

DO DEMOCRATIC AGREEMENTS FOSTER BILATERAL TRADE FLOWS?

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Abstract:

For several years, preferential trade agreements have been oriented towards initiating a deep integration process. As a result, treaties include clauses concerning the harmonization of regulations, policies and standards. In order to join the European Union, a future member must be a stable democracy that respects human rights, the rule of law and the protection of minorities.

The inclusion of such a clause can be interpreted as a political choice to promote democracy. But it can also be viewed as a pre-condition for implanting a "deep integration" process: only democracies are able to drive the harmonization process of rules and standards. If democratic constraints imply deeper integration, we can expect that such agreements will have a higher impact on trade inside the area concerned by the agreement.

The aim of this paper is to verify that preferential trade agreements (PTAs), which are bound by a democratic constraint, have a higher positive effect on trade inside the area, than non-constraining agreements. To achieve this, we use an Anderson and van Wincoop (2003) type of gravity model, and we differentiate between PTAs according to whether or not they include a democratic clause.

Whereas trade between democratic countries is higher than trade between autocratic countries, empirical evidence shows that the inclusion of a democratic clause fosters bilateral trade between the partners has no significant effect relative to no PTA, and is neutral relative to a non-democratic PTAs between South countries.

Keywords: Free Trade Agreements, Democracy, Gravity Model

JEL: F13, F15, O19; P16

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For several years, preferential trade agreements have been oriented towards initiating a deep integration process. As a result, treaties include clauses concerning the harmonization of regulations, policies and standards. Moreover, a commitment to democracy is frequently a prerequisite to membership. Violation of democratic principles may serve as a motive to exclude countries from the free trade or custom union area. In order to join the European Union, a future member must be a stable democracy that respects human rights, the rule of law and the protection of minorities.

This inclusion can be interpreted as a political choice to promote democracy in the world. The Rosendorff model (2000) establishes that a democracy offers more concessions to another democracy than to an autocracy at the end of trade negotiations. But the democratic constraint can also be viewed as a pre-condition to foster a "deep integration" process: only democracies are able to drive the harmonization process of rules and standards. Thus, another Rosendorff result is that gains from tariff cooperation are greater between democracies, and may be the consequence of a deeper integration.

If democratic constraints imply deeper integration, we can expect that such agreements will have a higher impact on trade inside the area.

Empirical literature on the impact of democracy on trade remains ambiguous about the direction of the effect, i.e. whether democracy engenders trade or trade engenders democracy. Various papers deal with the influence of democracy on trade openness and trade policy (Granger and Siroën, 2001; Mayer, 1984; Milner et Kubota, 2003). Few studies tackle the incidence of political regimes on bilateral trade flows (Bliss and Busset, 1998; Duc and alii, 2004; Mansfield et alii, 2000).

The aim of this paper is to verify that preferential trade agreements (PTAs), bound by a democratic constraint, have a higher positive effect on trade inside the area than non-constraining ones. To do this, we use a gravity model discriminating between PTAs.

Section I describes the gravity model and the data. Section II verifies the trade-democracy linkage. Section III presents and discusses the results of preliminary regressions between trade and PTAs. Section IV presents some tests of sensitivity and robustness. Section V provides a conclusion.

I. The econometric model

This paper addresses the effect on trade of democratic clauses in PTAs. We are concerned with bilateral flows, which justify a gravity model specification.

Anderson & van Wincoop (2003) introduce the concept of multilateral resistance. The bilateral trade flows correspond to the equilibrium between the import demand from j addressed to i and the export supply from i towards j . They show that tariff, as well as other trade costs, must be appreciated relative to tariff and trade costs applied to all countries. If country j increases its tariffs against all countries except i , the imports from i will increase, although the tariff between i and j is held constant. Similarly, an exporting country i increases its supply towards j if all the other partners of j increase their tariffs. Therefore, the weaker the "multilateral resistance", the more restrictive a given bilateral tariff is.

The Anderson & van Wincoop equation to test is:

$$X_{ij} = \frac{Y_i Y_j}{Y_w} \left(\frac{P_i P_j}{t_{ji}} \right)^{\sigma-1} \quad [1]$$

X_{ij} represents exports from country i to country j ; Y_i and Y_j are the i and j national incomes (GDP); Y_w is the world income and does not have to be estimated as it is constant.

