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# The MENA Trade and Regional Conflicts:

## Causal Evidence from a Disaggregated Analysis

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# The MENA Trade and Regional Conflicts: Causal Evidence from a Disaggregated Analysis

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## Abstract

This study investigates the impacts of trade on conflicts within the Middle East and North Africa (MENA) region. The findings indicate that bilateral trade has no significant impact on regional conflicts in the MENA, but this veils substantial heterogeneity. The multilateral trade of manufacturing and agriculture sectors increases the number of conflicts within the region, possibly due to decreased dependence on bilateral ties. The positive effect of multilateral trade is mainly driven by the oil importer MENA countries. Membership in the World Trade Organization (WTO) is associated with a reduction in conflicts. The results vary when considering oil-exporting and oil-importing countries separately, revealing nuances in the relationship between trade and conflicts within the MENA region.

**Keywords:** Conflict, trade, the MENA

**JEL Codes:** F14, F15, F49

## 1. Introduction

Over the past forty years, the Middle East and North Africa (MENA) region has witnessed high levels of tension in the form of protests, conflicts, and wars. The Algerian Civil War from 1991 to 2002, the Arap Spring from 2010 to 2013, and civil wars in Libya, Iraq, Syria, and Yemen are the most noteworthy examples of these tensions. During these four decades, at the same time, highly integrated and interdependent economies have evolved through the rapid rise in information, communication, and transportation technologies and the decrease in transportation costs. However, even though the MENA region has higher trade potentials such as geographical compactness and different comparative advantages across countries and sectors within the region, the MENA does not fully achieve high-level trade integration (Sekkat, 2021). Given these facts, we ask the following questions:

- Does the MENA trade significantly affect regional conflicts?

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- Does this impact show heterogeneity across product types, MENA countries, sectors, and trading partners?

The first novelty of this study is to observe true domestic value-added embedded in exports and true foreign value-added embedded in imports via more than 5000 products at Harmonized System (HS) 6-digit code. In other words, the trade statistics at 6-digit code are not conventional, but they are trade-in value-added statistics (Wang et al., 2017), which provides a more accurate way to measure trade values. Secondly, the comprehensive dataset enables us to conduct disaggregated analysis via the heterogeneity across product types, MENA countries, sectors, and trading partners. Thirdly, we also present the instrumental variables estimation results with several trade-based instruments.

The relationship between trade and conflict is widely investigated in literature. On one hand, Polachek (1980) indicates that trade and conflicts are negatively associated. Keshk et al. (2004) assert that conflicts inhibit international trade. On the other hand, Barbieri (2002) claims that there is a greater possibility of armed conflicts in areas with substantial economic interconnectedness. Besides, Gartzke et al. (2001) show that capital interdependence promotes peace regardless of the results of trade. Goenner (2004) finds that while democracy reduces conflict, extensive trade relationships do not. Li and Reuveny (2011) reveal that while the trade of agriculture and chemical/mineral goods reduces the likelihood of conflict, the trade of energy products increases the possibility. There are also some studies specifically focusing on the relationship for the MENA region. Karam and Zaki (2016) find out the negative impacts of different types of conflicts on bilateral manufacturing trade. Similarly, Sekkat (2021) reveals that regional political tensions negatively affect intra-MENA trade. Literature generally investigates the impacts of conflict on trade, no other way around. They generally do not consider the simultaneity in the trade and conflict relationship. Martin et al. (2008) provide evidence for these two relationships at the same time. Following Martin et al. (2008), the most similar study to our study, Asik and Marouani (2021) claim that intra-MENA trade is more likely to decrease the likelihood of conflict without providing causal evidence.

The empirical findings suggest that, when considering all sector groups and categories of bilateral trade flows, there is no substantial impact of bilateral trade on regional conflicts in MENA. However, this conclusion conceals various forms of heterogeneity. In the manufacturing and agriculture sectors, engaging in multilateral trade with both home and partner countries is linked to an increase in the number of conflicts within the MENA region. The MENA countries, who import oil, are the primary drivers of the positive effects of multilateral trade. Membership in the WTO exhibits conflict-deterrent effects. The examination

further delves into the heterogeneity within the MENA region, making distinctions between countries that export oil and those that import it. The robustness checks uphold the primary findings, demonstrating consistent outcomes across different levels of conflict hostility and when Israel is excluded from the analysis.

The study is organized as follows. The next section explains the data and the third section describes the methodology. The fourth section provides estimation results and robustness checks. The final section concludes the paper.

## 2. Data

To evaluate our research questions, we utilize a variety of different databases. We take the conflict measures from the Militarized Interstate Disputes dataset (version 5.0) of the Correlates of War project (Palmer et al., 2022). The project reports each incidence and gives a number from one (1) to five (5) to indicate the hostility level of each conflict until the year 2014. One (1) is for no military action, two (2) is for threat to use force, three (3) is for display use of force, four (4) is for use of force, and five (5) is for war.

