



FROM SPRING TO WINTER? AN ANALYSIS OF "ARAB SPRING" IMPACTS ON TURKEY AND MENA REGION FOREIGN TRADE WITH GRAVITY APPROACH



Mustafa Kahveci

Faculty of Political Sciences, Department of Political Science and Public Administration, Section of Public Finance, Istanbul University, Turkey.
Email: mustafa.kahveci@istanbul.edu.tr Tel: +905335751074



ABSTRACT

Article History

Received: 19 August 2019

Revised: 24 September 2019

Accepted: 15 November 2019

Published: 9 December 2019

Keywords

Gravity model

Foreign trade

Arab spring

Trade state

Turkey and MENA trade

Foreign policy shift.

JEL Classification:

F53; F14; F50.

This paper analyzed the foreign policy adjustment in Turkey's current ruling party government period, and the impacts of Arab Spring on the Turkey-MENA region trade. For this purpose, Tinbergen's Gravity Model that is regarded as the workhorse of the empirical international trade model was run by augmenting it with foreign policy adjustment dummies (political shift and Arab Spring), political violence, corruption, free trade agreements, regional and trade agreements. With these policy dummies, we analyzed the impacts of Turkish foreign policy adjustment tools on Turkey and MENA region trade. Estimation results showed that the increase in political connections and concentration in the MENA region had positive impacts on Turkey and MENA regional trade. In contrast to this, the post- Arab Spring period had negative impacts on trade. Empirical results showed that soft power tools for policy activism such as visa liberalization programs, free trade agreements, preferential trade agreements, high-level economic corporation councils had positive impacts on bilateral trade. But coercive policies and being part of regional conflict had negative impacts on bilateral trade.

Contribution/ Originality: This paper contributes to the existing literature by analyzing the Arab Spring impacts on bilateral trade and investigating the economic background of Turkey's foreign policy changes. In addition to this, paper underlines the information advantage of neighboring countries in an unstable region.

1. INTRODUCTION

This paper analyzes the impact of Turkey's foreign policy activism in the MENA region under the Justice and Development Party (AKP here after) governments since 2002 and the Arab Spring on Turkey and MENA regional bilateral trade. The research question arises from the "trading state" argument of international relations scholars which refers to the increasing role of international trade incentives in foreign policy decisions.

Together with the controversial dimensions, foreign policy activities and also the economic activities of Turkey in the MENA region have increased since 2002. This change provoked a debate both within domestic Turkish politics and the perception of Turkey in the region and worldwide. As a popular argument the "axis shift of Turkish foreign policy" was discussed and explained and refers to the government's ideological position¹.

¹See for details Oktav (2011).

Simply stated, the government of the AKP and pro-AKP sectors underlined Turkey's historical, cultural and religious ties with the former Ottoman Empire territory, which offered an opportunity window for comparative advantages (Kardaş, 2010). The opposition camp argues that Turkey has a limited role as a regional power, with warning against the risks of integrating into the Middle East region, such as institutional quality, regime characteristics and the potential domestic impacts of these issues (Kardaş, 2010). The epicenter of discussion about foreign policy changes is mostly in the political realm, with a focus on the government's Islamic incentives and its revenge from the modernization process of the Turkish Republic (Jung, 2012).

This paper excludes the subjective debate in this topic and argues that necessities of Turkish entrepreneurs motivated AKP's MENA regional activism. Additionally, Altunişik and Martin (2011) underlines that the Turkish foreign policy during AKP era has been swinging in terms of policy tools. This inconsistency provokes us to investigate the impact of different policy tools on bilateral trade. Specifically the Turkish case is suitable for examining the bilateral trade relations of a country which has unstable neighbor countries. The main hypothesis of this paper is that Turkish foreign policy activism in the MENA region increases the bilateral trade between Turkey and the region. Additionally, the Arab Spring has adverse impacts on trade relations.

The best tool for analysis along these lines is the Gravity model. Although the traditional gravity equation was not based on economic theory, - the name and logic came from Newton's physics gravity equation - it has been one of the most common empirical models in economics (Anderson, 2011). There is extensive literature which has used Tinbergen's equation accounting for different types of factors which have impacts on trade. The results of this research "have produced some of the clearest and most robust empirical findings in economics (Leamer and Levinsohn, 1995)." In due course, several rigorous theoretical frameworks have been presented and links of empirical intuition to economic theory have been established.²

This paper is organized as follows. Section 2 describes the transformation of Turkish foreign policy from the 1980s until 2015 and presents the patterns of foreign trade. Section 3 introduces the Justice and Development Party ruling period's descriptive trade statistics. Sections 4 discusses the gravity model and presents the main findings of gravity model research on the MENA region. Section 5 deals with Tinbergen's international trade model adaptation to Turkish foreign trade data with the MENA region. Section 6 concludes the paper and discusses results related to the hypotheses.