P_i and P_j are the national price index, which account for the "multilateral resistance": the stronger the multilateral resistance, the higher the prices are. $\sigma (> 1)$ is the elasticity of substitution between the good produced by i and the one produced by j . Anderson & van Wincoop propose an iterative method to estimate P_i and P_j . Because this process is complex, empirical studies, following the alternative method presented by the authors, prefer to replace the computed price index by fixed effects, i.e. dummy variables that locate the exporting country and the importing country (see for example, Rose & van Wincoop, 2001; Subramanian & Wei, 2003; see also Feenstra, 2004). These fixed effects take into account all "unilateral" characteristics of countries (including the level of democracy). They have to be considered as variables controlling all the unilateral determinants of bilateral trade such as the level of development, the trade policy, and the national institutions. This specification allows differentiating between the influence of unilateral variables acting towards all partners and that of bilateral variables involving a pair of countries such as a common membership to a PTA. The result is that other unilateral variables need not be considered except for fixed

effects, which take all of these variables into account. Introducing unilateral variables, such as GDP per capita or remoteness would cause a co-linearity issue.

In equation [1], t_{ji} represents all trade costs occurring between exporter i and importer j . It includes transportation costs and the cultural community, such as a common language. Proxy variables can take into account some components of these costs (distance, common border or common language, common adhesion to WTO...). Preferential trade agreements might reduce t_{ji} and foster bilateral trade between i and j . We test the hypothesis that "democratic" PTAs have a greater effect on bilateral trade than non-democratic ones.

Our model can thus be written as follows:

$$\text{Log}(X_{ij}/Y_i Y_j) = \alpha_1 \text{Log}(D_{ij}) + \sum_k \alpha_k \Psi_{ijk} + \sum_k \beta_k Z_{ijk} + \sum_i \alpha_i DE_i + \sum_j \alpha_j DI_j + \varepsilon_{ij} \quad [2]$$

Where X_{ij} = exports (F.O.B.) from country i to j , in current U.S. dollars = imports of country j from country i .

Y_i (Y_j) = GDP of country i (j), in U.S. current dollars. In equation [1], the exponent of the GDPs is equal to 1, so that it is strictly equivalent to having this product appear on the dependent variable side.

D_{ij} = great arc circle kilometric distance between the two countries' capitals.

Ψ_{ijk} = k variables indicating a common element: a common language, a common border, a trade agreement, a former colonial dependence.

Z_{ijk} = k' bilateral variables of interest

DE_i (DI_j) = exporter (importer) country-fixed effect. This dummy variable is equal to 1 if country i (country j) is the exporting (importing) country.

ε_{ij} = an error term.

All these variables and their sources are presented in Annex 1. Equation [2] is estimated by GLS (Generalized Least Square). Observations with missing data or with a zero value for exports have been dropped.

II. The Trade-democracy linkage

Do democratic countries trade more with each other? Democracy is a qualitative variable, which is difficult to quantify. We approach democracy by a dummy variable, built from the

Freedom House's indicators¹ in the following way: according to their note compared with the median the countries of the sample are divided into two groups, democratic and autocratic. We use a similar method with *Polity IV* data. Because our gravity model imposes bilateral variables we regress the following ones:

$FHO_{ij} (PolityO_{ij}) = 1$ if the exporting country i and the importing country j are not democratic (autocratic).

$FHI_{ij} (PolityI_{ij}) = 1$ if the exporting country i and the importing country j are democratic.

The benchmark situation is a mixed case where only one partner is democratic.

The basic model (column 1) performs well and is in line with results obtained by similar gravity models. Columns 2 and 3 show that a pair of autocratic countries trades more with each other than a pair of democratic countries. However, the coefficients are not significantly different from zero. *Freedom House* and *Polity* data give very close results.

Democracy is largely concentrated in developed countries, and then these variables might be a proxy for the specificity of trade between developed countries as well as between developing countries. In columns 4 and 5 we introduce dummy variables for North-North (OECD countries) and South-South trade, North-South trade being the reference for both variables. Democracy variables become significant. Once the level of development has been controlled, a pair of democratic countries trades more with each other than a pair of autocratic countries.