We employ the bilateral trade flows in the Base pour l'Analyse du Commerce International (BACI) in the Centre d'Etudes Prospectives d'Informations Internationales (CEPII) database (Gaulier and Zignago, 2010). The database provides data on bilateral trade flows of 5000 products for 200 countries at the Harmonized System (HS) 6-digit product codes. We then aggregate this product-level data to reach sector-level trade statistics by using related HS6-BEC-ISIC Rev. 3 concordance tables.

The first reason for the selection of this detailed database is the difference between gross and net trade statistics. While gross trade statistics include both domestic and foreign value-added, the net trade statistics include only the true domestic value-added created by the country sector. In addition, net trade statistics solve the double-counting issue in global production systems. The literature points out that 6-digit products can be treated as net trade statistics (Wang et al., 2017a, 2017b, 2021). The second reason is the utilization of heterogeneity in our sample in terms of three main sectors as manufacturing, agriculture, and mining, and the use of products as intermediate and finals. Furthermore, by observing these detailed bilateral trade flows, we are also able to observe the trade flows with the rest of the world, which is an important determinant to properly evaluate the conflict and trade relationship.

We employ several gravity measures such as distance, common border, colony, language, and the World Trade Organization (WTO) membership from the CEPII database (Conte et al., 2022). These gravity measures not only explain variations in trade flows between different pairs of countries but also understand the patterns and relationships between countries in the global

economy. Therefore, incorporating these factors into the analysis provides a more comprehensive picture of the conflict and trade nexus.

We employ the polity index in the Polity V database to consider the institutional quality of the countries (Marshall and Gurr, 2020). The polity index ranges from -10 meaning strongly autocratic to +10 meaning strongly democratic.

We also differentiate the sample in terms of oil exporters and oil importers. Since oil-exporting and oil-importing countries have different economic structures, vulnerabilities, and contributions to the global market, they may have different economic strategies and policies in response to their oil status. Therefore, understanding the dynamics between oil exporters and oil importers countries in the MENA region is essential for assessing conflict and trade relationships. The oil exporter MENA countries are Algeria, Bahrain, Iran, Iraq, Kuwait, Libya, Oman, Qatar, Saudi Arabia, UAE, and Yemen. The other MENA countries are Djibouti, Egypt, Israel, Jordan, Lebanon, Mauritania, Morocco, Somalia, Sudan Syria, Tunisia, and Turkey.

Table 1 shows the summary statistics of variables we employ in the empirical analysis.

**Table 1:** Summary statistics

| Variable | Obs. | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| Number of incidents | 8,610 | 0.27 | 2.89 | 0.00 | 71.00 |
| ln(Bilateral intermediate manufacturing trade) | 7,627 | 9.59 | 3.23 | 0.00 | 17.15 |
| ln(Multilateral intermediate manufacturing trade) | 8,610 | 16.51 | 1.13 | 11.91 | 19.08 |
| ln(Bilateral final manufacturing trade) | 7,373 | 8.97 | 3.28 | 0.00 | 16.88 |
| ln(Multilateral final manufacturing trade) | 8,610 | 16.09 | 1.09 | 11.21 | 18.96 |
| ln(Bilateral intermediate agriculture trade) | 5,072 | 6.58 | 2.91 | 0.00 | 14.87 |
| ln(Multilateral intermediate agriculture trade) | 8,610 | 13.50 | 1.30 | 6.77 | 16.76 |
| ln(Bilateral final agriculture trade) | 5,583 | 7.19 | 2.96 | 0.00 | 14.72 |
| ln(Multilateral final agriculture trade) | 8,610 | 12.49 | 1.31 | 7.50 | 15.69 |
| ln(Bilateral intermediate mining trade) | 4,239 | 6.98 | 3.43 | 0.00 | 16.76 |
| ln(Multilateral intermediate mining trade) | 8,610 | 15.24 | 2.17 | 6.66 | 19.47 |
| ln(Bilateral final mining trade) | 228 | 4.11 | 2.91 | 0.02 | 12.89 |
| ln(Multilateral final mining trade) | 8,610 | 6.36 | 4.28 | 0.00 | 16.09 |
| WTO membership | 8,610 | 0.34 | 0.47 | 0.00 | 1.00 |
| ln(Distance) | 8,566 | 7.65 | 0.76 | 4.72 | 8.95 |
| Contiguity | 8,566 | 0.13 | 0.34 | 0.00 | 1.00 |
| Common colony | 8,566 | 0.19 | 0.39 | 0.00 | 1.00 |
| Common language | 8,566 | 0.75 | 0.43 | 0.00 | 1.00 |
| Polity index | 8,610 | -6.68 | 7.24 | -20.00 | 15.00 |

**Notes:** The number of incidents counts conflicts according to five main hostility categories: no military action, threat to use force, display use of force, use of force, and war. While bilateral trade represents trade between home and partner country, multilateral trade indicates trade between home (partner) and other countries. The polity index varies between -10 and +10. Higher values mean more democratic and lower values mean more autocratic governance. We sum up the number of incidents and political indices of home and partner countries.

