

# **Institutional Reform: A Step towards Free Trade in Egypt**

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## **Abstract**

Since Egypt is a member country of the World Trade Organization (WTO), the main objectives of this paper are to assess the institutional problems existing in the Egyptian economy and impeding the application of 'free trade' as called for by the WTO, and to detect the impact of certain institutional factors existing in the rest of the WTO countries on the trade flows of these countries with Egypt. The paper identifies a significant positive relationship between the institutional factors and the trade flows and suggests some recommendations for eventual institutional reforms that could help Egypt get on the right track with regard to free trade.

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## **1. Introduction**

Egypt signed the General Agreement on Tariffs and Trade (GATT) in the year 1970 and remained since that time an active signatory of the agreement. Later, in the year 1995, it joined the World Trade Organization (WTO) and adhered to all its agreements, with the exception of the agreement on government procurements. Egypt stressed on the fact that it faces problems in implementing a number of WTO related agreements, particularly the agreements on Trade Related Aspects of Intellectual Property Rights (TRIPS), Technical Barriers to Trade (TBT), and Sanitary and Phytosanitary Measures (SPS).

The first objective of this paper is assessing the institutional problems that exist in the Egyptian economy and impede the application of 'free trade' as called for by the WTO. The second objective is detecting the impact of certain institutional factors -government effectiveness, rule of law and control of corruption- existing in the rest of the WTO countries on their trade flows with Egypt. For that purpose, a gravity regression model, also including other control variables, is used, and a significant positive relationship is observed. Finally, the paper provides some recommendations for institutional reforms that could help Egypt achieve free trade with the rest of the WTO members.

## **2. Egypt's commitments in the WTO**

Egypt has fulfilled the majority of its commitments under the WTO. However, for a number of tariff lines, the applied rates exceeded the bound rates, among the most important of which were textiles and ready-made garments, and because of which the United States (US) has taken Egypt to consultations under the WTO. Under pressure from the US and the European Union (EU), the Egyptian Minister of Finance issued a decree in 2003, stating that if the Egyptian applied rates exceeded the bound rates, then the WTO members would have the right to apply the bound rates towards Egypt. Moreover, in 2004, the Egyptian government undertook a major tariff reform that has brought down the applied tariff levels below their bound rates. Currently, for agricultural goods, the bound rate is 95.3 percent and the applied rate is 22.8 percent, and for non-

agricultural goods, the bound rate is 28.3 percent and the applied rate is 19.4 percent (WTO, Egypt country profile, 2005).

The US claimed that Egypt's enforcement of the Intellectual Property Rights (IPR) is not in line with the TRIPS agreement, especially concerning pharmaceuticals. However, the issue is still debatable and has not been taken to the WTO dispute settlement mechanism.

In the context of the General Agreement on Trade in Services (GATS), Egypt committed itself in 45 out of 160 sectors and sub-sectors. It has undertaken commitments in the fields of construction and engineering related services, financial services, tourism and travel related services, maritime transport, and in 2002 it undertook several liberal commitments in the telecommunications sector. It also joined the Information Technology Agreement in 2004 and only put constraints on the acquisition of land and the hiring of foreign workers.

### **3. Egypt's institutional performance regarding trade**

In this section, some of the institutional problems dampening the Egyptian trade activities with the rest of the world are reported.

#### **3.1. Information asymmetries**

A very important problem for the Egyptian exporters is the lack of information and data about potential markets abroad. They mainly obtain their information through individual efforts.

Exporting the products is usually very costly; every procedure taken for exporting a product means more expenditures on equipment, air tickets for representatives who market for the products, freight...etc. Hence, starting a new market based on individual expectations and efforts is risky. This applies particularly to the Egyptian exporters of agricultural products, such as vegetables and fruits; the special containers they need in

order to preserve their products alone for sending samples to other countries are usually very expensive. Therefore, most of the Egyptian exporters prefer to keep dealing with the importers that they already have contact to and enough information about, in order to avoid any eventual risk in new markets abroad.

### **3.2. Freight and transportation problems**

The infrequency of the national airlines transporting the products, their bias towards certain exporters and -in some cases- their corruption are important problems facing the Egyptian exporters.

### **3.3. Obstacles of the Egyptian government**

The Egyptian government has been artificially overvaluing the Egyptian Pound towards hard currency. When the overvaluation of the Egyptian Pound occurs in the time lag between exporting the Egyptian products abroad and the exporter's receipt of the hard currency, the former are faced by receiving a payment that is worth less than what they had expected. Since hereby their profits decrease, they are forced to decrease the production in the next year, dismiss some employees, and -in extreme cases- exit the market. This environment of uncertainty has a negative impact on the overall motivation and total production.

As mentioned above, accessing new markets needs promoting and marketing for the new products. Some importers who principally agree on importing from the Egyptian exporters request huge amounts of money, in order to be able to test for the quality of the products by using special equipment for that purpose...etc.). The Egyptian exporters should be able to pay them these amounts, since the former are seeking new markets. All these procedures need the finance that many small exporters cannot afford. These exporters criticize the government for not providing them with this kind of financial support.

### **3.4. Problems in the Egyptian customs outlets**

A crucial problem facing the Egyptian exporters is the draw-back system. When they import the inputs, they have to pay the tariffs for that. But when they re-export these inputs in the form of the final product, they have the right to have the money that they had paid reimbursed only if they show a proof for that. This proof is usually a customs certificate that is obtained from the customs officials. Many exporters have to deal with corruption when they are to get this certificate.

Another aspect of corruption can be observed in the Egyptian airport. Many employees there receive 'extra amounts' in order for the deals to work smoothly.

In general, the Egyptian importers face numerous administrative and bureaucratic problems when attempting to start a new import activity. There are too many documents that have to be filled and signed before even getting the permission for being registered as importers.

