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The Impact of Trade Liberalization on Trade Balance in Arab Countries

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Abstract. This paper examines the impact of trade liberalization on imports, exports, and the trade balance in 20 Arab countries over the period 1995-2010. To examine the issues empirically, the paper uses dynamic panel data techniques based both on Fixed Effects and Generalized Methods of Moments (GMM) and employs two measures of trade liberalization. The results of the paper suggest that trade liberalization is statistically and positively correlated with imports and trade balance. However, when fuel exports are excluded, the results suggest that trade liberalization is deleterious to the trade balance. These results have serious policy implications for Arab countries given the unsustainable nature of fossil fuel resources as well as the weak manufacturing base of these countries. The paper argues that these results might not be surprising in light of institutional weaknesses, poor physical infrastructure and the lack of skilled labor available at an internationally competitive cost.

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1. Introduction

International trade has been a central issue both for economic thinkers and policy makers since the field of "modern" Economics first appeared. It dates back to a few years before Adam Smith's *Wealth of Nations* to David Hume who argues in his "Of the Balance of Trade" that trade imbalances are self-correcting. The classic doctrine that international trade enhances growth by widening the market and improving labor division and productivity has dominated – and still does dominate to a large extent – trade theory in one way or another. Free trade theorists distinguish between two types of gains from trade: static gains and dynamic gains. Static gains arise from reallocation of resources based on comparative advantage and increased specialization, while dynamic gains increase production potential through more investment and productivity increases resulting from economies of scale, learning by doing and technology transfer. Dynamic gains have been the core of modern trade theory and growth models (e.g., Helpman and Krugman, 1985) which emphasize the link between exports and growth. Yet, empirical research tends to give conflicting results. Some studies show that countries which liberalized their trade have improved their export performance (Thomas et al, 1991; Bleaney, 1999; and Ahmed 2000). However, other studies have found little evidence of a positive relationship between trade liberalization and export growth (UNCTAD, 1999; Greenway and Sapsford Jenkins, 1994). Concerning imports, it would seem that trade liberalization exerts a strong positive impact on the growth of imports (Bertola and Faini, 1991).

Since the 1950s, there has been a significant liberalization of world trade. This trend was given strong momentum by the establishment of the General Agreement on Tariffs and Trade (GATT) in 1947 which was replaced by the World Trade Organization (WTO) in 1995. Tariffs and non-tariff barriers to trade have significantly decreased both in developed and developing countries although they are still relatively higher in the latter. Arab countries have not been an exception; they have followed the same trend and have liberalized their trade regimes over the past two decades either unilaterally – which has been the rarer case – or as a part of structural adjustment programs.

Since the impact of trade liberalization on trade balance will depend on the relative impact of liberalization on export and import growth and on change in relative prices and terms of trade, policy makers are more concerned about the impact of trade liberalization on the overall trade

balance. The relevance of this issue for policy is especially high due to its serious implications for the balance of payments in particular and macroeconomic stability in general. This might help explain the fact that many developing countries have been reluctant to liberalize their trade regimes for fear of worsening trade balances.

The purpose of this paper is to examine the impact of trade liberalization on the overall trade balance in 20 Arab countries[1] over the period 1995-2010. Specifically, the aim is to answer four questions. First, what has been the impact of trade liberalization on the growth of exports and imports in Arab countries? Second, has the effect of trade liberalization been stronger on exports or imports? Third, what has been the impact of liberalization on the overall trade balance? Finally, what might explain trade balance patterns in Arab countries over the period under consideration?

Empirical studies on this issue suffer from the lack of systematic time series data measuring trade liberalization. Dates of liberalization, which are widely used in the literature and are represented by liberalization dummy, have serious shortcomings as they do not take into consideration the intensity of liberalization of the time period elapsed since the date of liberalization. In addition, the coexistence of tariffs and quantitative restrictions has made the construction of satisfactory summary indicators of trade policy at different points in time difficult (Edwards,1997). This paper uses systematic time series data over the period 1995-2010 and focuses exclusively on Arab countries.

The paper is organized as follows: Section II presents a selective literature review. Section III gives an overview of developments in merchandise imports, exports and the trade balance in Arab countries over the last two decades. Section IV discusses the empirical methodology used and presents the empirical results. Section V discusses the implications of the empirical results and certain policy issues, and Section VI concludes.

[1]Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, UAE, West Bank and Gaza, Yemen.

2. Review of Relevant Literature

There is an immense amount of literature on trade openness and economic growth. The primary theme of this literature is that trade openness contributes positively to economic growth. Many studies investigate the impact of open trade on exports, employment and economic growth, while very little attention has been paid to the impact of trade liberalization on imports and the balance of trade.

From a theoretical standpoint, the impact of trade liberalization (measures taken to reduce export restrictions and import controls, considering tariffs and non-tariffs, and exchange rates) on the trade balance is unclear. That is, trade liberalization might boost imports more than exports, which would put constraints on the trade balance and impede growth rather than enhance it. Several key studies have emphasized important issues that affect the relationship between trade policy on the one hand and exports and economic performance on the other.

Krueger (1998) argues that trade policy is integrally tied up with the overall development strategy. That is, while most countries liberalize from an initial situation that is sufficiently extreme so that gains are almost inevitable, their trade policy does not operate in a vacuum. Other policies supporting trade liberalization may be necessary and in any event can greatly increase its benefits.