III. Trade and democratic preferential trade agreements

The first step was to read all agreements (notified at the WTO) for classification in one of two categories: "democratic" or "non democratic". Our criteria are simple; we consider as democratic an agreement containing a reference to the respect of democratic principles or a reference to the United Nation Charter (with an explicit wish to respect democratic principles).

We also restrict the category, "democratic", to agreements containing an actionable sanction in case of violation (see annex 2 for the list of agreements).

¹ This index is usually used in the literature (see for example, Granger and Siroën, 2001; Tavares and Wacziarg, 2001). It includes two components, which both correspond to a note ranging from 1 to 7: the first accounts for the respect of political freedom; the second for the respect of civil freedom. In this study, we only retain the first component because it is nearest of our theoretical issue.

Table 1 – The democratic linkage

<i>Dependent variable: Log(X_{ij}/Y_iY_j)</i>					
	(1)	(2)	(3)	(4)	(5)
Distance (<i>LogDij</i>)	-1.49 ^{***} (0.03)	-1.48 ^{***} (0.03)	-1.48 ^{***} (0.03)	-1.49 ^{***} (0.03)	-1.48 ^{***} (0.03)
Adjacency	0.66 ^{***} (0.12)	0.66 ^{***} (0.11)	0.65 ^{***} (0.11)	0.67 ^{***} (0.11)	0.66 ^{***} (0.11)
Common language	0.78 ^{***} (0.06)	0.78 ^{***} (0.06)	0.77 ^{***} (0.06)	0.78 ^{***} (0.06)	0.77 ^{***} (0.06)
Colony	1.13 ^{***} (0.10)	1.13 ^{***} (0.10)	1.15 ^{***} (0.10)	1.12 ^{***} (0.10)	1.14 ^{***} (0.10)
Common Free Trade Agreement	0.36 ^{***} (0.06)	0.34 ^{***} (0.06)	0.33 ^{***} (0.06)	0.35 ^{***} (0.06)	0.34 ^{***} (0.06)
WTO membership	0.50 ^{***} (0.13)	0.46 ^{***} (0.13)	0.48 ^{***} (0.13)	0.47 ^{***} (0.13)	0.49 ^{***} (0.13 ^o)
FH0 _{ij}		0.82 (0.91)		-1.77 ^{**} (0.84)	
FH1 _{ij}		-0.67 (0.91)		1.94 ^{**} (0.84)	
Polity0 _{ij}			0.92 (0.91)		-1.66 ^{**} (0.84)
Polity1 _{ij}			-0.63 (0.91)		1.97 ^{***} 0.84
South-South				1.19 ^{**} (0.48)	1.20 ^{**} (0.48)
North-North				-1.42 ^{***} (0.48)	-1.45 ^{***} (0.49 ^o)
Exporter fixed effect (<i>DE_i</i>)	Yes	Yes	Yes	Yes	Yes
Importer fixed effect (<i>DI_j</i>)	Yes	Yes	Yes	Yes	Yes
Number of observations	13749	13749	13749	13749	13749
Constant	-36.37 ^{***} (0.85)	-38.82 ^{***} (0.77)	-38.89 ^{***} (0.77)	-36.96 (0.72)	-37.07 ^{***} (0.72)
Fisher's statistic	36.69	36.58	36.65	36.89	36.97
Adjusted R ²	0.4409	0.4411	0.4415	0.4413	0.4417

Standard errors in parentheses. *** Significant at 1%, ** significant at 5%, * significant at 10%.

The second step was to synthesize all this information in a bilateral dummy variable. Thus, the DA variable is equal to 1 if the exporter country i and the importer country j belong to the same democratic agreement in 2000, 0 otherwise. The NDA variable is equal to 1 if the common agreement is not democratically binding.

The benchmark situation is when two countries have no common trade agreement in 2000.

Our first regression (table 2 column 1) replaces the agreement variable in the standard model (table 1, column 1) by DA and NDA. The sign of DA is counter intuitively negative but with a non-significant coefficient. NDA is positive with a highly significant coefficient.