Figure 1 represents the trade values of the intermediate and final products of the MENA region. The trade values sharply increased to 200 billion Dollars in the 2000s and then continued its rising tendency until 2015 on average. This trend is valid for each MENA country. This increasing trend can be highly related to several free trade agreements (FTAs) such as the Gulf Cooperation Council (GCC) (1981), the Arab Maghreb Union (AMU) (1989), the Greater Arab Free Trade Area (GAFTA) or the Pan-Arab Free Trade Agreement (PAFTA) (1997), Euro-Mediterranean Association Agreements (1995), MEFTA initiative (2003). It is important to note that the values of traded intermediates are higher than the values of traded finals. The lines have slightly converged through the sample period. Even if there was a hike in 2012, this did not represent a persistent change in the patterns.

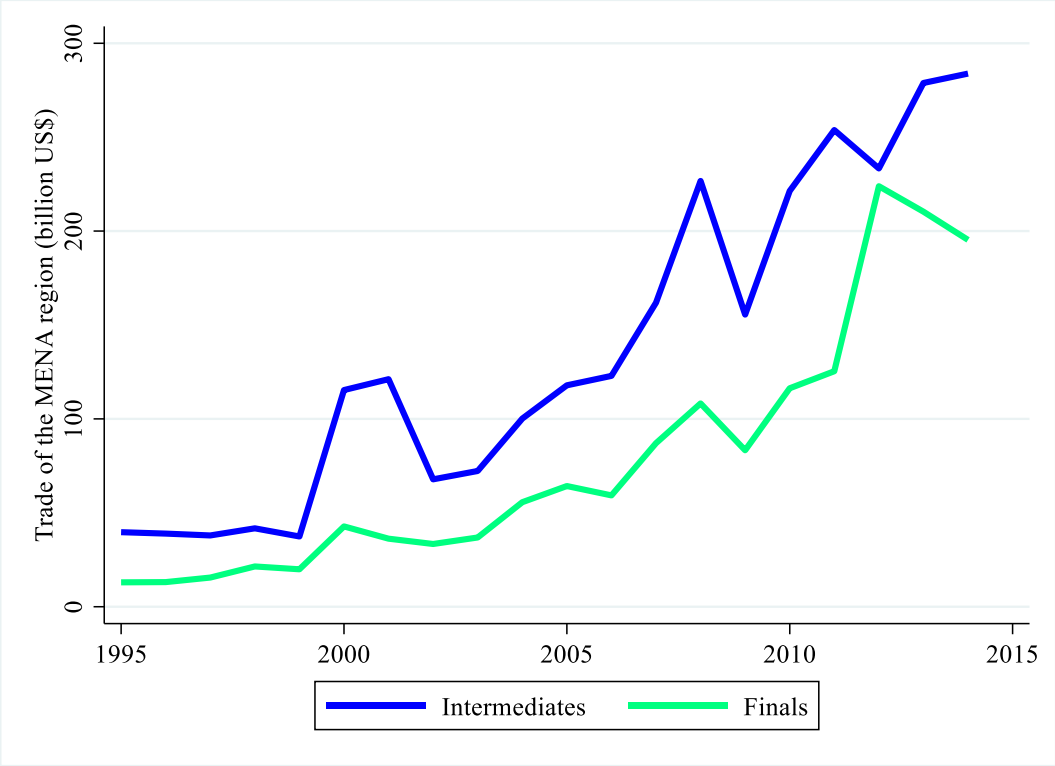


**Figure 1:** Trade share in GDP (%) (within the MENA region)

Figure 2 presents the number of incidents according to five hostility levels (no military action, threat to use force, display use of force, use of force, and war). While relatively fewer conflicts are observed from 1995 to 2000, the increase in the number of conflicts after the year 2000 is noteworthy. The Arap Spring from 2010 to 2013, and civil wars in Libya, Iraq, Syria, and Yemen are the most important conflicts.