### **3.5. Taxation problems**

By the end of the year, the exporters have to show all their documents to the tax authorities. In these documents, the 'extra amounts' paid to different employees are usually included. However, the tax officials do not take them into account, since they are not proven by any sort of official documents. In fact, the reports of the tax officials are mainly based on overestimated calculations, and the exporters are required to prove the opposite. Therefore, the exporters have to go along with the tax officials and 'cooperate' with them as well. Otherwise, the cases can go to court, which is time and money consuming. A logic result is the mutual mistrust between the market representatives and the government.

The tax employees themselves are not always well informed and do their calculations in different ways. Therefore, a producer needs to deal with only one employee, and in case

this employee is replaced by another, the producer falls in trouble, since s/he has to start the calculations from the beginning and submit the statements once again. Hence, there is no unified way of making the calculations, which leads in many cases to double accounting.

Due to all the problems that the producers face from the authorities, including the tax authorities, many of them shut down, close their tax files, and start new businesses in the informal sector. This proves that there is a general trend that discourages people from working in the light. Hence, the profits that are gained in the informal sector do not enter the official income cycle, which negatively affects the economy.

### **3.6. The missing government commitment**

A common complaint among the Egyptian producers, exporters and importers is the fact that the government does not commit itself in practice to the signed trade agreements with other countries. The market representatives are very often impressed by the government press releases before being shocked by the obstacles in implementation. They agree that the Egyptian government sign many of the agreements just for political reasons and not really to benefit the Egyptian economic interests. When the government loses its credibility, the market representatives lose their predictability, certainty and future vision, which has a negative effect on the Egyptian economy in general and the Egyptian trade in particular.

### **3.7. Enforceability of contracts**

There are a number of complaints about the Egyptian exporters who start deals with other countries, and after receiving the money they do not commit themselves to these deals. In other cases, they do not commit themselves to the guarantees agreed upon and do not provide their importing trade partners with the necessary spare parts....etc.

Moreover, many Egyptian business men frequently change from one country to the other and/or one activity to the other. Accordingly, there is no stability and no real settling of markets and mutual trust between the Egyptian exporters and their trading partners.

There are many incidences where ships carry consignments and suddenly change their direction to pass by other countries for receiving more consignments. This reflects the disrespect of the contracts and the time factor, especially that some products might be subject to spoilage. Therefore, the bad transportation shall not always be the excuse, but the behavior of the market representatives should also play an important role in trade. As a matter of fact, this bad behavior finds a big chance in developing rather than developed countries, where in the former it is hard to be penalized and there is a lack of enforceability of contracts.

### **3.8. Low quality of human resources**

Most of the Egyptian exporters cannot make the best use of the trade agreements. These exporters do not have the future vision for establishing their markets abroad and prevailing a good reputation internationally. In addition, the Egyptian exporters concentrate on their own capabilities of producing certain products instead of keeping an eye on the international markets and the needs of these markets quantity-, quality- and time wise.

On the other hand, the Egyptian commercial diplomacies abroad do not always do their job accurately. The heads of these offices are not employed according to their efficiency or experience qualifications but their age in grade. For example, these diplomacies do not inform the Egyptian exporters about their potential markets abroad and do not provide them with information about these markets. Furthermore, they are not capable of providing the Egyptian importers with information about the products that they could import.

As for the Egyptian Ministry of Industry and Foreign Trade, it lacks the qualified personnel. The salaries are very low, which increases the probabilities of corruption. Moreover, there are no sufficient equipment and laboratories. Therefore, some judgments about the products tested are misleading. Furthermore, the methods of examining the products are costly and time consuming. All these laboratories and equipment need to comply with the international standards.

The budget at the disposal of the Ministry is large enough for improving the quality of the corresponding personnel. Nevertheless, there is strong resistance from conservative employees in the ministry against this change.

#### **4. Institutions and trade**

Economic literature has recently increased its interest in the role of institutions for the general functioning of markets<sup>1</sup>. Institutions embody different elements, such as formal and informal rules of behavior, ways and means of enforcing these rules, procedures for mediation of conflicts, and sanctions in the case of violation<sup>2</sup>. Institutions depend on the operation of these different features. The more the institutions are well-developed, the more likely the transaction costs for market participants would decrease and hence the efficiency of markets would increase. The channels through which well-developed institutions fulfill this are the following<sup>3</sup>:

1. The reduction of information asymmetries, since good institutions make information about market conditions, goods and participants more available.
2. Risk reduction, since good institutions define and enforce property rights and contracts.
3. Dampening the actions undertaken by politicians and interest groups.

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<sup>1</sup> Examples for relevant literature are Frankel and Romer (1999), Acemoglu et al (2001) and Rodrik et al (2002).

<sup>2</sup> See North (1994) and World Bank (2002). North (1990) makes a distinction between institutions and organizations, referring to the first as the rules and the second as the players.

<sup>3</sup> World Bank (2002)



According to the World Development Indicators (WDI, 2003), trade as a share of the world Gross Domestic Production (GDP) has increased from 25 per cent in 1960 to 58 per cent in 2001. This could be an indicator for deeper international specialization, which has in turn led to an increase in the number of international transactions per dollar of world GDP. At the same time, it reflects the substantial tariff reductions that took place since the 1960s, and hence, the observed global increase in trade.

Institutions are supposed to be responsible for setting the rules for the interaction between private actors and for the interaction between public and private actors as well<sup>4</sup>. Well-functioning institutions reduce the level of uncertainty and in turn reduce transaction costs. Therefore, they are expected to have a positive impact on economic activity, and particularly on international trade.