If democratic agreements are effective, bilateral relations covered by such a treaty should be democratic and quoted 1 for $FH1_{ij}$ (or $Polity1_{ij}$) in the regressions of the table 1. As we did in the table 1, column 4, we introduce a dummy variable for North-North and South-South trade. This time, the regression is not affected.

A second way to take into account the specificity of the model for Southern countries is to differentiate democratic agreements. We consider three kinds of agreements: South-South, North-North and North-South. Results are given in the column 3. Each type of democratic trade agreements has a significant coefficient. It is only positive for South-South agreements and is then equal to the NDA coefficient.

A third way to make a distinction between Northern and Southern countries is to restrict the sample to South-South bilateral trade relations. Firstly (table 2, column 4), we regress the basic model with our new restricted sample and we verify it gives similar results except for the decreasing influence of the WTO common membership. For this variable, the coefficient is smaller and only significant at a 10% threshold. Next, we introduce (column 5) democratic (DA) and non-democratic (NDA). The coefficients of these two variables are positive and significant. Democratic agreements have a higher coefficient. However, as the two coefficients have close values a Student test concludes they are not significantly different. Concerning South-South trade agreements, the effects of political constraints may be considered as neutral.

Table 2: The influence of democratic Agreements on bilateral trade.

Dependent variable: $\text{Log}(X_{ij}/Y_iY_j)$

	Total trade			South-South trade	
	(1)	(2)	(3)	(4)	(5)
Distance (LogDij)	-1.49*** (0.03)	-1.50*** (0.03)	-1.50*** (0.03)	--1.54*** (0.04)	-1.54** (0.04)
Adjacency	0.55*** (0.12)	0.56*** (0.12)	0,50*** (0.11)	0.58*** (0.13)	0.58*** (0.13)
Common language	0.75*** (0.06)	0.75*** (0.06)	0,74 (0.06)	0.88*** (0.08)	0.88*** (0.08)
WTO membership	0.45*** (0.13)	0.46*** (0.13)	0.47*** (0.13)	0.25* (0.14)	0.25* (0.14)
Colony	1.08** (0.10)	1.08** (0.10)	1.06*** (0.10)	0.99*** (0.16)	1.00*** (0.16)
Common Free Trade Agreement				0.89*** 0.10	
Democratic trade agreement (DA)	-0.08 (0.07)	-0.07 (0.06)			1.04*** (0.15)
Non-democratic trade agreement (NDA)	1.00*** (0.10)	1.00*** (0.10)	1.04*** (0.10)		0.85*** (0.11)
South-South		1.23** (0.49)			
North-North		-1.37*** (0.49)			
Democratic trade agreement South-South			1.05*** (0.13)		
Democratic trade agreement North-North			-0.98*** (0.11)		
Democratic trade agreement North-South			-0.21 (0.06)		
Exporter effect (DE_i) fixed	Yes	Yes	Yes	Yes	Yes
Importer effect (DI_j) fixed	Yes	Yes	Yes	Yes	Yes
Number of observations	13749	13749	13749	8327	8327
Constant	-36,46*** (0.86)	-35,03*** (0.69)	-36.42 (0.86)	-37,62*** (1.04)	-37,57*** (1.04)
Fisher's statistic	37.87	38.2	39,6	30.53	30.68
Adjusted R ²	0.4443	0.4443	0.4477	0.4623	0.4624

Standard errors in parentheses. *** Significant at 1%, ** significant at 5%, * significant at 10%.

IV. Sensitivity and Robustness of estimations.

To test the influence of the model specification: we replace our gravity model by a standard gravity model withdrawing fixed effects and letting the GDP variables to have an elasticity different of the unity. Then GDPs have to move to the right side of the equation. Such a specification without fixed effects means that "unilateral" variables may be reintroduced in the model without a colinearity issue, which we do for GDP per capita.

The first two columns show our results for all countries and the last two columns only for Southern countries. For the sample as a whole, the coefficients of DA and NDA are significant at the 1% level. DA has a positive coefficient significantly lower than the coefficient of AND. When we add GDPs per capita, the coefficients of DA is no longer significant (column 2).