2. TURKISH FOREIGN POLICY AT A GLANCE SINCE 80's

International relations scholars argue that the international system of the post-Cold War period gives more autonomy and more playground for middle power/regional power countries (Jordaan, 2003). With the constraint of the Cold War, conventional Turkish foreign policy significantly overlooked its Pan-Turkist claims (the Caucasus and Central Asia) and historical ties between Muslim countries and communities (the Middle East and the Balkans) (Murinson, 2006; Altunişik and Martin, 2011). Thus, the end of the Cold War and the transformation of the international system gave way to incentives to Turkey to play a new and relatively autonomous and active role.

In the early post-Cold War period, Turkish foreign policy's activism had increased in former Soviet territories, the Balkans and the Middle East, but these activist policies were limited by two important domestic dynamics: security problems related to the Kurdish issue and several economic crises.³ Due to related bottlenecks, the economic and political structure of the country rapidly changed under the supervision of the IMF, the World Bank, and the EU (Öniş, 2010). After the 2001 economic crisis, the IMF led various economic programs, and the EU imposed some institutional changes implemented by the 1999-2002 coalition government.⁴ Financial sector

² See Anderson (2011).

³For a more comprehensive foreign policy analysis: Kirişçi (2009), Öniş and Yilmaz (2009); Öniş (2014).

⁴For a more comprehensive discussion on 2001 economic crisis and policy adjustments: Cizre and Yeldan (2005).

regulation, macroeconomic discipline policies, central bank independence and decreasing the role of the public sector in the economy were the basic elements of this reform process. Most of the legislation changes and structural regulations came into effect by the coalition government mentioned above and have continued during the first AKP era. In the political realm, the Kurdish leader Abdullah Öcalan's capture and ceasefire with the PKK restored stability in the Southeastern Anatolia region (Gunter, 2000). With the revival of the European Union integration process, several political reforms, such as the legislation of death penalty, abolition and individual rights reforms were implemented (Müftüler, 2005).

As a result of these changes, while the political area has been dominated by the European Union candidacy negotiations, the economic area has been dominated by the IMF standby agreements. Both transformations have increased Turkey's economic and political credibility, while decreasing the rate of political and economic uncertainty. Taking advantage of the international economic conditions as well, the Turkish economy has staged a good performance in terms of growth in comparison to historical growth numbers (Aktas, 2017).

This period should also be marked as the accomplishment of the economic liberalization and the transformation from a closed import substitute economy to a globally integrated export led economy which started after the 1980 military coup. Along with the opposition of some groups –such as workers in the state-owned factories– which harmed the economic liberalization process, the role of trade in the Turkish economy has increased (Akman, 2016).

Industrial geography also diversified, spreading from the Western region of the country to the other regions, and small-scale family business emerged in Anatolia (Tür, 2011). Together with increasing role of foreign trade; foreign policy has become a domestic issue, not only in terms of nationalist ideas or security problems, but also with regard to its impacts on employment, income and welfare from the effect of the international trade channel (Tür, 2011). Kirişçi (2009) claims that the emerging role in international trade lies behind the current Turkish foreign policy, and names this transformation as the “rise of the trading state.” In comparison to security-based foreign policy actors (military and foreign ministry diplomats), the increasing role of business associations and economy policy agents of state on foreign policy discussions is the indicator of this change.

Under these circumstances, the conservative Justice and Development Party won the 2002 elections, and became the longest ruling party government of the Turkish Republic since the start of the multiple party system era (Çınar and Şentürk, 2019). Foreign policy activism during the AKP era is grouped into two following periods by international scholars: a strong tendency to Europeanization (2002-2007), which goes back to the pre-AKP era, and renunciation from the Europeanization and simultaneous adaption of Euro-Asianism (2008-2015) (Öniş and Yılmaz, 2016). A significant continuity is seen in terms of activism, but there is also an adjustment and program change that trigger the foreign policy shift discussion.

The second period can be described in two subperiods: The 2008-2011 subperiod denoted a strong emphasis on soft power tools, historical ties with the region, and contacting all countries as a mediator regional power (Öniş, 2014). Together with increasing economic, political and cultural relations, and an anti-Israel rhetoric by the government, positive public opinions about Turkey in the Middle East improved in this subperiod (Akgun and Gundogar, 2013).