In a pioneer work tackling another aspect of the issue, Sachs and Warner (1995) show that economies with a high ratio of natural resource exports as a percentage of their GDP tend to have low economic growth rates. They argue that this conceptual puzzle can be explained by several hypotheses. The most relevant of these hypotheses is the argument that characteristics of the domestic economy are more crucial to export and growth performance than those of the international economy. This hypothesis is based on the view that beneficial “forward and backward linkages” from primary exports to the rest of the economy would be small since manufacturing leads to a more complex division of labor than natural resource production and thus to a higher standard of living. One may conclude from the argument put forward by Sachs and Warner that the issue is not “whether to trade,” but rather “what to trade.”

In their extensive survey of the macroeconomic effects of trade tariffs, Ostry and Rose (1992) stated that there is no clear conclusion

concerning the effects of tariff change on the overall trade balance. As a result, the issue can only be approached empirically. The empirical research in this area is quite mixed. However, three distinct streams can be distinguished. On the side of imports, studies generally find that trade liberalization has a positive impact on a country's imports (Melo and Vogt, 1984; Bertola and Faini, 1991; and Santos-Paulino, 2002). On the export side, findings are mixed. While some research shows that countries which have opted for trade liberalization have improved their export performance (Thomas et al, 1991; Weiss, 1992; Joshi and Little, 1996; Helleiner, 1994; Bleaney, 1999; Ahmed, 2000 and Santos-Paulino, 2002), other studies find little or no evidence of such a relationship (UNCTAD, 1989; Agosin, 1991; Clarke and Kirkpatrick, 1992; Greenway and Sapsford, 1994; Shafaedin, 1994; and Jenkins, 1996). Similarly, the relevant empirical literature on the impact of trade liberalization on trade balance tends to give conflicting results. Ostry and Rose (1992) examined the effects of tariff changes on the overall trade balance using five data sets (mostly data from the OECD countries) and found no statistically significant impact. UNCTAD (1999), in a cross-sectional study of 15 developing countries over the period 1970-1995, found that, controlling for other factors, trade liberalization had a negative impact on the trade balance and the balance of payments.

In a more recent study, Thirlwall and Santos-Paulino (2004) examined the impact of trade liberalization on imports, exports and the overall trade balance using a sample of 22 developing countries for the period 1972-1997. They found that the impact of trade liberalization differs depending on whether trade had previously been more or less protected. That is, the positive impact of trade liberalization on import growth has been far stronger in industries which were highly protected during the period before liberalization. In addition, they found that trade liberalization stimulated both exports and imports, yet imports grew by a higher rate than exports, which ultimately worsened the overall trade balance.

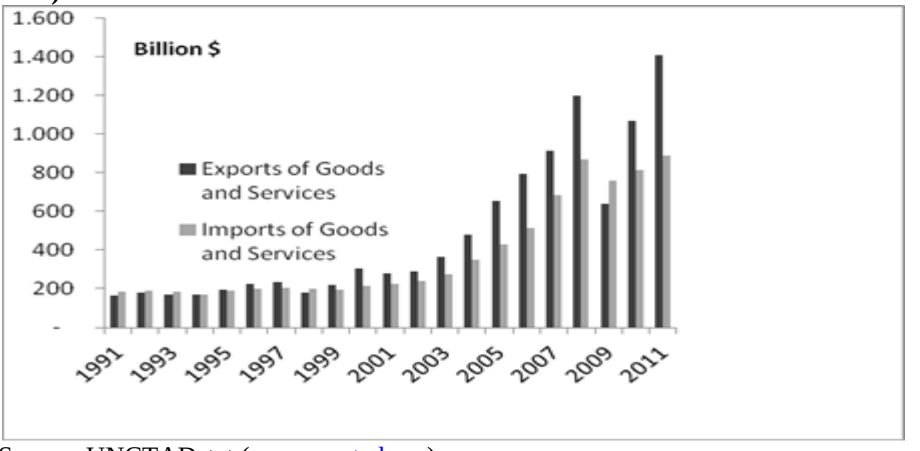
Using two recently constructed measures of trade liberalization dates, Wu and Li Zeng (2008) examined the impact of trade liberalization on imports, exports and overall trade balance for two samples comprising 39 and 77 countries, respectively. They found strong and consistent evidence that trade liberalization leads to increases in imports and exports. Nevertheless, evidence for its negative impact on trade balance was mixed.

It seems that not only theoretically but also empirically the question of whether trade liberalization improves or worsens a country's trade balance is at present an open question.

3. Trade Performance in Arab Countries (1991-2010)

Aside from Gulf Cooperation Council (GCC) countries[2], most Arab countries discussed in this paper have reformed their trade regimes since the late 1980s and early 1990s, either as a part of structural adjustment programs (e.g. Egypt, Morocco, Sudan, Tunisia) or unilaterally. Trade liberalization with substantial reforms and reduction of tariffs has taken place in a number of Arab countries, some non-tariff barriers have been lifted and a number of restrictions on anti-export biases have been abolished. Yet, the pathway to reform has not been even in all countries. That is, it is important to note that Arab countries differ in their degree of openness to trade. While Algeria, Morocco, Jordan, and Tunisia all had tariff rates (unweighted) averaging over 10 percent in 2005/2006, Tunisia had a rate of almost 23 percent, while tariff rates in several GCC countries are very low and there are virtually no other barriers to trade. (Nugent and Pesaran, 2007).