In contrast, inefficient institutions can lead to serious obstacles for trade. Bigsten et al. (2000) give a good example on how an inefficient legal system can hinder interaction between manufacturing firms in a number of African countries on one hand and potential importers outside the continent on the other; after collecting survey data in Burundi, Cameroon, Côte d'Ivoire, Kenya, Zambia and Zimbabwe, the authors examined the contractual practices of African manufacturing firms. One of their findings is that a risky trade environment is usually associated with contract non-performance, and thus a higher probability of renegotiation of a contract. Due to the absence of an efficient legal system, the use of lawyers and courts to enforce the original contract can be rare. In this case, importers and exporters do not fulfill their contracts in the regular ways; imports may not arrive on time and/or their quality may not comply with what was ordered, and importers sometimes pay later than agreed upon. For instance, when Europeans deal with African firms, the former are often surprised by contractual renegotiations, delays or even sudden cancellations. It would be hard for those who are not used to functioning in this sort of environment to capture the fact that unpredictable behavior of African firms in such cases is nothing more than a 'rational' response to an inefficient system. This explains -to a great extent- why firms of developed countries have a hard time dealing with Third-

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<sup>4</sup> For a detailed elaboration, see North (1990).

World firms and the chances for the latter to enter the export markets of the former are very low.

Hence, domestic institutions, both in the home and the foreign country, can be expected to affect a country's choice of trading partners and, accordingly, the overall pattern of bilateral trade, i.e. countries with better institutions trade more and inefficient institutions can be regarded as a cost factor for domestic exporters and therefore lower their international competitiveness, leading in turn to negative repercussions on export flows. On the other hand, transaction costs associated with inefficient institutions raise the final consumer price of imported goods, which negatively affects a country's import flows.

It is also worth mentioning that institutions are expected to influence the effectiveness of trade policy; even if we assume that the trade barriers of one country are lowered to the minimum, outsiders may still be reluctant to trade with that country if, for example, they are not sure whether contracts will be enforced or payments will be made.

Quite recent empirical studies have relied on more sophisticated measures for institutional quality in gravity equations. Take for instance Anderson and Marcouiller (2002) who use the survey data of the World Economic Forum on contractual enforcement and corruption as an index for institutional quality. They conclude that lower institutional quality negatively affects trade.

Rauch and Trindade (2002) are concerned with the transnational networks and their impact on trade. Such networks include informal institutions that can either take the function of missing formal institutions or complement existing formal institutions. According to Greif (1993), the networks of traders can play an important role when it comes to contract enforcement in international trade<sup>5</sup>. Furthermore, they can contribute to the reduction of transaction costs through the reduction of information costs. In the study of Rauch and Trindade (2002), they find that the ethnic Chinese networks strongly

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<sup>5</sup> See for instance Greif (1993) on the role of coalitions between traders that governed agency relations among the Maghribi traders in the Mediterranean in the 11<sup>th</sup> century.

and positively influence the bilateral trade, especially in the case of differentiated products. This result can be referred to the fact that information costs are more important in the case of differentiated rather than homogeneous products.

De Groot et al. (2004) use the measure for institutional quality to analyze the effect of institutions on bilateral trade flows. They find that a better quality of informal institutions tends to coincide with more trade. Their paper also includes a special dummy for belonging to different Regional Trade Agreements (RTAs).

## **5. Other factors affecting trade between countries**

Numerous studies have focused on the geographical determinants of trade. These determinants are expected to affect the transaction costs a country faces in terms of international transport costs. A country's distance to its trading partners also has a negative effect on its propensity to trade. Hence, it is a standard result that measures of "remoteness" have a negative and significant effect on openness (Jansen and Nordas, 2004; Rodrik, 1998; Frankel and Rose, 2000 and Wei, 2000)<sup>6</sup>. International transport costs are captured by the geographical distance between countries and by a border dummy<sup>7</sup>. It is also very common in the empirical literature to include dummies for islands and landlocked countries when explaining openness, since both types of countries are expected to face higher international transport costs (e.g. Frankel and Rose, 2000 and Wei, 2000).

The size of one country is likely to play a big role in determining openness, due to the fact that the small size limits the country's possibilities to diversify production. In order to satisfy their domestic demand, smaller economies rely to a larger extent on imports as

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<sup>6</sup> Very few papers, such as Baier and Bergstrand (2001) have used direct measures for transport costs. These measures included c.i.f./f.o.b ratios from the IMF International Financial Statistics, which was highly criticized in the literature for its low quality (Hummels, 2001). It should also be noted that the relevant data are no longer published in the IMF.

<sup>7</sup> Trade between adjacent countries is expected to be characterized by lower transaction costs.

compared to large-size countries<sup>8</sup>. Country size has indeed systematically been found to have a significantly negative impact on imports, and hence on the openness of any country (e.g. Rodrik, 1998; Frankel and Rose, 2000 and Wei, 2000). This country size is usually measured by population or landmass.

According to Frankel and Rose (2000), the literature considered for a long time the elasticity of trade with respect to output to be larger than unity. In other words, richer countries trade more. But according to some recent studies, when including measures for institutional quality and trade policy in gravity equations, the effect of GDP on trade becomes either insignificant or turns negative<sup>9</sup>.

The effect of institutional factors on bilateral trade flows is also captured by variables reflecting a shared historical, political and cultural background. The measures that have been most commonly used for this purpose are dummies that indicate the presence of cultural factors, such as a common language, a common dominant religion and/or a common colonial history. Each of these factors is likely to affect international transaction costs in its own way. For example, a common language facilitates communication in personal contact. A common religion may increase mutual trust and thus reduce the perceived risk of transactions, and a common colonial history has also been considered to affect international transaction costs in a way or another (Jansen and Nordas, 2004).

## **6. The model**

One of the very first studies that relied on the gravity model in the empirical literature was the one run by Tinbergen (1962) and Pöyhönen (1963). In fact, they ran the first econometric studies of trade flows based on the gravity equation, for which they gave some intuitive justifications. Linnemann (1966) added more variables and went further towards a theoretical justification in terms of a Walrasian general equilibrium system, but the Walrasian model tends to include too many explanatory variables for each trade flow

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<sup>8</sup> See for instance Commonwealth Secretariat and World Bank (2000) and Easterly and Kraay (2000) for the particularities of small economies.