For the Southern sample, coefficients of DA and NDA are significant but not significantly different. This result remains after adding GDPs per capita. The alternative gravity model specification confirms that for the world as a whole, democratic agreements have no effects on bilateral trade whereas non-democratic agreements foster it. When the sample is restricted to developing or emerging countries, both democratic and non-democratic agreements exert a positive effect, which is roughly the same. Results are then robust to the specification of the model.

Our next regressions test the sensitivity of results to the criteria we used to discriminate among types of trade. We define a new variable, which is more restrictive in regard to democratic constraints. We only take into account agreements that sanction violations of democratic principles. The first and the third columns of table 4 assess our results for our sample as a whole and the second and the fourth columns do so for Southern countries.

We test these new variables with the gravity model *à la* Anderson and van Wincoop (Column 1 and 2) and with a standard gravity model with no fixed effects (column 3 and 4).

The main difference concerns the sample restricted to developing and emerging countries (column 2): democratic trade agreements have a significantly higher positive impact on south-south trade than NDAs. More democratic are the agreements more pro-trade they might be. The alternative specification (column 4) confirms the positive effect but it remains neutral compare with the NDAs. Common WTO membership fosters trade poorly in the full sample and does not affect Southern trade.

Table 3: The influence of democratic agreements on trade, another specification on dependant variable.

<i>Dependent variable: LogX_{ij}</i>				
	(1) All	(2) All	(3) South	(4) South
Distance (<i>LogD_{ij}</i>)	-1.28*** (0.03)	-1.27*** (0.03)	-1.37*** (0.04)	-1.36*** (0.04)
Adjacency	0.62*** (0.11)	0.68*** (0.11)	0.66*** (0.13)	0.73*** (0.13)
Common language	0.64*** (0.06)	0.64*** (0.06)	0.61*** (0.07)	0.61*** (0.07)
WTO membership	0.12*** (0.04)	0.07* (0.04)	0.026 (0.06)	-0.01 (0.06)
Colony	1.08*** (0.10)	1.06*** (0.10)	1.15*** (0.15)	1.07*** (0.15)
Log GDP _i	1.18*** (0.009)	1.17*** (0.012)	1.22*** (0.014)	1.20*** (0.016)
Log GDP _j	0.91*** (0.008)	0.88*** (0.011)	0.83*** (0.014)	0.81*** (0.016)
Log GDP per capita i		0.048*** (0.016)		0.088*** (0.02)
Log GDP per capita j		0.072*** (0.016)		0.075*** (0.02)
Democratic trade agreement (<i>DA</i>)	0.166*** (0.06)	0.094 (0.06)	0.844*** (0.13)	0.824*** (0.13)
Non-democratic trade agreement (<i>NDA</i>)	1.086*** (0.10)	1.165*** (0.10)	0.923*** (0.11)	1.016*** (0.11)
Exporter fixed effect (<i>DE_i</i>)	No	No	No	No
Importer fixed effect (<i>DI_j</i>)	No	No	No	No
Number of observations	13749	13749	8327	8327
Constant	-30.20*** (0.38)	-38.95*** (0.38)	-37.34*** (0.54)	-37.48*** (0.54)
Fisher's statistic	3675,42	3009.47	1428,69	1180,03
Adjusted R ²	0.67	0.67	0.56	0.56

Standard errors in brackets. *** Significant at 1%, ** significant at 5%, * significant at 10%.

Table 4: The influence of restricted democratic agreements on trade, sensitivity.