Figure1. Exports and Imports of Goods and Services of Arab Countries (1991-2011)



Source: UNCTADstat (www.unctad.org)

[2]GCC countries are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates.

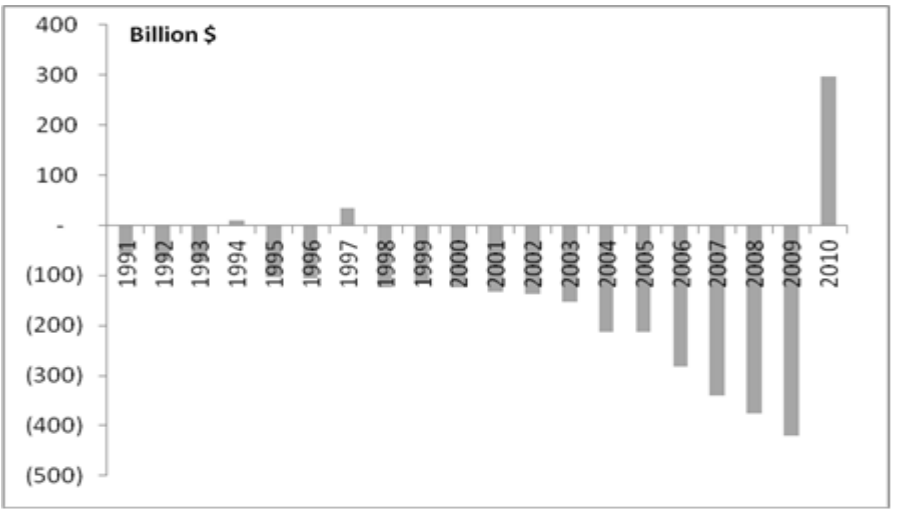
Liberalized trade in Arab countries has been reflected in foreign trade patterns; imports and exports of goods and services have increased more than eightfold and fourfold respectively over the period 1991-2011 (Figure.1). Merchandise trade reveals a similar trend; merchandise imports increased more than six times, rising from $ 102.8 billion in 1991 to $ 660.2 billion in 2010. The growth of merchandise exports was even more striking, for they increased more than eightfold during the twenty-year period from 1991, when they stood at $ 127 billion, to 2008, when they reached $1070 billion, before declining to $ 918 billion in 2010 due to the global financial crisis.

Figure 2. Merchandise and Fuel Exports of Arab Countries (1991-2010)

Source: UNCTADstat (www.unctad.org), World Development Indicators and author's calculations

Merchandise export figures should be carefully examined as fuel exports have been the principal export, ranging from 63% to 84% of merchandise exports during the same period (Figure. 2). Data on trade balances for Arab countries over the period 1991-2010 demonstrate that Arab economies had trade surpluses for all the years depicted, with only a few exceptions. However, this surplus turned out to be a deficit when fuel exports are excluded from the figures for merchandise exports (Figure 3). Finally, it is worth noting that Arab countries' current account balance has moved by and large in parallel with their trade balance over the same period.

Figure 3. Non-Fuel Trade Balance of Arab Countries (1991-2010)



Source: UNCTADstat (www.unctad.org), World Development Indicators and author's calculations.

4. Empirical Methodology and Regression Results

4.1 Empirical Framework

The impact of trade liberalization on trade performance is usually measured by the monetary gap between imports and exports. The present paper treats this issue in three steps. First, the impact of trade liberalization on merchandise imports is assessed; secondly, the impact on merchandise exports, and finally its impact on the trade balance.

It is not liberalization alone that affects trade performance; other variables are also in play. These variables include: income, relative price changes and terms of trade. To investigate empirically the impact of trade liberalization on trade performance, merchandise imports (M), merchandise exports (X) and trade balance (TB) are taken as dependent variables. To take into account differences in the size of countries, all three variables are normalized by measuring them as a share of GDP. Following the literature (Thirlwall, 1999; Santos-Paulino 2002; Santos-Paulino and Thirlwall 2004; and Wu and Li Zeng, 2008), the basic three estimating equations are:

$$M_{i,t} = \beta_1 + \beta_2 M_{i,t-1} + \beta_3 Y_{i,t} + \beta_4 RER_{i,t} + \beta_5 TOT_{i,t} + \beta_6 LIB_{i,t} + \beta_7 FIS_{i,t} + v_{i,t} + \varepsilon_{i,t} \quad (1)$$

Where $M_{i,t}$ is merchandise imports/GDP; $M_{i,t-1}$ is lagged $M_{i,t}$, Y is domestic GDP growth (real); RER is change in real effective exchange rate; TOT is change in terms of trade measured as the ratio of exports to imports prices; LIB is the trade liberalization measure; FIS is the fiscal balance/GDP; $v_{i,t}$ is the time-unvarying country-specific effect and $\varepsilon_{i,t}$ is the well-behaved error term.