<sup>9</sup> See for instance Anderson and Marcouiller (2002), de Groot et al. (2003) and de Groot et al. (2004).

to be easily reduced to the gravity equation. Leamer and Stern (1970) followed Savage and Deutsch (1960) in deriving this equation from a probability model of transactions. They applied their approach on trade. Leamer (1974) also used the gravity equation to motivate explanatory variables in a regression analysis of trade flows.

These contributions were followed by several more formal attempts to derive the gravity equation from models that assumed product differentiation. For example, Anderson (1979) was the first to do so, assuming Cobb-Douglas preferences. Jeffrey Bergstrand has explored the theoretical determination of bilateral trade in a series of papers. For example, in Bergstrand (1985) he derived a reduced form equation for bilateral trade involving price indices. Helpman (1987), who has become a gravity model expert, used a correspondence between the gravity equation and the monopolistic competition model as the basis for his empirical work, i.e. he interpreted the close fit of the gravity equation with bilateral data on trade as supportive empirical evidence for monopolistic competition. Helpman applied his test to data on trade of the Organisation for Economic Co-operation and Development (OECD) countries, where most would agree that monopolistic competition is possibly present. Hummels and Levinsohn (1995) decided to attempt a sort of negative test of the same proposition by looking for the same relationship in the trade among a larger variety of countries, including those where monopolistic competition is less visible. Anderson and Marcouiller (2002), de Groot et al. (2004) and Jansen and Nordas (2004) observed a positive and robust relation between the quality of institutions and countries' openness to trade as measured by their trade flows.

It has long been recognized that bilateral trade patterns are well described empirically by this model, which relates trade between two countries positively to both of their incomes and negatively to the distance between them, usually with a functional form that is reminiscent of the law of gravity in physics (Deardorff, 1995).

When applied to a wide variety of goods and factors moving over regional and national borders under differing circumstances, the gravity model usually produces a good fit (Anderson and Wincoop, 2003). In the following, we briefly demonstrate the most

important studies that used this model, particularly in assessing the impact of different factors on trade flows between countries.

### 6.1. The variables

The gravity model used in this paper mainly relies on the following three indicators for institutional quality:

- *Government Effectiveness*: It is an indicator for the quality of public service provision, the quality of the bureaucracy, the capability of civil servants, the independence of the civil service from political pressures, and the accountability of the government's commitment to different policies. In many cases, governments are powerful enough to change domestic institutions. Therefore, the “government effectiveness” index is likely to reflect the quality of domestic institutions. It can also determine the importance of uncertainties related to policy changes in general and trade policy changes in particular.
- *Rule of Law*: It is based on several indicators that measure the extent to which agents trust and bear the rules of society. These indicators contain the perceptions of the incidence of crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts.
- *Control of Corruption*: It measures the perceptions of corruption, usually defined as using the public power for private gain. Hence, high levels of corruption increase the uncertainty about the size of gains to be expected from economic activities. Corruption seems to be a widespread phenomenon with potentially large negative effects on trade<sup>10</sup>. In a 1996 World Bank survey of 3,685 firms in 69 countries, for instance, corruption proved to be the second most important obstacle for doing business<sup>11</sup>.

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<sup>10</sup> See for instance Ades and Di Tella (1999) and Wei (2000).

<sup>11</sup> Brunetti et al. (1997) as cited in Anderson and Marcouiller (2002). The obstacle that ranked first was complaints about tax regulation and high taxes.

The three indicators are available in the Kaufmann et al. (2002) database<sup>12</sup>. Their indexes take values between -2.5 and 2.5; the higher the value the better the quality of the institutional factor. These indicators were chosen, since they can be expected to strongly affect the uncertainty associated with trade and hence the transaction costs.

## 6.2. The regressions

In all the regressions, the dependent variable is the trade flows between Egypt and the member countries of the WTO pair wise, and the main concern is estimating the coefficients of the three institutional independent variables and detecting their sign and significance in the model. We first add only the very basic independent variables -also used as control variables- of the gravity model (GDP<sup>13</sup> for the pair countries and the geographic distance between them) to the institutional variables, and in advanced steps, we add other complementary variables, such as a dummy for belonging to one of the RTAs that Egypt is member of, landmass or population of the partner country, border contingency with the partner country, common official language, common spoken language, common dominant religion<sup>14</sup>, being colonized by a common colonizer, having a colonial relationship and being a same country at a certain time of history<sup>15</sup>, which are all independent variables that could have a certain influence on the trade flows between Egypt and its WTO partner countries. We are also concerned with the fact whether the partner country is and island or landlocked country, and therefore, a dummy for this characteristic is included in the model as well.

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<sup>12</sup> The measures for institutional quality in de Groot et al. (2004) are taken from the same database.

<sup>13</sup> To avoid the endogeneity problem between the GDP on one hand and the exports and imports on the other, instrumental variables that explain the GDP were used, such as belonging to a certain continent, having colonized or having been colonized in the past, and using the languages used in the former colonies.

<sup>14</sup> Detailed data on the dominant religions in different countries were obtained from the World Fact Book, Central Intelligence Agency (CIA).

<sup>15</sup> CEPII (2005)

### 6.2.1. Using the minimum number of variables of a gravity model

In this section, we only include the GDP of the partner country of Egypt, the distance between the two countries and the institutional variables of the partner countries in the different regressions one at a time. We do this for the exports and the imports separately.

#### 6.2.1.1. Exports

The following regression is used:

$$\log_{exp_{ij}} = \alpha + \gamma \log_{gdp_j} + \delta \log_{distwces} + \theta \log_{inst_j} + \varepsilon$$

.....1

where:

$exp_{ij}$  are Egypt's exports to the partner country  $j$

$gdp_j$  is the GDP of the partner country  $j$

$distwces$  is the weighted average distance between Egypt and the partner country  $j$

$inst_j$  is the institutional variable in the partner country  $j$

assuming that  $i$  represents Egypt and  $j$  represents the partner country, i.e.  $\log_{exp_{ij}}$  is Egypt's exports to the WTO partner country.