	<i>Dependent variable: Log (X_{ij}/Y_iY_j)</i>		<i>Dependent variable: Log (X_{ij})</i>	
	(1) All	(2) South	(3) All	(4) South
Distance (<i>LogDij</i>)	-1.50*** (0.03)	-1.53*** (0.04)	-1.25*** (0.03)	-1.36*** (0.04)
<i>Adjacency</i>	0.59*** (0.11)	0.55*** (0.13)	0.77*** (0.10)	0.71*** (0.13)
<i>Common language</i>	0.77*** (0.06)	0.88*** (0.08)	0.67*** (0.06)	0.62*** (0.07)
WTO	0.49** (0.13)	0.23* (0.14)	0.07 (0.05)	-0.01 (0.06)
Colony	1.06*** 0.10	0.99*** 0.16	1.03*** (0.10)	1.03*** (0.15)
Log GDP _i			1.16*** (0.012)	1.20*** (0.02)
Log GDP _j			0.87*** (0.011)	0.81*** (0.016)
Log GDP per capita i			0.035** (0.02)	0.09*** (0.02)
Log GDP per capita j			0.059*** (0.02)	0.08*** (0.02)
Restricted Democratic trade agreement (RDA)	-0.078 (0.08)	1.228*** (0.16)	0.23*** (0.07)	0.993*** (0.14)
Restricted Non-democratic trade agreement (RNDA)	0.592*** (0.06)	0.700*** (0.08)	0.65*** (0.06)	0.783*** (0.07)
Exporter fixed effect (<i>DE_i</i>)	Yes	Yes	No	No
Importer fixed effect (<i>DI_j</i>)	Yes	Yes	No	No
Number of observations	13749	8327	13749	8327
Constant	-36,33*** (0.06)	-37.77*** (1.01 ¹)	-38.76*** 0.38	-37.61***
Fisher's statistic	38.45	31.26	3010,44	1176.21
Adjusted R ²	0.444	0.464	0.670	0.562

Standard errors in brackets. *** Significant at 1%, ** significant at 5%, * significant at 10%.

Our last robustness regressions tackle the outlier's issue: remote observations "draw" results exponentially and few of them may greatly affect results. To correct such a bias, we use a specific estimation method.

The first step is to regress our model a first time. With two iterative methods, Huber (1964) weights and bi-weight (due to Beaton and Tukey 1974), equations receive a weight according to their absolute residual's deviation from the median, with a tolerance of 0,01. The closer the values, the greater the weight is. The first iteration starts with observations where the absolute residual is greater than twice the median; the second iteration gives the value 0 to all cases with absolute residual greater than seven times the median.

Finally, the model is re-estimated, taking into account the weight of each bilateral relation.

The result of doing so is that the new model gives more importance to countries, which are not very different from the median and less to bilateral relations with abnormally high or small estimated flows. Table 5 assesses our results for the sample as a whole and for Southern countries.

Table 5: Regressions with outliers*Dependent variable: Log (X_{ij}/Y_iY_j)*

	(1)All	(2) All	(3) All	(3) South	(4) South
Distance (<i>LogDij</i>)	-1,47*** (0,03)	-1.48*** (0.03)	-1.48*** (0.03)	-1.56*** (0.04)	-1.55*** (0.04)
Adjacency	0,65*** (0,10)	0,69*** (0.10)	0.58*** (0.10)	0,67*** (0.13)	0,63*** (0.13)
Common language	0,73*** (0,05)	0.76*** (0.05)	0.72*** (0.05)	0.89*** (0.04)	0.88*** (0.07)
WTO	0,39*** (0,11)	0.43*** (0.11)	0.41*** (0.10)	0.21 (0.13)	0.20 (0.13)
Colony	0.98*** (0,12)	0,96*** (0.12)	0.97*** (0.12)	0.87*** 0.21	0.87*** 0.21
Democratic trade agreement (DA)	-0.12* (0,07)			0.80*** (0.18)	
Non-democratic trade agreement (NDA)	0,94*** (0,09)		0.98*** (0.09)	0.75*** (0.11)	
Democratic trade agreement South-South			0.84*** (0.15)		
Democratic trade agreement North-North			-0.92*** (0.14)		
Democratic trade agreement North-South			-0.21*** 0.08		
Restricted Democratic trade agreement (RDA)		-0.117 (0.09)			0,97*** (0.19)
Restricted Non-democratic trade agreement (RNDA)		0.51*** (0.05)			0.62*** (0.08)
Exporter fixed effect (<i>DE_i</i>)	Yes	Yes	Yes	Yes	Yes
Importer fixed effect (<i>DI_j</i>)	Yes	Yes	Yes	Yes	Yes
Number of observations	13749	13749	13749	8327	8327
Constant	-36,13*** (0,59)	-35,98*** (0.59)	-36.03*** (0.59)	-37.55*** (0.86)	-37.76*** (0.86)
Fisher's statistic	43.49	43.28	43.81	31,31	31,37

Standard errors in brackets. *** Significant at 1%, ** significant at 5%, * significant at 10%.