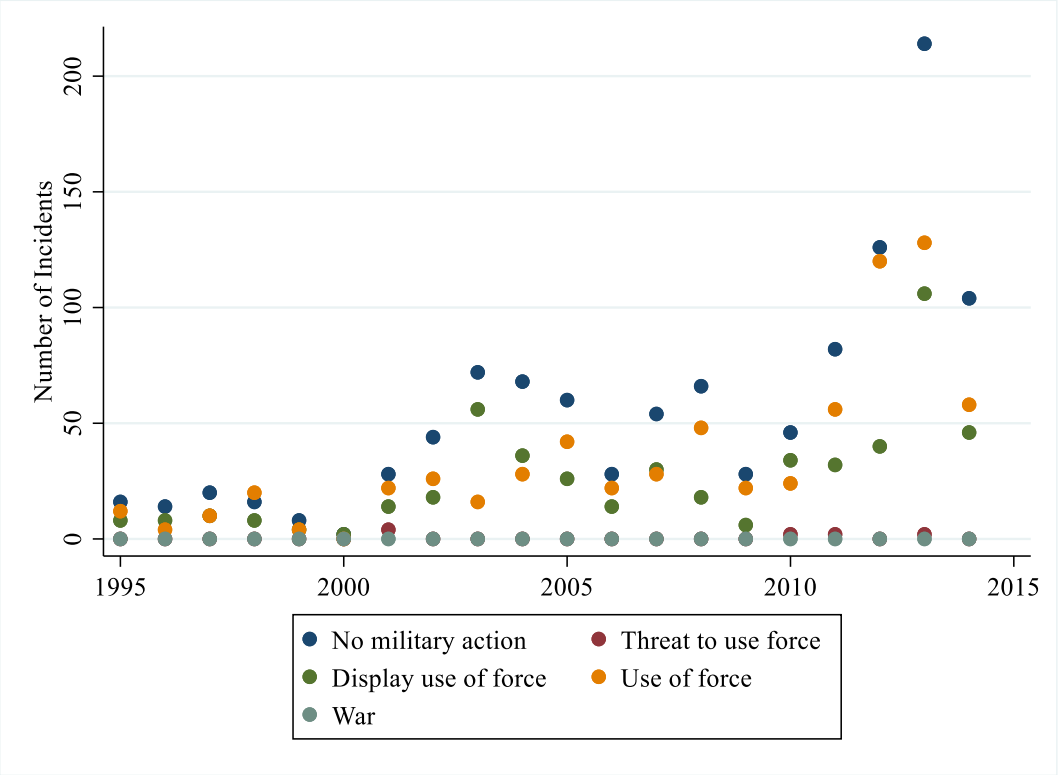


**Figure 2:** Number of incidents according to five hostility levels

Before empirical analysis, we first investigate the basic relationship between conflict and trade of different products and sector groups by drawing network diagrams for trade flows and the number of conflicts to constitute a base for our empirical strategy. Figure 3 reveals that average trade flows within the MENA region are highly concentrated in some countries. Trade flows between Iran, the United Arab Emirates, Saudi Arabia, Sudan, Iraq, Turkey, and Oman.

Figure 4 presents the number of conflicts in the MENA region based on annual averages. The figure again indicates that conflicts within the MENA region are highly concentrated in some countries, too. These are Israel, Lebanon, Syria, Iran, Iraq, Turkey, Sudan, and South Sudan. The network diagrams clearly point out that intra-MENA trade is quite lower in conflict areas.