Following the Arab Spring period, foreign policy activism continued, but foreign policy tools have evolved into more intervening and coercive types (Wei, 2019). In this period (2012-2015), the approval of Turkey in the Middle East dropped by 19% (Akgun and Gundogar, 2013). Both the continuity of the multitask policy and the shifts have been driven by the domestic and regional changes (Kirişçi, 2009; Öniş and Yılmaz, 2009; Öniş and Yılmaz, 2016). Former foreign affairs minister and prime minister of the AKP governments, Ahmet Davutoğlu, who is also the mastermind of the strategic depth doctrine as an international relations scholar, announced the major principles of Turkish foreign policy in the region as security and freedom balance, zero problems with neighbors, a multidimensional foreign policy, and pro-activism in the region (Keyman and Sazak, 2015).

As an on-going process, the permanent results of the Arab uprisings are still unclear. However, it is apparent that Turkey and the established powers have a different reading as to these uprisings. The Turkish government interpreted the movement and the regime changes as a replication of Turkey's own transformation under the AKP governments (Christofis, 2019). Following this assertion, Minister of Foreign Affairs, Ahmet Davutoglu, mentioned this claim in May 2011 as "The Arab Spring is also the Turkish Spring" (Aksam, 2011) Together with the Turkish model claim, AKP's "New Turkey" discourse took on a regional dimension named by pro-AKP intellectuals as the "new region" (Özhan, 2011). During the first two years of the Arab uprisings, Turkey seemed to be the biggest winner of the regime changes in the region, providing technical assistance and financial support to the new regimes where the Muslim Brotherhood was the key player of the political arena. After the Muslim Brotherhood governments in Egypt and Tunisia collapsed and the Syrian uprising evolved into a civil war, Turkey changed its position from a mediator role between the protestors and the regimes to an interventionist part of the conflicts. Turkey's taking part of the Sunni ally together with the Gulf Stream countries, deteriorated its relations with Iran, Iraq, the central Iraq government, and the new Egypt government.

In addition to this, the target gap between Turkey and the established western powers has widened. While ISIS and the migration problem became the primary target for the US and the EU, Turkey attached itself to the regime change in Syria and to limiting the power of the Kurdish movement. The new phase of its foreign policy, having problematic relations with both the regional countries and the established powers, was stated by the Turkish government as "precious loneliness."⁵

The following section of this paper presents the Turkey and MENA regional trade dynamics.

3. TURKEY AND MENA REGION TRADE IN THE AKP ERA

International trade in the AKP era has rapidly increased, with total exports rising from nearly 48 billion US dollars to 144 billion US dollars, and imports from 70 billion US dollars to 207 billion US dollars with current numbers (TSI, 2015). Despite this sharp increase in exports, the international trade balance has not changed significantly (TSI, 2015). The proportion of imports covered by exports was 68.1% and 69.4% at the beginning and end of the period respectively, pointing out the trade balance issue of the Turkish economy (TSI, 2015).

Related to these problems, the weight of MENA regional trade has increased due to Turkey being a net exporter in this region. Graph 1 shows that the share of MENA regional export in Turkey's total exports has doubled in this period. Although, trade between the region and Turkey has been increasing, most of the regional countries' (except Iraq, Iran and Israel) individual shares are less than 1% (TSI, 2015).

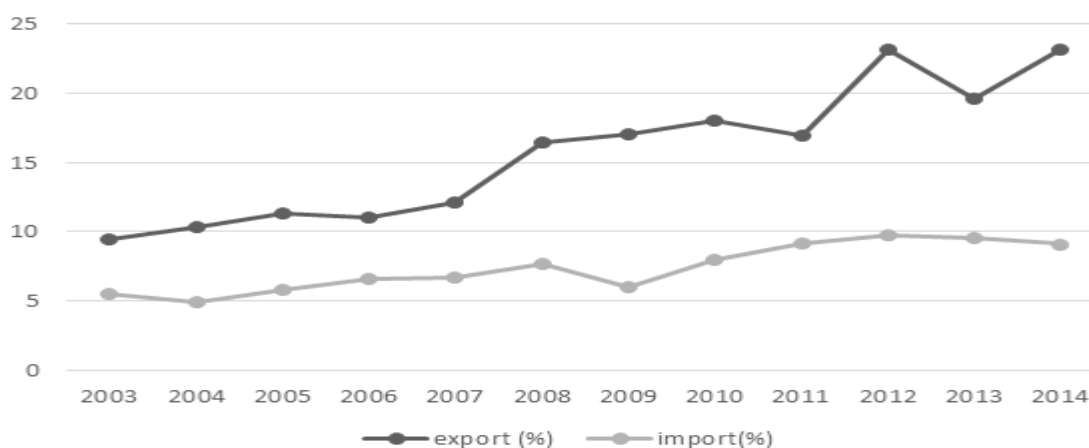


Figure-1. Export and import share of MENA (MENA/TOTAL %).