$$X_{i,t} = \mu_1 + \mu_2 X_{i,t-1} + \mu_3 W_{i,t} + \mu_4 RER_{i,t} + \mu_5 TOT_{i,t} + \mu_6 LIB_{i,t} + \mu_7 OP_{i,t} + v_{i,t} + \varepsilon_{i,t} \quad (2)$$

Where $X_{i,t}$ is merchandise exports /GDP; $X_{i,t-1}$ is lagged $X_{i,t}$; W is foreign GDP growth; OP is world oil price and the rest of the variables as noted earlier, and

$$TB_{i,t} = \phi_1 + \phi_2 TB_{i,t-1} + \phi_3 Y_{i,t} + \phi_4 W_{i,t} + \phi_5 RER_{i,t} + \phi_6 TOT_{i,t} + \phi_7 LIB_{i,t} + \phi_8 FIS_{i,t} + v_{i,t} + \varepsilon_{i,t} \quad (3)$$

Where$TB_{i,t}$ is trade balance/GDP; $TB_{i,t-1}$ is $TB_{i,t}$ lagged value and all other variables are as noted earlier.

This paper uses dynamic panel data techniques based both on Fixed Effects and Generalized Methods of Moments (GMM). The fixed effects estimator includes a dummy variable to allow for country specific effects that are constant over time. The GMM estimator controls for the endogeneity of explanatory variables including the lagged dependent variables (Blundell and Bond, 1998).

4.2 Data Sources

The sample consists of a panel data set that comprises 20 Arab Countries with annual observations from 1995 to 2010. This paper uses two measures of trade liberalization. The first one is the average MFN applied tariff rates (unweighted) and the second one is the Trade Freedom Index published by The Heritage Foundation. One of the main constraints researchers face on the subject is the lack of systematic data measuring trade liberalization. Because of that, most empirical studies have been limited either to country case studies or to the use of dates of trade liberalization. The main advantage of the two measures of trade liberalization employed in this paper is that they reflect the systematic changes in trade liberalization because of their time-series nature. In addition, the Trade Freedom Index is a composite measure of the absence of tariff and non-tariff barriers that affect imports and exports

of goods and services**.** Data for this paper are from various sources: World Bank Development Indicators, International Financial Statistics, the United Nations Conference on Trade and Development, and The Heritage Foundation. Data definition and sources of variables are presented in Appendix 1.

4.3 Regression Results

The Impact of Trade Liberalization on Merchandise Imports

Regression results using the two measures of trade liberalization are reported in Table 1. The sample covers 20 countries with 285 observations for the first measure (Trade Freedom Index) and 279 for the second measure (average MFN applied tariff rates). The results for the first measure reveal that the coefficient of real effective exchange rate as well as the coefficient of terms of trade are statistically significant. The negative signs of both coefficients suggest that real exchange rate appreciation and better terms of trade lead to a lower rate of imports. Domestic GDP growth coefficient is positively significant implying that higher domestic growth leads to higher import/GDP, reflecting an income elasticity larger than 1. The impact of trade liberalization on imports/GDP is significantly positive, suggesting that trade liberalization increases imports, which is not surprising. The fiscal balance coefficient has the expected sign, yet is not significant. It is worth noting that there are no remarkable differences between fixed effects and GMM estimators except for the fact that the coefficient's magnitude of GMM estimator is generally bigger than that of the fixed effect. The results for the second measure of trade liberalization are broadly similar to the first measure regression except that terms of trade become insignificant. The key point to be made here is that for all specifications, trade liberalization seems to lead to more imports.

Table 1: Trade Liberalization and Merchandise Imports in Arab Countries (1995-2010)
Dependent Variable: Merchandise Imports /GDP

Explanatory Variables	**Trade Policy Freedom Index**		**Average MFN Applied Tariff**	
	F E	**GMM**	**F E**	**GMM**
Lagged Dependent Variable	0.245** (0.018)	0.881* (0.074)	0.624** (0.024)	0.523** (0.031)
Trade Liberalization	0.074* (0.027)	0.084** (0.72)	0.069** (0.038)	0.075** (0.00.42)
Domestic GDP Growth	0.008*** (0.012)	0.16* (0.034)	0.009** (0.023)	0.017** (0.032)
Change in REER	-0.021** (0.031)	-0.135** (0.037)	-0.121* (0.050)	-0.241** (0.038)
Change in Terms of Trade	-0.004** (0.010)	-0.081* (0.047)	-0.016 (0.031)	-0.011 (0.041)
Fiscal Balance/GDP	- 0.026 (0.036)	- 0.132 (0.062)	- 0.045 (0.051)	0.044 (0.031)
No. of Countries	20	20	20	20
No. of Observations	285	285	279	279
Arellano-Bond Test for AR(2){ p value}	0.41	0.46	0.43	0.45

Note:*, ** and *** represents significant at 10%, 5%, and 1% level. Robust standard errors are in parenthesis
FE: Fixed Effects and GMM: Generalized Method of Moments two stages

The Impact of Trade Liberalization on Merchandise Exports

Table 2 reports the export regression results for the two liberalization measures. The regression results for total merchandise exports show that the effect of all explanatory variables on exports was as expected. Foreign GDP growth had a significant positive effect on exports. Real effective exchange rate and terms of trade are significantly positively related to exports. Trade liberalization is shown to lead to more exports / GDP, yet at lower significant levels (5 percent to 10 percent). Once again, the regression results of both measures are broadly similar.