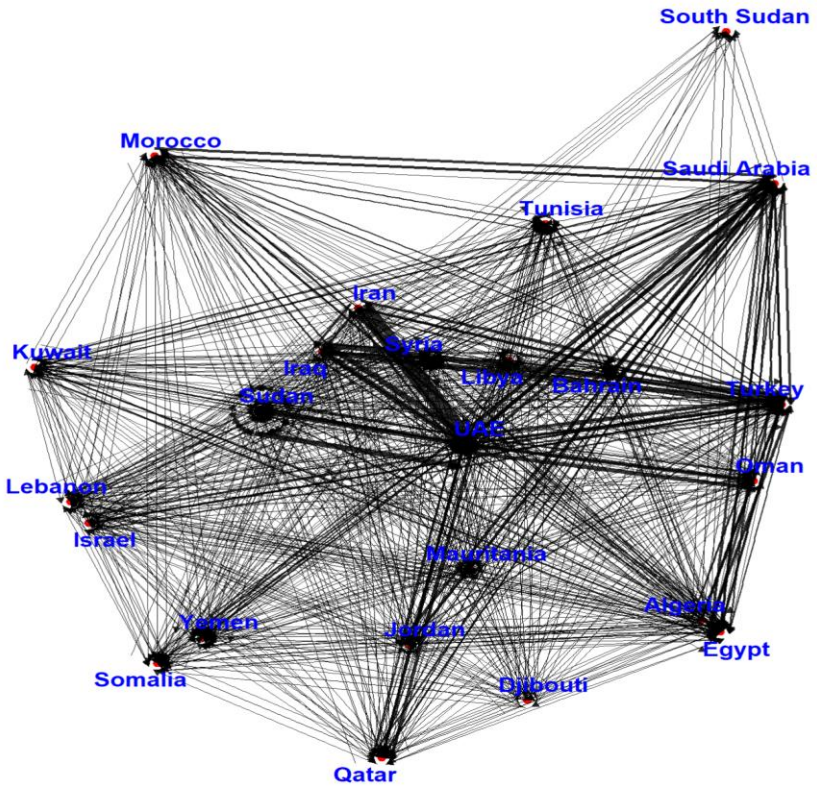


**Figure 3:** Network diagram of trade flows within the MENA region

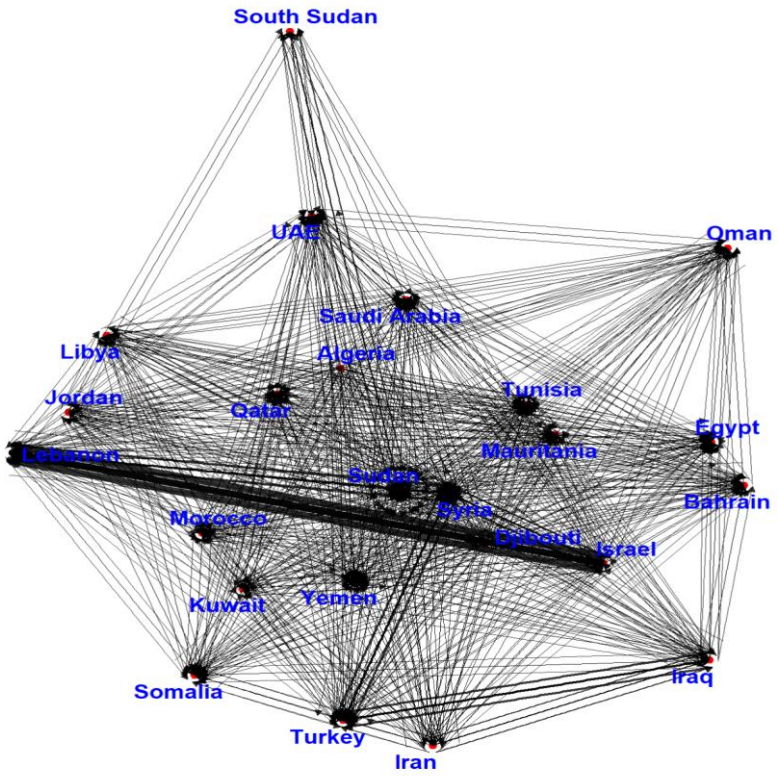


**Figure 4:** Network diagram of number of conflicts the MENA region

## 3. Methodology

Building on Martin et al. (2008) and Asik and Marouani (2021), we analyze the impacts of trade on regional conflicts by the following equation:

$$Conflict_{c,p,t} = \beta_1 Bilateral\_Trade_{c,p,t} + \beta_2 Multilateral\_Trade_{c,p,t} + \beta_3 Gravity_{c,p,t} + \beta_4 T_t + \varepsilon_{c,p,t} \quad (1)$$

where $c$, $p$, $t$ stand for the home country, partner country, and time, respectively. $Conflict_{c,p,t}$ signifies the conflict measures, the natural logarithm of summation of the number of incidences between home and partner countries. $Bilateral\_trade_{c,p,t}$ stands for the natural logarithm of summation of exports of the home and imports of the partner countries within the MENA region. This variable also differentiates product types as intermediates and finals and sector groups as manufacturing, agriculture, and mining. $Multilateral\_trade_{c,p,t}$ stands for the natural logarithm of the summation of multilateral exports of the home country and imports of the partner country with the rest of the world. We use this measure in our empirical model to assess the impact of multilateral trade on regional conflict. The literature points out that if a country has higher trade values with the rest of the world, a country's probability of having conflicts is more likely to be higher (Martin et al., 2008). This is explained by the channel of having more sets of choices in the international market. $Gravity_{c,p,t}$ represents sectoral gravity measures such as distance, common border, colony, language, FTA, and polity index. We also include the time ($T_t$) fixed effects in our empirical model.

The method of instrumental variables (IV) is employed to overcome possible endogeneity issues. Martin et al. (2008) suggest the economic remoteness of countries as instrumental variables (IVs), but the correlation can be directly related to conflict measures. Therefore, we try to propose different instrumental variables. We first instrument the MENA trade with the trade values of similar three countries with the USA, Germany, and Japan (Constantinescu et al., 2019). The similarity is based on the trade structure of countries. In other words, for each country, we find three similar countries according to the similarity of the trade shares (different for imports and exports) depending on the trading partner country. To reduce the risk of violation of the exclusion restriction as much as possible, we prefer to construct the IVs based on trade structure which can reduce the risk of violation through comparative advantage, variety of products, and trade policy. The reason for the selection of specific destination countries such as the USA, Germany, and Japan is that there is a technological asymmetry between these countries and "factory" economies like the MENA countries.

In the 2SLS technique, the F statistics should be higher than the threshold level of 10 to ensure the validity of the instruments used in the model. Durbin p-value is related to the null hypothesis that variables are exogenous. If the Durbin p-value is less than 0.1, we can reject the null hypothesis and conclude that the variables are endogenous. Therefore, the 2SLS estimates are more appropriate than the OLS estimates.

We expect different mechanisms in different countries due to the oil wealth of each country and the level of integration. To address the heterogeneity problem, we divide our sample by considering the MENA countries as oil exporters and oil importers.

