE W.T.P.	0.05	0.22	2,146	(8)
TRADE DISP.	0.01	0.12	2,146	(8)
COLONY	0.75	0.43	2,146	(4)
DEMOCRACY	4.26	2.04	2,146	(6)
EU CANDID.	0.13	0.33	2,146	(10)
US PTA	0.02	0.12	2,146	(10)
DISTANCE	8.56	0.64	2,146	(4)
REFORM	1.24	1.05	1,637	(9)
GDP GROWTH	2.77	7.36	2,146	(3)
LANDLOCKED	0.23	0.42	2,146	(4)
ISLAND	0.12	0.32	2,146	(4)

Table 2: The formation of preferential trade agreements, Heckman Model. Notes: standard errors are in parentheses.

\*\*\* significant at 1 per cent, \*\* significant at 5 per cent, \* significant at 10 per cent.

Covariates	Model 1	Model 2	Model 3
II Stage: PTA Flexib.			
CORRUPTION	0.07*** (0.02)	-	-
RULE OF LAW	-	0.08***(0.02)	-
GOVERN. EFFECT.	-	-	0.11***(0.02)
DEMOCRACY	-0.02*** (0.007)	-0.02*** (0.01)	0.002***(0.005)
COLONY	-0.15***(0.02)	-0.15***(0.02)	-0.16*** (0.02)
TRADE	0.012***(0.003)	0.01***(0.004)	0.006**(0.002)
US PTA	0.14**(0.006)	0.14**(0.06)	0.11*(0.06)
$\varrho$	0.51***(0.09)	0.29**(0.11)	0.45***(0.09)
$\sigma$	0.14***(0.006)	0.50***(0.09)	0.13***(0.006)
$\lambda$	0.07***(0.01)	0.14***(0.006)	0.06***(0.01)
$Rho \geq \chi^2$	22.37 (0.000)	$21.38 \ (0.000)$	$18.49 \ (0.000)$
I Stage: PTA Formation			
CORRUPTION	0.44*** (0.14)	-	-
RULE O F LAW	-	0.65***(0.13)	=
GOVERN. EFFECT.	-	-	0.42***(0.16)
GDP	0.07 (0.03)	$0.10 \ (0.06)$	$0.06 \ (0.06)$
$\operatorname{GDPpc}$	-0.007 (0.01)	-0.01 (0.01)	-0.002 (0.01)
ALLIANCE	0.82***(0.22)	0.84***(0.22)	0.87**** (0.23)
DEMOCRACY	-0.13*** (0.04)	-0.13*** (0.04)	-0.13*** (0.04)
COLONY	-0.26 (0.21)	-0.23 (0.21)	-0.12 (0.21)
US PTA	1.57****(0.25)	1.55***(0.25)	1.62***(0.26)
TRADE DEP.	-0.18 (3.05)	-0.41 (3.22)	-0.002(3.01)
WTO	0.47**(0.21)	0.45**(0.21)	0.50**(0.22)
DISPUTE W.T.P.	-0.13 (0.22)	-0.13 (0.22)	-0.13 (0.22)
TRADE	0.13****(0.04)	0.12****(0.04)	0.12***(0.04)
DISTANCE	-0.45***(0.07)	-0.51*** (0.07)	-0.43***(0.07)
SPATIAL PTA	61.04****(12.65)	62.70*** (12.22)	61.69****(12.09)
Number of Observations	2,064	2,064	2,064
Number of Censored Observation	165	165	165
Log likelihood	1,028.03 (0.0000)	1,087,92 (0.0000)	1,180.66 (0.0000)

Economic and Political Transparency	$[-\sigma, +\sigma]$
CORRUPTION	4.2 (0.002, 0.228)
RULE OF LAW	$6.2 \ (0.004, \ 0.254)$
GOVERN. EFFECT.	$4.1\ (0.00003,\ 0.168)$

Table 4: Cases correctly predicted by the models, cases not predicted, and case of insufficient bilateralism.

PTAs correctly predicted	PTAs not predicted	Insufficient Bilateralism
Bulgaria	Algeria	Ukraine
Chile	Egypt	Yugoslavia
Czech Republic	Lebanon	-
Estonia	Syria	-
Croatia	-	-
Hungary	-	-
Jordan	-	-
Latvia	-	-
Lithuania	-	-
Mexico	-	-
Morocco	-	=
Poland	-	-
Romania	-	=
Slovakia	-	-
Slovenia	-	-
Tunisia	-	-
Turkey	-	-
Macedonia	-	-
South Africa	-	-

Table 5: List of PTAs between the EU and LDCs included in the analysis and Flexibility Index  $\,$ 

Country	No. Discret. Provis.	No. Art.	Annexes	FI
Bulgaria	34	125	Yes	0.27
Chile	33	206	No	0.16
Croatia	39	52	No	0.56
Czech Republic	34	124	Yes	0.27
Estonia	30	50	No	0.60
Hungary	40	124	Yes	0.32
Jordan	34	159	No	0.21
Kazakhstan	1	32	No	0.03
Latvia	28	51	No	0.55
Lebanon	21	42	No	0.50
Lithuania	29	52	No	0.56
Macedonia	34	128	No	0.27
Mexico	31	50	No	0.62
Morocco	39	156	Yes	0.25
Poland	34	122	No	0.28
Romania	35	126	No	0.28
Slovakia	33	124	No	0.27
Slovenia	32	51	No	0.63
Tunisia	42	156	Yes	0.27
Turkey	18	65	No	0.28
South Africa	31	109	No	0.28