With the regression results for both imports and exports, it becomes possible to compare the impact of trade liberalization on exports and imports in order to examine the impact of trade liberalization on the trade balance. The coefficient magnitude of imports and exports shows that trade liberalization has a greater impact on exports than on imports. However, knowing that over the sample period fuel exports account for 63% to 84% of Arab countries' merchandise exports makes a distinction between the impact of trade liberalization on total merchandise exports and on non-oil merchandise exports a necessary step toward forming a better understanding of the issue. Table 2 also reports the non-oil export regression results. Except

that foreign GDP growth coefficient becomes insignificant, the key difference between the regression results of total exports and non-oil exports is that trade liberalization in the latter is mostly insignificant with a coefficient magnitude much lower than that of the corresponding value in the former.

Table 2: Trade Liberalization and Merchandise Exports in Arab Countries (1995-2010)
Dependent Variable: Merchandise Exports /GDP

Explanatory Variables	**Total Merchandise Exports**				**Non-Fuel Merchandise Exports**			
	Trade Policy Freedom Index		**Average MFN Applied Tariff**		**Trade Policy Freedom Index**		**Average MFN Applied Tariff**	
	F E	**GMM**	**F E**	**GMM**	**F E**	**GMM**	**F E**	**GMM**
Lagged Dependent Variable	0.642** (0.018)	0.816** (0.042)	0.914** (0.024)	0.642** (0.018)	0.816*** (0.042)	0.914** (0.024)	0.816** (0.042)	0.914** (0.024)
Trade Liberalization	0.109* (0.050)	0.096* (0.046)	0.089** (0.061)	0.109* (0.050)	0.036 (0.046)	0.019 (0.061)	0.026 (0.046)	0.029 (0.061)
Foreign GDP Growth	0.218** (0.048)	0.213** (0.24)	0.149** (0.031)	0.218** (0.048)	0.213 (0.24)	0.149 (0.031)	0.213 (0.24)	0.149 (0.031)
Change in REER	0.315* (0.041)	0.217* (0.084)	0.198 (0.095)	0.315* (0.041)	0.217* (0.084)	0.198 (0.095)	0.217* (0.084)	0.198 (0.095)
Change in Terms of Trade	0.007** (0.009)	0.011** (0.001)	0.009** (0.005)	0.0012** (0.009)	0.011** (0.001)	0.009* (0.005)	0.011** (0.001)	0.009* (0.005)
No. of Countries	20	20	20	20	20	20	20	20
No. of Observatios	285	285	279	279	285	285	279	279
Arellano-Bond Test for AR(2){ p value}	0.36	0.39	0.41	0.46	0.37	0.37	0.37	0.37

Note:*, ** and *** represents significant at 10%, 5%, and 1% level. Robust standard errors are in parenthesis
FE : Fixed Effects and GMM: Generalized Method of Moments two stages

The Impact of Trade Liberalization on Trade Balance

Because trade liberalization increases both imports and exports, the trade balance may increase or decrease. Consequently, the impact of trade liberalization on the trade balance needs to be investigated. Table 3 presents the regression results of examining the impact of trade liberalization on total

trade balance and non-oil trade balance using the two liberalization measures. Considering the total trade balance results, the coefficient of domestic GDP growth is negative and significant. Foreign GDP growth coefficient is positive and significant. The change in the real effective exchange rate is negative, yet weakly significant, while the change in terms of trade is positive and significant. Trade liberalization coefficient is positive but not significant. The results for the second measure of trade liberalization are broadly similar. The regression results suggest that higher domestic GDP growth leads to a deterioration of the trade balance, while higher foreign GDP growth improves the trade balance. Further, real exchange rate appreciation tends to lead to deterioration in the trade balance. Consistent with the previous results, positive terms of trade shock improve the trade balance. Fiscal balance coefficient is shown to be positive, although marginally significant.

The results of non-oil trade balance regressions are reported also in Table 3. In contrast to the total trade balance results, trade liberalization coefficient is negative and significant, which suggests that trade liberalization has a negative effect on the trade balance. The pattern of the coefficients is generally similar to those of the total trade balance results except that terms of trade coefficient are insignificant. Looking at the broad empirical picture, one might argue that the positive impact of trade liberalization on trade balance is mainly driven by fuel exports, for excluding fuel from merchandise exports reverses the impact of trade liberalization, becoming significantly negative. The question of what might explain the paper's empirical results is addressed in the next section.