**4. Results**

This section presents the estimation results. Table 2 presents the results of the relationship between the number of incidences and a variety of different trade-related variables. For all sector groups and types of bilateral trade flows, we observe no significant impact of bilateral trade on regional conflicts in the MENA region. The reasons behind this relationship may be complex and multifaceted. Factors such as oil wealth and regional dynamics may contribute to the lack of significant impacts of bilateral ties on the number of conflicts. For the manufacturing and agriculture sectors, multilateral trade of home and partner countries increases the number of conflicts within the MENA region. This positive impact is explained by the decrease in bilateral dependence and the cost of bilateral conflict (Martin et al., 2008). In other words, globalization weakens the incentive to avoid regional disputes, especially for the manufacturing and agriculture sectors.

Other control variables carry important results for regional peace. Being a member of WTO has conflict-deterring impacts. This may be explained by the fear of sanctions applied by the WTO and strong commitments to WTO rules and dispute settlement mechanisms. While contiguity increases the number of incidences, other gravity measures such as distance, common colony, and common language decrease the number of incidences. Having a higher polity index, that is having more democratic governance, increases the number of conflicts within the MENA region. This interesting result might be explained by a variety of different specific characteristics of democratic governance within the MENA region.

Therefore, even if multilateral trade, having a common border, and governance styles within the MENA region might create regional conflicts, still being a member of WTO can contribute to reducing conflicts depending on international governance and agreements.

**Table 2:** Conflicts and trade

| | **Manufacturing** | | **Agriculture** | | **Mining** | |
|---|---|---|---|---|---|---|
| | Intermediate | Final | Intermediate | Final | Intermediate | Final |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Bilateral trade | -0.003 | -0.005 | 0.001 | -0.006 | -0.014 | -0.018 |
| | (0.005) | (0.006) | (0.006) | (0.005) | (0.015) | (0.050) |
| Multilateral trade | 0.020** | 0.030*** | 0.027*** | 0.034*** | 0.009 | -0.007 |
| | (0.010) | (0.011) | (0.009) | (0.010) | (0.007) | (0.014) |
| WTO | -0.049*** | -0.055*** | -0.046*** | -0.056*** | -0.031** | 0.031 |
| | (0.007) | (0.008) | (0.008) | (0.009) | (0.014) | (0.046) |
| Distance | -0.026** | -0.029** | -0.009 | -0.021** | -0.023 | -0.023 |
| | (0.011) | (0.013) | (0.008) | (0.009) | (0.015) | (0.033) |
| Contiguity | 0.228*** | 0.230*** | 0.217*** | 0.213*** | 0.228*** | -0.032 |
| | (0.021) | (0.021) | (0.023) | (0.022) | (0.028) | (0.067) |
| Common colony | -0.031*** | -0.034*** | -0.007 | -0.021*** | -0.041*** | -0.046 |
| | (0.007) | (0.007) | (0.006) | (0.007) | (0.012) | (0.125) |
| Common language | -0.064*** | -0.067*** | -0.075*** | -0.064*** | -0.106*** | 0.037 |
| | (0.014) | (0.015) | (0.021) | (0.022) | (0.026) | (0.162) |
| Polity | 0.002*** | 0.002*** | 0.001* | 0.001* | 0.002** | 0.005 |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.006) |
| Constant | -0.141 | -0.294 | -0.420* | -0.333* | 0.290 | 1.790* |
| | (0.170) | (0.187) | (0.231) | (0.184) | (0.246) | (1.052) |
| Observations | 7,588 | 7,335 | 5,038 | 5,558 | 4,219 | 227 |
| R-squared | 0.117 | 0.119 | 0.105 | 0.099 | 0.100 | 0.244 |
| IV F-stat | 1359.200 | 1075.100 | 438.841 | 453.912 | 846.476 | 30.603 |
| Durbin pval | 0.000 | 0.000 | 0.002 | 0.000 | 0.000 | 0.363 |

**Notes:** Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Year dummies are included.

***Heterogeneity***

Since the MENA region includes many countries that are different in terms of income level thanks to the resource richness, we divide our sample into oil exporters and oil importers. The results show that the positive impact of multilateral trade observed in the total sample is mainly driven by the oil importer MENA countries. The multilateral trade of the manufacturing and agriculture sectors has still a peace-deterring impact for this group of countries. Similarly, for the sub-group where one of the countries is an oil importer, we still observe positive impacts of multilateral trade of the manufacturing sector.

Even if we do not observe a significant impact of bilateral trade on the conflict measure in the total sample, this veils a lots of heterogeneity. While bilateral trade of manufacturing products of oil-exporter and importer MENA countries decreases the number of regional conflicts, bilateral trade of final manufacturing products of country groups where one of them is oil-exporter increases the conflicts.