Table (1) shows that the GDP of the partner countries of Egypt has a significant positive impact on the trade with Egypt and the shorter the distance between Egypt and its partner countries the more the trade flows. The institutional quality has a significant positive effect on the trade flows.



**Table (1)**  
**The impact of GDP, distance and institutional variables on the Egyptian exports to the countries of the WTO**

(T-statistics in parenthesis)

	Government effectiveness	Rule of law	Control of corruption
Constant	0.0022368 (0.03)	0.0020326 (0.03)	0.0013339 (0.02)
GDP in the partner country	0.4368208 (6.04)	0.4450949 (6.13)	0.4442202 (6.14)
Distance between the two countries	-0.2015331 (-2.89)	-0.2015117 (-2.87)	-0.2042963 (-2.92)
Institutional variable in the partner country	0.1574182 (2.18)	0.1296016 (2.08)	0.1354222 (2.18)
R-squared	0.2774	0.2701	0.2717

### 6.2.1.2. Imports

The previous regression is run, but after substituting the imports for the exports, in order to assess the other side of the coin:

$$log\_imp\_ij = \alpha + \gamma log\_gdp\_j + \delta log\_distwces + \theta log\_inst\_j + \varepsilon$$

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where  $ixp\_ij$  are Egypt's imports from the partner country j

We obtain similar results for all the variables included in the regressions so far, as can be seen in table (2).

**Table (2)**  
**The impact of GDP, distance and institutional variables on the Egyptian imports from the countries of the WTO**

(T-statistics in parenthesis)

	Government effectiveness	Rule of law	Control of corruption
Constant	0.0023905 (0.05)	0.0022021 (0.04)	0.0012711 (0.02)
GDP in the partner country	0.6841807 (12.37)	0.6908063 (12.40)	0.690189 (12.44)
Distance between the two countries	-0.1183521 (-2.22)	-0.1175284 (-2.18)	-0.1213208 (-2.26)
Institutional variable in the partner country	0.1940436 (3.52)	0.1729065 (3.11)	0.1786097 (3.24)
R-squared	0.5771	0.5700	0.5721

### 6.2.2. Adding dummies for the membership in the RTAs

Egypt is member of several RTAs. It is part of the Common Market for Eastern and Southern Africa (COMESA), the Greater Arab Free Trade Area (GAFTA), the Europe-Mediterranean Partnership Agreement (Euro-Med) and the Aghadir agreement (with three other Arab countries also members of Euro-Med). In the following regressions, we add dummies for belonging to one of these four RTAs.

#### 6.2.2.1. Exports

In the case of Egypt's exports to the other WTO member countries, we use the following regression:

$$\log_{exp_{ij}} = \alpha + \beta \log_{gdp_j} + \gamma \log_{distwces} + \delta \log_{inst_j} + \eta COMESA_j + \theta GAFTA_j + \lambda EURO_MED_j + \kappa AGHADIR_j + \varepsilon \dots\dots\dots 3$$

where:

*COMESA<sub>j</sub>* is the dummy for Egypt's partner country's membership in COMESA.

*GAFTA<sub>j</sub>* is the dummy for Egypt's partner country's membership in GAFTA.

*EURO\_MED<sub>j</sub>* is the dummy for Egypt's partner country's membership in Euro-Med.

*AGHADIR<sub>j</sub>* is the dummy for Egypt's partner country's membership in Aghadir.

The results are demonstrated in table (3). The GDP of the partner country is still positively significant. However, the institutional variables in the importing countries do not have a significant influence on their trade with Egypt. The distance loses its significance after including these dummies. Moreover, being a member in Euro-Med increases the possibility for the trading partner to trade more with Egypt as compared to the members of the other RTAs.

**Table (3)**  
**The impact of GDP, distance and institutional variables on the Egyptian exports to the countries of the WTO (including dummies for the membership in the RTAs)**

(T-statistics in parenthesis)

	Government effectiveness	Rule of law	Control of corruption
Constant	0.000918 (0.01)	0.000677 (0.01)	0.0006545 (0.01)
GDP in the partner country	0.4447747 (6.20)	0.4529223 (6.32)	0.4489409 (6.28)
Distance between the two countries	-0.0962809 (-1.08)	-0.0910723 (-1.02)	-0.0947369 (-1.06)
Institutional variable in the partner country	0.0446847 (0.53)	0.0071901 (0.09)	0.0258546 (0.32)
GAFTA	0.0320498 (0.39)	0.0292493 (0.36)	0.0280845 (0.34)
COMESA	-0.0236361 (-0.32)	-0.0298541 (-0.40)	-0.0281117 (-0.38)
Euro-Med	0.2365585 (2.47)	0.2558425 (2.68)	0.2466217 (2.62)
Aghadir	-0.0680681 (-0.87)	-0.0697249 (-0.88)	-0.0672559 (-0.85)
R-squared	0.3093	0.3080	0.3084

### 6.2.2.2. Imports

We use the following regression:

$$\log_{imp_{ij}} = \alpha + \beta \log_{gdp_j} + \gamma \log_{distwces} + \delta \log_{inst_j} + \eta COMESA_j + \theta GAFTA_j + \lambda EURO_{MED}_j + \kappa AGHADIR_j + \varepsilon \dots\dots\dots 4$$

As shown in table (4), the institutional variables in the partner countries of Egypt, when the former are regarded as exporters to Egypt, positively influence the trade flows. The rest of the results are the same like in the case of the Egyptian exports.