Table 3: Trade Liberalization and Trade Balance in Arab Countries (1995-2010)
Dependent Variable: Trade Balance /GDP

Explanatory Variables	Overall Trade Balance				Non-Fuel Trade Balance			
	Trade Policy Freedom Index		Average MFN Applied Tariff		Trade Policy Freedom Index		Average MFN Applied Tariff	
	F E	GMM	F E	GMM	F E	GMM	F E	GMM
Lagged Dependent Variable	0.102** (0.047)	0.074* (0.051)	0.062** (0.072)	0.064* (0.068)	0.010*** (0.102)	0.101** (0.094)	0.072* (0.087)	0.068** (0.069)
Trade Liberalization	0.103 (0.034)	0.092* (0.042)	0.084 (0.051)	0.075 (0.059)	0.112*** (0.061)	0.101* (0.049)	0.098** (0.055)	0.106** (0.049)
Domestic GDP Growth	-0.204** (0.028)	-0.185** (0.031)	-0.164* (0.041)	-0.201* (0.036)	-0.171** (0.038)	-0.158* (0.040)	-0.201** (0.028)	-0.181* (0.035)
Foreign GDP Growth	0.151* (0.048)	0.118** (0.061)	0.142** (0.051)	0.148* (0.040)	0.122* (0.028)	0.107* (0.036)	0.133** (0.070)	0.127** (0.061)
Change in REER	-0.011* (0.020)	-0.009* (0.031)	-0.0013 (0.042)	-0.018* (0.037)	-0.020* (0.041)	-0.023* (0.039)	-0.017* (0.027)	-0.013* (0.042)
Change in Terms of Trade	0.078** (0.047)	0.051** (0.039)	0.069** (0.050)	0.063* (0.044)	0.073 (0.062)	0.081* (0.047)	0.066 (0.054)	0.073 (0.040)
Fiscal Balance/GDP	0.016* (0.036)	0.022* (0.047)	0.011* (0.051)	0.020* (0.058)	0.018 (0.042)	0.013* (0.039)	0.029* (0.044)	0.023* (0.036)
No. of Countr	20	20	20	20	20	20	20	20
No. of Observations	285	285	279	279	285	285	279	279
Arellano-Bond Test for AR(2){ p value}	0.39	0.38	0.42	0.44	0.40	0.38	0.43	0.46

Note:*, ** and *** represents significant at 10%, 5%, and 1% level. Robust standard errors are in parenthesis
FE : Fixed Effects and GMM: Generalized Method of Moments two stages

5. Discussion of Results and Policy Recommendations

The impact of trade openness on economic growth is one of the most controversial issues in trade theory literature. It is conceivable that trade liberalization might improve imports more than exports, leading to trade deficits which could have serious implications for the balance of payments and constraints on economic growth in the future. For many developing

countries with low sovereign credit rating, this is even more harmful as prolonged trade deficits may cause sources of future borrowing to dry up. In addition, trade deficits can result in economic instability and with only modest economic growth, they may be inconsistent with long-term equilibrium (Shakur, 2011).

Although trade liberalization is shown to have positive impact on total trade balance in Arab countries over the period 1995-2010, the non-oil trade balance is seen to be negatively related to trade liberalization. This has serious long-term implications for both oil-exporting and non-oil exporting Arab countries in light of two facts: first, oil resources are not sustainable and will be depleted sooner or later; second, Arab countries' export structure is weak and concentrated in or dominated by fuel and primary commodities.

Some empirical studies (e.g. Bhattacharya and Wolde, 2010) support the widely held hypothesis that trade values in the Middle East and North Africa (MENA[3]) region – mainly made up of Arab countries – are significantly lower than what would be expected given their economic, cultural and geographical characteristics. More specifically, Bhattacharya and Wolde's results suggest that MENA exports are more than 86 per cent below what would be expected given the characteristics of their economies. Moreover, they argue that the non-oil exports of MENA countries are, on average, one third of the levels that would be expected on the basis of their per capita incomes, resource endowments and population size. This raises the question of why non-oil exports are significantly below potential. Is it due to trade impediments or to more fundamental, structural factors?

This paper's results do not support the "trade impediments" hypothesis and indirectly gives some support to the fundamental/structural factor hypothesis. In this regard, a number of issues need to be highlighted.

First, the weak industrial base in Arab countries provides a partial explanation for the trade balance and exports performance. Table 1 (Appendix 2) shows that manufactured exports as a percentage of merchandise exports averaged around 11% over the period 1991-2009. Moreover, the average of high-technology exports is less than 2% that of manufactured exports over the same period. This demonstrates implicitly that the Arab countries' merchandise exports are mostly primary products.

[3]The MENA Region includes: Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malta, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, West Bank and Gaza, Yemen (World Bank definition)

The key point here – as Thirlwall (2002) put it – is not "whether" to trade, but in "what" to trade, and the "terms" under which trade should take place. Two factors could be mentioned in this regard: i) the trade patterns between developing (including Arab countries) and developed countries and ii) policies pursued by developed countries towards developing countries. Perhaps unsurprisingly, over 60% of export earnings of developing countries are derived from exporting raw materials as primary commodities. Furthermore, prices of primary commodities relative to manufactured products have been deteriorating for at least a century at an average rate of approximately 0.5 per cent per annum (Thirlwall, 1995). It is also worth mentioning that while developed countries push and even pressure developing countries to liberalize trade, they nevertheless continue to protect their own markets from developing countries' imports, in particular, agricultural products and textiles. Bouet et al (2010) argue that one important reason for LDCs' poor export performance is the implicit discrimination against their exports in developed countries' trade policies. It is always the case that the most generous market access concessions provided by developed countries to LDCs entail exceptions; these exceptions are usually concentrated among a narrow range of products in which developing countries have a comparative advantage, particularly in agricultural products and labor-intensive manufactures such as textiles, apparel and footwear. Because of the undiversified export structure of developing countries, the impact of such exceptions is significant on their exports.