**Table 3:** Conflict and trade, country groups

| | Manufacturing | | Agriculture | | Mining | |
|---|---|---|---|---|---|---|
| | Intermediate | Final | Intermediate | Final | Intermediate | Final |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Panel I: Both countries are oil exporters** | | | | | | |
| Bilateral trade | -0.083* | -0.049** | -0.003 | -0.006 | -0.038** | 0.475 |
| | (0.045) | (0.025) | (0.014) | (0.007) | (0.018) | (0.913) |
| Multilateral trade | -0.042 | -0.052* | 0.025 | 0.004 | -0.008 | -0.161 |
| | (0.028) | (0.030) | (0.016) | (0.031) | (0.023) | (0.244) |
| Observations | 1,633 | 1,607 | 1,087 | 1,281 | 1,007 | 103 |
| R-squared | | | 0.119 | 0.121 | 0.004 | |
| IV F-stat | 215.921 | 97.313 | 118.348 | 99.506 | 108.437 | 10.866 |
| Durbin pval | 0.010 | 0.006 | 0.039 | 0.531 | 0.061 | 0.116 |
| **Panel II: One of the countries is an oil exporter** | | | | | | |
| Bilateral trade | 0.005 | 0.007* | 0.005 | -0.003 | -0.014 | |
| | (0.003) | (0.004) | (0.005) | (0.004) | (0.014) | |
| Multilateral trade | 0.019** | 0.021** | 0.000 | -0.001 | 0.006 | |
| | (0.008) | (0.009) | (0.008) | (0.008) | (0.005) | |
| Observations | 3,980 | 3,876 | 2,588 | 2,935 | 2,143 | |
| R-squared | 0.122 | 0.125 | 0.166 | 0.142 | 0.145 | |
| IV F-stat | 784.407 | 684.969 | 240.109 | 252.105 | 650.753 | |
| Durbin pval | 0.000 | 0.000 | 0.539 | 0.149 | 0.323 | |
| **Panel III: None of the countries is an oil exporter** | | | | | | |
| Bilateral trade | -0.033* | -0.052** | 0.106*** | -0.001 | 0.728 | -0.075 |
| | (0.019) | (0.023) | (0.039) | (0.016) | (1.623) | (0.309) |
| Multilateral trade | 0.078* | 0.152** | 0.209*** | 0.131*** | -1.204 | 0.321 |
| | (0.042) | (0.060) | (0.079) | (0.039) | (2.667) | (0.273) |
| Observations | 1,975 | 1,852 | 1,363 | 1,342 | 1,069 | 32 |
| R-squared | 0.178 | 0.161 | | 0.098 | | 0.595 |
| IV F-stat | 462.527 | 562.308 | 91.460 | 95.455 | 125.087 | 0.667 |
| Durbin pval | 0.000 | 0.001 | 0.000 | 0.000 | 0.059 | 0.046 |

**Notes:** Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Year dummies and other control variables are included, but not reported.

***Robustness***

This section presents the robustness checks of the main estimation results given in the previous section. Table 4 presents the results where we use the most severe three hostility levels of conflicts (display use of force, use of force, and war) to sum the number of conflicts. The sizes and the significance levels of all variables are quite similar to those represented in Table 2.

**Table 4:** Conflict and trade, country groups, different conflict measure

| | **Manufacturing** | | **Agriculture** | | **Mining** | |
|---|---|---|---|---|---|---|
| | Intermediate | Final | Intermediate | Final | Intermediate | Final |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Bilateral trade | -0.003 | -0.004 | 0.001 | -0.005 | -0.012 | -0.018 |
| | (0.004) | (0.005) | (0.004) | (0.004) | (0.012) | (0.040) |
| Multilateral trade | 0.016** | 0.024*** | 0.022*** | 0.028*** | 0.006 | -0.005 |
| | (0.007) | (0.009) | (0.007) | (0.008) | (0.006) | (0.012) |
| WTO | -0.037*** | -0.041*** | -0.034*** | -0.043*** | -0.023* | 0.029 |
| | (0.005) | (0.006) | (0.006) | (0.008) | (0.012) | (0.036) |
| Distance | -0.023** | -0.025** | -0.009 | -0.018** | -0.020* | -0.020 |
| | (0.009) | (0.010) | (0.006) | (0.007) | (0.012) | (0.027) |
| Contiguity | 0.172*** | 0.173*** | 0.161*** | 0.159*** | 0.171*** | -0.029 |
| | (0.016) | (0.016) | (0.018) | (0.017) | (0.023) | (0.055) |
| Common colony | -0.025*** | -0.027*** | -0.006 | -0.016*** | -0.033*** | -0.045 |
| | (0.005) | (0.006) | (0.005) | (0.005) | (0.010) | (0.101) |
| Common language | -0.045*** | -0.047*** | -0.050*** | -0.041** | -0.077*** | 0.044 |
| | (0.011) | (0.012) | (0.016) | (0.017) | (0.021) | (0.128) |
| Polity | 0.002*** | 0.002*** | 0.001 | 0.001* | 0.002** | 0.005 |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.004) |
| Constant | -0.101 | -0.213 | -0.360* | -0.283* | 0.261 | 1.490* |
| | (0.128) | (0.140) | (0.186) | (0.147) | (0.198) | (0.847) |
| Observations | 7,588 | 7,335 | 5,038 | 5,558 | 4,219 | 227 |
| R-squared | 0.110 | 0.111 | 0.093 | 0.089 | 0.088 | 0.242 |
| IV F-stat | 1359.200 | 1075.100 | 438.841 | 453.912 | 846.476 | 30.603 |
| Durbin pval | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | 0.364 |

**Notes:** Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Year dummies are included.

Since Israel has distinct cultural and historical characteristics as well as regional dynamics and political situations in the region, we repeat our analysis by excluding Israel from the sample. Table 5 suggests that the results, especially the positive impact of multilateral trade on the number of incidents, are valid in the absence of Israel. Similarly, we observe the positive impacts of multilateral trade of the manufacturing and agriculture sectors on the number of regional conflicts. Therefore, we can claim that our results are robust to the alternative definition of conflict and exclusion of Israel.