**Table (4)**

**The impact of GDP, distance and institutional variables on the Egyptian imports from the countries of the WTO (including dummies for the membership in the RTAs)**

(T-statistics in parenthesis)

	Government effectiveness	Rule of law	Control of corruption
Constant	0.0012576 (0.02)	0.001038 (0.02)	0.0006534 (0.01)
GDP in the partner country	0.6896267 (12.65)	0.6964007 (12.74)	0.6937006 (12.75)
Distance between the two countries	-0.025826 (-0.38)	-0.0217395 (-0.32)	-0.0270925 (-0.40)
Institutional variable in the partner country	0.1061155 (2.28)	0.0760153 (2.22)	0.0886796 (2.14)
GAFTA	0.0321223 (0.51)	0.0262318 (0.42)	0.0215744 (0.35)
COMESA	0.0054745 (0.10)	0.0003389 (0.01)	-0.002076 (-0.04)
Euro-Med	0.205188 (2.82)	0.2209099 (3.04)	0.215485 (3.00)
Aghadir	-0.093 (-1.56)	-0.0916693 (-1.52)	-0.0877883 (-1.46)
R-squared	0.6011	0.5976	0.5994

### 6.2.3. Adding the size of the importing country

In this section, we only consider Egypt as an exporting country, since what concerns us as an additional control variable is the size of the importing country and its impact on the trade flows. Hence, if we look at Egypt as an importing country, we cannot include its size in the regression, since it will always be a fixed size. In other words, this variable will be automatically dropped from the regression.

Therefore, we use the following regression:

$$\log\_exp\_ij = \alpha + \beta \log\_gdp\_j + \gamma \log\_distwces + \delta \log\_inst\_j + \eta COMESA\_j + \theta size\_j + \theta GAFTA\_j + \lambda EURO\_MED\_j + \kappa AGHADIR\_j + \varepsilon \dots\dots\dots 5$$

where *size<sub>j</sub>* is the size of the importing partner country.

When Egypt is looked at as an exporting country, the impact of the institutional variables of the importing countries is insignificant. This can be seen in tables (5) and (6). The distance does not have a significant effect on trade either. In all cases, the membership of an Egyptian trade partner in Euro-Med matters in contrast to its membership in any of the three other RTAs. When comparing the significance of the landmass and population of the Egyptian partner countries, we easily find out that the landmass does not give significant results, while the population does.

**Table (5)**  
**The impact of GDP, distance, landmass and institutional variables on the Egyptian exports to the countries of the WTO (including dummies for the membership in the RTAs)**

(T-statistics in parenthesis)

	Government effectiveness	Rule of law	Control of corruption
Constant	0.0008087 (0.01)	0.0005772 (0.01)	0.0005501 (0.01)
GDP in the partner country	0.4230916 (5.19)	0.4302952 (5.26)	0.4263554 (5.23)
Distance between the two countries	-0.1015541 (-1.13)	-0.0967454 (-1.08)	-0.1003805 (-1.11)
Landmass	0.0454841 (0.56)	0.0465831 (0.58)	0.0466716 (0.58)
Institutional variable in the partner country	0.0435392 (0.51)	0.0079677 (0.09)	0.026237 (0.32)
GAFTA	0.0294352 (0.36)	0.0266575 (0.32)	0.0254618 (0.31)
COMESA	-0.0242825 (-0.32)	-0.030195 (-0.40)	-0.0285374 (-0.38)
Euro-Med	0.2423317 (2.51)	0.2607558 (2.72)	0.2517512 ( 2.65)
Aghadir	-0.0680727 (-0.86)	-0.0695997 (-0.88)	-0.0671541 (-0.85)
R-squared	0.3108	0.3096	0.3100

**Table (6)**  
**The impact of GDP, distance, population and institutional variables on the Egyptian exports to the countries of the WTO (including dummies for the membership in the RTAs)**

(T-statistics in parenthesis)

	Government effectiveness	Rule of law	Control of corruption
Constant	0.0004439 (0.01)	0.0002616 (0.00)	0.3610456 (5.10)
GDP in the partner country	0.3623777 (5.13)	0.3683079 (5.20)	0.3610456 (5.10)
Distance between the two countries	-0.079095 (-0.94)	-0.0754368 (-0.89)	-0.0817938 (-0.97)
Population	-0.2874856 (-4.23)	-0.2873638 (-4.21)	-0.291371 (-4.26)
Institutional variable in the partner country	0.0615084 (0.76)	0.0348257 (0.44)	0.0637265 (0.82)
GAFTA	0.0536818 (0.69)	0.0501397 (0.64)	0.0473345 (0.61)
COMESA	-0.0014085 (-0.02)	-0.0059025 (-0.08)	-0.0041316 (-0.06)
Euro-Med	0.2640281 (2.91)	0.2778379 (3.07)	0.2643404 (2.96)
Aghadir	-0.0776545 (-1.04)	-0.0777037 (-1.04)	-0.0732917 (-0.98)
R-squared	0.3846	0.3829	0.3850

#### 6.2.4. Including all the complementary variables in the regressions

In the following, we add other complementary variables that reflect common cultural and historical factors between Egypt and its partner countries. We also add two dummies that reflect whether the Egyptian partner country is an island or landlocked<sup>16</sup>, such that the regression takes the following form:

<sup>16</sup> Data on the island and landlocked countries were obtained from the Free Dictionary 'Encyclopedia'.

$$\log\_exp\_ij = \alpha + \beta \log\_gdp\_j + \gamma \log\_distwces + \delta \log\_inst\_j + \eta \text{ COMESA\_j} + \nu \text{ size\_j} + \theta \text{ GAFTA\_j} + \lambda \text{ EURO\_MED\_j} + \kappa \text{ AGHADIR\_j} + \sigma \log\_ (1+isl) + \varrho \log\_ (1+landl) + \mu \log\_ (1+contig) + \nu \log\_ (1+comla\_f) + \omega \log\_ (1+comla\_k) + \rho \log\_ (1+comrel) + \pi \log\_ (1+colony) + \varepsilon \dots\dots\dots 6$$

where:

*isl* is the dummy for the partner country being an island.