Second, it has been widely believed that trade openness is positively correlated with economic growth. This premise has been supported by numerous empirical studies. Yet, Rodriguez and Rodrik (2001) raised some concerns about the robustness of these results as conclusions remained sensitive to difficulties in measuring openness, statistically sensitive specification, and collinearity of protectionist policies with other poorly executed policies in developing countries. Moreover, trade theory – based on the early thinking of Adam Smith and David Ricardo and even modern trade theory –has nothing that guarantees an equitable distribution of gains from international trade, as they depend on terms of trade and some other factors. Considering the distribution of the gains from trade between Arab countries and developed countries, it seems that a significant part of the story lies in the export structure of Arab countries. As Table 2 (Appendix 2) shows, in 2010, raw materials accounted for 49.1% of Arab countries' merchandise exports and intermediate goods represented 16.6% of exports, while consumption goods and capital goods accounted for 24.4% and 4.6%,

respectively. From an international trade perspective, the main problem with raw materials and primary commodities is that they both have low prices and income elasticity of demand, which implies that an increase in supply could make prices decrease significantly as demand responds slowly to increase income.

Third, the important role played by institutional factors in determining the value and structure of trade flows is also worth considering. That is, inefficient institutions can lead to serious obstacles for trade - recent economic literature has emphasized the role of domestic institutions in foreign trade (Bigsten et al., 2000; Jansen and Nordas, 2004 and Bhattacharya and Wolde, 2010).

Fourth, the quality of a country's infrastructure is likely to have an important impact on a country's export performance. In many Arab countries, port, airport, road and rail facilities are in poor repair and need substantial upgrading to reduce the cost of doing business. High transport, logistics, and communications costs have also been highlighted as factors impeding exports in Arab countries. The lack of adequate infrastructure is among the areas of investor concern that stand out in Arab countries with respect to institutional failure to provide basic public goods and services (Bhattacharya and Wolde , 2010 and World Bank Business Enterprise Surveys).

In addition, lack of skilled labor at an internationally competitive cost is one of the most important areas of investor concern. In non-GCC countries, the shortage of appropriate skills means the low-cost labor available is an illusory advantage. This feature of many Arab countries, reflected in relatively low human skill/natural resource ratios by international standards, has proved particularly unfavorable to export diversification at a time when new automated technologies demand high levels of general skills and education (Karshenas, 2001).

To sum up, one might argue that trade liberalization/trade openness cannot automatically lead to more economic growth and more exports unless initial economic factors and other structural- institutional are favorable and supportive. These would include supportive economic policies, a decent infrastructure, sound legal and justice systems, efficient institutions and skilled labor at an internationally competitive cost.

Arab countries – as well as developing countries – should tackle several issues. A long-term strategy for developing manufacturing activities that put these countries at a comparative advantage is a key to improving export structure. Reforming the educational system to bridge the gap between job seekers' qualifications and employers' requirements is urgently needed. Upgrading infrastructure is a major area that needs to be addressed to reduce transaction costs for investors. Institutional reform in customs and legal areas could help to reduce uncertainty, which would stimulate both domestic and foreign investment. Trade liberalization should be sequenced carefully, taking into consideration the domestic as well as the external environment.

6. Conclusions

This paper has been mainly concerned with the impact of trade liberalization on the trade balance in 20 Arab countries over the period 1995-2010. To examine the issues empirically the paper used dynamic panel data techniques based both on Fixed Effects and Generalized Methods of Moments (GMM) and used two measures of trade liberalization, the average MFN applied tariff rates (unweighted) and the Trade Freedom Index published by The Heritage Foundation. The findings of this paper suggest that trade liberalization is statistically and positively correlated with imports and trade balance. However, excluding fuel exports turns the positive impact of trade liberalization on trade balance into a negative one as it worsens the non-oil trade balance. The results of the paper have important policy implications which are relevant not only to Arab countries, but also to developing countries in similar situations. There are several possible explanations for the paper's results and the poor performance of non-fuel exports. Foremost among these explanations comes the weak manufacturing base as well as the distorted-concentrated exports structure and the issue of inefficient institutions. Further, poor infrastructure also has seriously impeded export growth for these countries.

A policy reform agenda for not only Arab countries but also developing countries in similar contexts should focus on finding ways to implement the following: activating industrial policy to stimulate the manufacturing sector and diversifying economic and exports structure, rethinking of educational and training systems, renovation of infrastructure, and legal reforms comprising legal texts as well as the administration of justice. But above all else is the need to proceed carefully and methodically toward trade liberalization to secure a better balance between the

performance of exports and imports. Put differently, governments should recognize that complex problems require complex reform packages. In other words, a prolonged and continuous trade deficit or structural weakness in export structure cannot be resolved simply by liberalizing trade.