Results show that outliers do not affect our conclusion: "democratic" trade agreements have a negative or a non-significant impact on trade except when it implies trade between Southern countries.

V. Conclusion.

Even if democratic countries might trade more than autocratic countries, the inclusion of democratic clauses inside PTAs does not foster bilateral trade between the partners involved in the agreement. The relation is strongly positive for South-South relations but democratic clauses do not give a clear advantage relatively to common trade agreements except for the most binding agreements.

We can put forward different hypotheses to explain this disappointing result. May be, democracy have no effect on trade. In despite of our own evidences, we saw that variables representing democracy may catch a lot of effects and, particularly, the level of development. In this case, democratic constraints have no reason to increase trade. Democratic clauses might also be inefficient. Firstly, many democratic agreements concern already solid democracies and they have no reasons to improve trade through an institutional channel. Secondly, a democratic might fail to improve political regime in autocratic countries. Duc & Lavallée show that such a clause in European Euro-Med agreements has few effects on Northern Africa countries.

Further studies are necessary to explore the complex relation between political regimes and trade.

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Annex 1: Data Sources and Description

Variable Name : Bilateral exports (X_{ij})

Description: Bilateral exports of the country i to the country j , in F.O.B terms and in U.S. current \$, year 2000.

Source: *IMF, Direction of Trade Statistics.*

Variable Name : GDP

Description: Gross Domestic Product in U.S. current \$.

Source: *World Bank, World Development Indicators 2004*

Variable Name : GDP per capita

Description: Gross Domestic Product per capita in U.S. current \$.

Source: *World Bank, World Development Indicators 2004*

Variable Name : Bilateral Distance (D_{ij})

Description: Great arc circle kilometric distance between the two capitals of countries i and j .

Source: *CEPII database*, <http://www.cepii.fr/francgraph/bdd/bdd.htm>

Variable Name : Common Language

Description: Dummy variable equals 1 if countries i and j share the same language.

Source: *CIA World Factbook*, <http://www.cia.gov/cia/publications/factbook/index.html>

Variable Name : Adjacency

Description: Dummy variable equals 1 if countries i and j share a common border.

Source: *CEPII database*, , <http://www.cepii.fr/francgraph/bdd/bdd.htm>

Variable Name : Common Free Trade Agreement

Description: Dummy variable equals 1 if countries i and j are members of a same trade agreement

Source: *CIA World Factbook*, Frankel, J.A., 1997. *Regional Trading Blocs in the World Trading System*. Washington DC: Institute for International Economics, authors' database.

Variable Name : Democratic Agreement (DA)

Description: Dummy variable equals 1 if countries i and j are members of a same free trade agreement which includes a democratic clause.

Source: Authors' database (see annex 2)

Variable Name : Non-Democratic Agreement (NDA)

Description: Dummy variable equals 1 if countries i and j are members of a same free trade agreement which has no democratic clause.

Source: Authors' database (see annex 2)

Variable Name : WTO

Description: Dummy variable equals 1 if countries i and j are WTO members.

Source: *WTO*, <http://www.wto.org>

Annex 2 : List of Democratic and Non Democratic Agreements.

Democratic Agreements (* means that the Agreement is not in our restrained variable)	Non Democratic Agreements
Andean Community	Arab Common Market
CEFTA members	ASEAN
EFTA members + EFTA Trade Agreements* EU	Bangkok Agreement
Association Agreements *	CACM
EU Cooperation Agreements *	CARICOM
EU Candidate	Common Market for Eastern and Southern Africa
European Union Members	Commonwealth of Independent States
EU Partnership Agreements*	Economic Cooperation Organization
EU Trade Agreements*	Economic Community of West African States
EUROMED*	Economic and Monetary Union of West Africa
Mercosur + Mercosur Partners	Economic and Monetary Union of Central Africa
NAFTA	East African Community
SADC (Southern African Development Community)	Eurasian Economic Community
	Gulf Cooperation Council
	LAIA (Latin American Integration Association)
	Mano River Union
	South Asian Association for Regional Cooperation
	SPARTECA (South Pacific Regional Trade and Economic Cooperation Agreement)
	Tripartite Agreement
	+ All bilateral agreements notified to the WTO