**Table 5:** Conflict and trade, country groups, Israel excluded

| | **Manufacturing** | | **Agriculture** | | **Mining** | |
|---|---|---|---|---|---|---|
| | Intermediate | Final | Intermediate | Final | Intermediate | Final |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Bilateral trade | -0.008 | -0.009 | 0.004 | -0.004 | -0.012 | 0.044 |
| | (0.007) | (0.010) | (0.006) | (0.004) | (0.013) | (0.118) |
| Multilateral trade | 0.025* | 0.027* | 0.030*** | 0.034*** | 0.004 | -0.022 |
| | (0.013) | (0.016) | (0.009) | (0.010) | (0.006) | (0.031) |
| WTO | -0.032*** | -0.035*** | -0.038*** | -0.048*** | -0.023 | -0.038 |
| | (0.006) | (0.006) | (0.006) | (0.008) | (0.015) | (0.064) |
| Distance | -0.027* | -0.027 | -0.016* | -0.026*** | -0.029* | 0.040 |
| | (0.015) | (0.019) | (0.009) | (0.009) | (0.015) | (0.068) |
| Contiguity | 0.215*** | 0.216*** | 0.223*** | 0.215*** | 0.238*** | 0.102 |
| | (0.021) | (0.021) | (0.024) | (0.023) | (0.031) | (0.202) |
| Common colony | -0.014** | -0.016** | 0.011* | -0.006 | -0.020** | 0.138 |
| | (0.006) | (0.006) | (0.006) | (0.006) | (0.010) | (0.358) |
| Common language | -0.074*** | -0.080*** | -0.082*** | -0.069*** | -0.125*** | -0.158 |
| | (0.015) | (0.015) | (0.021) | (0.022) | (0.030) | (0.360) |
| Polity | 0.001** | 0.001** | 0.002** | 0.002*** | 0.002** | -0.005 |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.008) |
| Constant | -0.146 | -0.179 | -0.452* | -0.302* | 0.415 | 0.847 |
| | (0.169) | (0.183) | (0.233) | (0.181) | (0.261) | (1.566) |
| Observations | 7,117 | 6,902 | 4,876 | 5,398 | 4,066 | 209 |
| R-squared | 0.101 | 0.098 | 0.105 | 0.101 | 0.111 | 0.055 |
| IV F-stat | 1340.400 | 1061.890 | 431.640 | 461.707 | 765.058 | 29.087 |
| Durbin pval | 0.001 | 0.002 | 0.001 | 0.000 | 0.000 | 0.310 |

**Notes:** Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Year dummies are included.

## 5. Conclusion

Over the last four decades, the region also experienced different types of conflicts. Despite the rapid globalization trends in the world and liberalization efforts within the MENA region during these thirty years, the region does not have a satisfactory level of trade compared to other regions. These characteristics make the MENA region special to be further investigated in the trade-conflict nexus. Therefore, this study focuses on the relationship between trade-related variables and conflicts within the MENA region by using various trade-related factors, including bilateral and multilateral trade, as well as control variables such as WTO membership and polity index to analyze their impact on the incidence of regional conflicts.

The results indicate that across all sector groups and types of bilateral trade flows, there is no significant impact of bilateral trade on regional conflicts in MENA, but this veils a lots of heterogeneity. For the manufacturing and agriculture sectors, multilateral trade involving both home and partner countries increases the number of conflicts within the MENA region. The positive impact of multilateral trade is mainly driven by the oil importer MENA countries. WTO membership has conflict-deterring effects. The analysis also considers the heterogeneity within the MENA region, considering the distinction between oil-exporting and oil-importing countries. The robustness checks confirm the main findings, showing consistent results when considering different hostility levels of conflicts and when excluding Israel from the analysis.

Overall, even if the MENA region's multilateral trade has the potential to cause conflicts, WTO membership seems to contribute to a decrease in regional disputes depending on international governance and agreements. Enlarging and deepening intra-MENA trade negotiations and policies emphasizing peace in the region might help to decrease tensions. Given the significant heterogeneities in the sample regarding the types of trade flows, home countries, and sector groups, understanding the heterogeneity within the MENA region seems as a vital instrument for policymakers and researchers. It allows for more nuanced and context-specific assessments of economic and political factors that shape the dynamics of individual countries and the region as a whole.

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