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APPENDIX 1

Data Description and Sources		
Variable	**Definition**	**Source**
Merchandise Exports	Merchandise Exports (% of GDP)	World Development Indicators (World Bank)/Author Calculations
Merchandise Imports	Merchandise Imports (% of GDP)	World Development Indicators (World Bank)/ Author Calculations
Terms of Trade	Terms of Trade as calculated by IMF's WEO Database	IMF's WEO Database
Foreign GDP Growth	Foreign GDP growth is the weighted growth rates of a country's export market countries. The Weight is the market country's 2000 share of the home country's total exports	World Development Indicators (World Bank) and IMF's Direction of Trade Statistics)
Domestic GDP Growth Rate	Real GDP growth Rates	World Development Indicators (World Bank)
Change in REER	Real exchange rate is calculated as a geometric weighted average of bilateral real exchange rates between home country and its trading partners. Countries whose trade share in home country is less than 10 percent are not considered	International Financial Statistics (IMF)
Trade Policy Freedom Index	Trade Policy Freedom Index is a composite measure of the absence of tariff and non-tariff barriers that affect imports and exports of goods and services. The trade freedom score is based on two inputs :i)The trade-weighted average tariff rate and ii) Non-tariff barriers (NTBs)	The Heritage Foundation (http://www.heritage.org/index/trade-freedom)
Tariff Rates	Trends in average MFN applied tariff rates **MFN Tariff** A tariff applied to a country with most favored nation status. An MFN tariff is the lowest possible tariff a country can assess on another country. For example, if a country's lowest tariff is 2% of the value of a good, this is its MFN tariff, and it charges this percentage on an import from a country with most favored nation status. Members of the World Trade Organization are required to extend most favored nation status to other members, though exceptions exist. In the United States, most favored nation status is formally called permanent normal trade relations	World Bank, Research Datasets and Analytical Tools (Francis K. T. Ng) Trends in average MFN applied tariff rates in developing and industrial countries, 1981-2010

APPENDIX 2

Table 1: Manufactured and High-technology Exports of Arab Countries (1991-2010)

	High-technology exports (% of manufactured exports)	Manufactured exports (% of merchandise exports)	Manufactured imports (% of merchandise imports)
1991	----	13	72
1992	1	15	74
1993	1	17	74
1994	3	----	----
1995	1	15	69
1996	1	14	
1997	----	----	----
1998	2	18	72
1999	3	13	69
2000	2	10	63
2001	2	11	64
2002	2	13	62
2003	2	14	64
2004	1	12	67
2005	1	10	68
2006	1	11	67
2007	1	10	68
2008	1	10	59
2009	----	----	----

Source: World Bank, World Bank Development Indicators

Table 2: Shares of Exports in Processing Stage of Arab Countries (2005-2010)

	Raw materials (%)		Intermediate goods (%)		Consumer goods (%)		Capital goods (%)	
	2005	2010	2005	2010	2005	2010	2005	2010
Algeria	53.8	43.7	1.3	1.9	44.8	54.4	1.3	8.2
Bahrain	2.4	27.8	16.4	42.5	80.0	21.4	22.0	5.1
Djibouti	15.2	61.5	13.4	4.0	48.3	2.8	3.8	1.9
Egypt	18.7	18.3	25.8	30.9	50.3	48.6	0.1	0.1
Iraq	96.7	96.8	0.2	0.2	0.9	0.3	10.1	8.4
Jordan	18.3	16.8	20.3	31.5	51.1	43.3	0.5	0.2
Kuwait	59.8	67.4	4.6	6.4	34.3	24.3	16.2	24.8
Lebanon	15.8	13.3	28.6	34.1	38.9	27.6	0.1	0.1
Libya	86.0	81.3	2.8	2.5	11.1	13.9	0.9	0.7
Mauritania	53.2	39.7	22.4	51.8	0.6	0.7	9.3	8.7
Morocco	18.4	19.2	25.7	31.6	46.7	40.4	1.0	2.1
Oman	71.7	54.3	4.1	11.6	17.4	20.3	0.7	0.2
Qatar	50.1	43.3	5.4	6.0	34.8	49.3	1.1	1.4
Saudi Arabia	76.2	75.9	7.3	9.8	15.3	12.8	0.2	0.2
Sudan	94.7	84.6	3.5	1.5	1.6	1.0	1.0	1.6
Syria	71.7	64.7	9.3	11.2	17.5	20.8	13.7	18.7
Tunisia	14.0	16.2	18.9	19.7	53.4	45.4	7.6	5.3
U AE	36.9	33.0	8.6	17.9	17.8	17.0	0.1	0.0
Yemen	87.8	74.5	2.5	1.4	8.6	19.2	1.2	0.1
Average Arab Countries	**49.5**	**49.1**	**11.6**	**16.6**	**30.2**	**24.4**	**4.8**	**4.6**
Brazil	26.8	42.9	29.6	27.8	19.9	14.9	21.8	14.4
India	11.2	9.7	36.9	35.0	41.1	41.8	9.6	11.6
Malaysia	8.1	7.8	14.5	17.7	25.3	33.0	50.7	41.0
Mexico	17.4	16.6	9.3	10.7	33.2	31.7	39.8	40.4
Philippines	3.9	5.7	7.5	9.8	17.5	17.5	71.0	67.0
Developing Countries	37.0	37.0	21.7	23.8	30.3	28.2	9.7	8.5
World	31.4	31.4	21.1	23.1	31.6	30.0	13.9	12.4

Source: United Nations (UN) COMTRADE Statistics