*landl* is the dummy for the partner country being landlocked.

*contig* is the dummy for the contiguity (common border) between Egypt and its partner country.

*comla\_f* is the dummy for the common official language between Egypt and its partner country.

*comla\_k* is the dummy for the common spoken language between Egypt and its partner country.

*comrel* is the dummy for the common dominant religion between Egypt and its partner country.

*colony* is the dummy for a historical colonial relationship between Egypt and its partner country.

The same regression is used for the exports and imports (by replacing this dependent variable one at a time). However, the size of the importing country is dropped when considering the Egyptian imports for the same reason mentioned above.

In principal, the results in tables (7), (8) and (9) do not differ from the previous results. The complementary variables do not add much significance to the regressions; only having a colonial relationship with Egypt matters for trade. Belonging to Euro-Med and acquiring high institutional quality rather positively affect the trade between Egypt and the other WTO countries.



**Table (7)**  
**The impact of GDP, distance, landmass, the institutional variables and the complementary variables on the Egyptian exports to the countries of the WTO (including dummies for the membership in the RTAs)**

(T-statistics in parenthesis)

	Government effectiveness	Rule of law	Control of corruption
Constant	0.0011429 (0.02)	0.0009264 (0.01)	0.001074 (0.02)
GDP in the partner country	0.4012459 (5.02)	0.4071633 (5.08)	0.4036747 (5.05)
Distance between the two countries	-0.1551092 (-1.60)	-0.1560445 (-1.61)	-0.1553543 (-1.61)
Landmass	0.0451226 (0.57)	0.046215 (0.58)	0.045815 (0.58)
Institutional variable in the partner country	0.0090856 (0.10)	-0.0228407 (-0.25)	-0.0045994 (-0.05)
Landlocked	-0.099455 (-1.33)	-0.0990591 (-1.33)	-0.0996189 (-1.34)
Island	-0.0185385 (-0.23)	-0.0105621 (-0.13)	-0.0153317 (-0.19)
Common borders	-0.1338026 (-1.74)	-0.1369952 (-1.78)	-0.1353294 (-1.75)
Common official language	0.0079581 (0.06)	0.0043827 (0.03)	0.0063733 (0.04)
Common spoken language	0.0552086 (0.68)	0.0592101 (0.73)	0.0567533 (0.70)
Common dominant religion	-0.0924999 (-0.91)	-0.0972688 (-0.96)	-0.0945383 (-0.93)
Colonial relationship	0.2327415 (3.22)	0.2317018 (3.20)	0.2324032 (3.21)
GAFTA	0.037246 (0.27)	0.0408943 (0.30)	0.0388709 (0.28)
COMESA	-0.0450972 (-0.58)	-0.0514619 (-0.66)	-0.0474943 (-0.62)
Euro-Med	0.2042214 (2.05)	0.2195252 (2.21)	0.2107391 (2.15)
Aghadir	-0.0645917 (-0.81)	-0.0672647 (-0.84)	-0.0657006 (-0.82)
R-squared	0.3750	0.3752	0.3749

**Table (8)**  
**The impact of GDP, distance, population, the institutional variables and the complementary variables on the Egyptian exports to the countries of the WTO (including dummies for the membership in the RTAs)**

(T-statistics in parenthesis)

	Government effectiveness	Rule of law	Control of corruption
Constant	0.000892 (0.01)	0.0007423 (0.01)	0.0006448 (0.01)
GDP in the partner country	0.3399964 (4.87)	0.3445768 (4.92)	0.3376527 (4.83)
Distance between the two countries	-0.1144115 (-1.26)	-0.1149416 (-1.26)	-0.1156533 (-1.27)
Population	-0.2800418 (-4.18)	-0.2792148 (-4.15)	-0.2835366 (-4.20)
Institutional variable in the partner country	0.0431821 (0.50)	0.0216991 (0.25)	0.0504457 (0.61)
Landlocked	-0.0814709 (-1.16)	-0.0825156 (-1.17)	-0.0810429 (-1.15)
Island	-0.0542111 (-0.72)	-0.0498201 (-0.66)	-0.0565441 (-0.75)
Common borders	-0.01300595 (-1.79)	-0.1322955 (-1.82)	-0.1282394 (-1.77)
Common official language	0.0408746 (0.31)	0.0379444 (0.28)	0.0405491 (0.30)
Common spoken language	0.0577103 (0.76)	0.0602907 (0.79)	0.0583473 (0.77)
Common dominant religion	-0.0946208 (-0.99)	-0.0972819 (-1.02)	-0.0921394 (-0.96)
Colonial relationship	0.2311775 (3.39)	0.2311951 (3.39)	0.2319686 (3.40)
GAFTA	0.0400166 (0.31)	0.0403715 (0.31)	0.0334553 (0.26)
COMESA	-0.0219653 (-0.30)	-0.0260867 (-0.35)	-0.0233348 (-0.32)
Euro-Med	0.2232428 (2.39)	0.2333877 (2.50)	0.2212152 (2.41)
Aghadir	-0.0754629 (-1.01)	-0.0757856 (-1.01)	-0.0715378 (-0.95)
R-squared	0.4435	0.4428	0.4440

**Table (9)**  
**The impact of GDP, distance, population, the institutional variables and the complementary variables on the Egyptian imports from the countries of the WTO (including dummies for the membership in the RTAs)**

(T-statistics in parenthesis)

	Government effectiveness	Rule of law	Control of corruption
Constant	0.0019889 (0.04)	0.0017933 (0.03)	0.0012693 (0.02)
GDP in the partner country	0.6740043 (12.30)	0.6792752 (12.35)	0.6785178 (12.39)
Distance between the two countries	-0.0273874 (-0.37)	-0.0277415 (-0.37)	-0.0314664 (-0.42)
Institutional variable in the partner country	0.1212075 (2.02)	0.0954257 (4.61)	0.0995836 (2.13)
Landlocked	-0.0800402 (-1.39)	-0.0835537 (-1.44)	-0.0800902 (-1.39)
Island	-0.0673064 (-1.10)	-0.0639844 (-1.04)	-0.0631041 (-1.03)
Common borders	-0.0896281 (-1.51)	-0.0926011 (-1.55)	-0.0895741 (-1.50)
Common official language	0.0143249 (0.13)	0.0098172 (0.09)	0.0089029 (0.08)
Common spoken language	-0.0243459 (-0.39)	-0.0214461 (-0.34)	-0.0187638 (-0.30)
Common dominant religion	-0.0196471 (-0.25)	-.00218492 (-0.28)	-.00196128 (-0.25)
Colonial relationship	0.1197693 (2.14)	0.1210498 (2.16)	0.1207684 (2.16)
GAFTA	0.0450812 (0.43)	0.0418191 (0.40)	0.0344726 (0.32)
COMESA	0.0232285 (0.38)	0.0187429 (0.31)	0.0130864 (0.22)
Euro-Med	.1774833 (2.33)	.1899083 (2.48)	0.189606 (2.52)
Aghadir	-.0971947 (-1.58)	-.0949618 (-1.54)	-0.0911188 (-1.47)
R-squared	0.6241	0.6211	0.6220

## **7. Conclusions and recommendations**

In the trade between Egypt on one hand and all the WTO countries on the other, the institutional variables in these partner countries -when they are regarded as exporting countries- play a positive significant role. This indicates that in one commercial deal between two countries, the institutional factors influencing the quality, quantity and timeliness of providing the goods are more important than the institutional factors influencing the financial settlements occurring within this deal. The GDP in the WTO partner countries of Egypt plays a positive significant role as well. However, when including the other control variables in the regressions, we find out that there are some factors other than the geographical distance that rather influence the trade flows. Two other factors highly related to the geographical distance and which are also included in the regressions are the dummies that categorize the WTO partner countries for being landlocked or an island. These two variables proved to be insignificant. Being a member in Euro-Med increases the possibility for the trading partner to trade more with Egypt as compared to the members of the other RTAs.

Since it is not possible to cover the institutional factors of all the member countries of the WTO in detail, and since the paper is rather concerned with the institutional problems in Egypt, it provides some recommendations that could be useful for overcoming such problems and moving with Egypt towards more free trade.

Since Egypt is relatively new in the field of free trade, it still cannot fully absorb some important concepts associated with 'trade liberalization', such as democracy. Therefore, even though Egypt apparently opens the door for free trade, the importers and exporters are squeezed by the different sorts of Non-Tariff Barriers (NTBs) and the administrative and bureaucratic problems existing in Egypt. When the institutional problems are deeply rooted, then it takes time to adapt to new systems and accept and implement the reforms.

Joining the WTO is often and mistakenly regarded as an end in its own. Nonetheless, it should be considered a start for penetrating global markets. When Egypt signed the

WTO, it was aiming at liberalizing on international basis, whereas it is more important to liberalize nationally; changing the rigid national policies is the most important and at the same time most difficult task. If these rigid national policies remain, then there would be no big difference if Egypt would liberalize regionally or internationally, with African, Arab or European countries, since the tight national policies would always be a burden and would not support and serve for the open international policies.

In order to be capable of penetrating international markets intensively, Egypt should be able to export high quality and low price products to these markets. As long as good institutions are missing and exporters mangle the export-oriented mentality, it is hard to fulfill this end. Therefore, it is essential for the exporters to realize that in order to win they first have to lose. They need to arrange campaigns for marketing their products abroad and send professional representatives of their companies. This is costly in the short run, but it establishes their markets abroad and increases their returns in the long run. And once they have settled, they should not change their activities but strengthen their markets abroad. All this needs knowledge and public awareness. The authorities that should take this responsibility are not working efficiently. Therefore, it could be useful for Egypt not to insist on giving this responsibility to the traditional ministries of industry and trade, but establish more powerful bodies that undertake their jobs. These bodies can either be public or private. In addition, the Egyptian Federation of Industries can play an important role in creating a sound environment for industry and trade.

A good approach for solving the problems associated with the Egyptian commercial diplomacies abroad could be transferring the unqualified employees of these diplomacies to the Ministry of Foreign Affairs (where they belong to originally) and replacing them by other employees from the Ministry of Industry and Foreign Trade, who would be more involved in the Egyptian commercial deals and who could do their important and crucial job more efficiently. However, the latter employees themselves need to be more informed and their skills should be improved through programs that combine theory with practice.

An important issue highly related to the previous problem is the availability of information. There should be a data base of all potential markets abroad as well as information channels between all the concerned parties of trade, in order to achieve the high level of transparency existing in the developed countries.

The Egyptian government needs a better strategy for collecting taxes, based on a better future vision; if the government gives the producers space to produce at cheap costs, they would increase their production, employ more labor, the purchasing power would increase, they can even start to be export-oriented, and the probability for the whole economy to benefit would increase. It is also important to strictly monitor and trace the poles of corruption and create a public awareness against bureaucracy and red tape, in order to remove all the intangible hindrances to free trade.

If the Egyptian government would commit itself more to the trade agreements, the guarantees system would automatically come into effect, and the traders would feel supported by the government and would be encouraged to run deals with new traders in different markets abroad, since the level of uncertainty will decrease.

Generally, there is a great need of mobilizing the Egyptian and foreign investors for investing in freight companies instead of air transport, in order to help the exporters avoid the above mentioned problems facing them when dealing with the national or foreign airlines.

Last but not least, more transparent exchange rates would increase the motivations of the importers and exporters and reduce their uncertainties.

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