Source: Turkish Statistics Institute (2015).

⁵ For a more comprehensive discussion on this topic: Ozkan (2014).

The graph shows that 2008 was the breakpoint especially for the export side. Although the financial crisis began with the 2007 collapse of US mortgage market, it spread and 2008 to 2009 was marked for the bilateral trade impacts. With the economic meltdown of the EU, Turkey's main export market (56% of the country's total exports) narrowed sharply (TSI, 2015). The economic policy of Turkey focused on both product diversification and export diversification⁶. Product diversification and changing the export mix are long term policies but diversification of the exporting countries is short term and more cost efficient.

This was consistent with the number of free trade agreements, visa waiver agreements, and strategic economic corporation councils⁷. In addition to this consistency, we may also assume that 2008 overlapped with the international relations scholars' claims of policy and program adjustment, Euro-Asianism and the emergence of the trade state. Although the Turkish interest of the regional countries had been slightly increasing before the financial crisis, Figure 2 shows that the increase becomes more obvious both in policy adjustment tools and trade volume after the financial crisis. These new penetrated markets have provided new opportunities for Turkey's growing export potential, and have been the basis of the negative effects of the global financial crisis affecting the Turkish economy (Göktürk *et al.*, 2013). While seeking new markets, Turkey has implemented a variety of instruments. Governmental level changes, such as visa liberalization programs, free trade agreements, preferential trade agreements, high-level economic corporation councils, have been complemented by business associations working with regional counterparts to increase bilateral and multilateral economic relations.

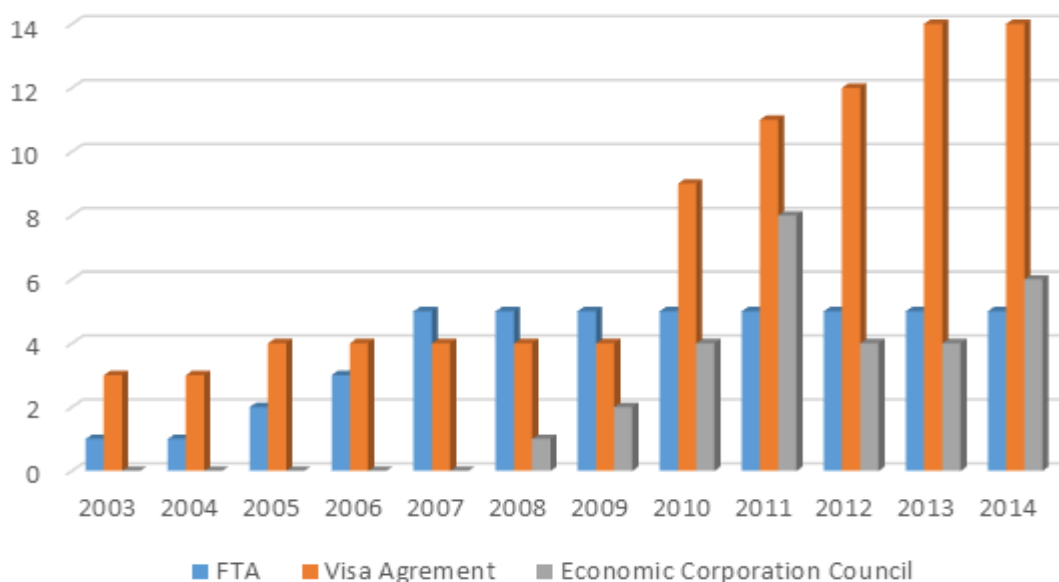


Figure-2. Number of agreements and policy mechanism.

Source: Republic of Turkey ministry of foreign affairs website (2015).

Despite economic interest-based motivations in Turkey's reorientation toward the region, other domestic and internal developments have also made impacts on the foreign policy shift. The suspension of membership negotiations with the EU and changes in Iraq after the US invasion have motivated Turkey to develop closer ties with the border countries that have huge Kurdish minorities and share a common concern of an independent Kurdish state coming true (Aras and Karakaya, 2008). Together with its economic interest and political agenda, Turkey has created greater economic and political collaborations with the region. The main characteristics of the policy shift period can be defined as high economic and political collaborations, high-level usage of soft power tools

⁶ For a more comprehensive discussion on trade diversification: Dennis and Shepherd (2011).

⁷ Number free trade agreements, visa waiver agreements, and strategic economic corporation councils data collected from Republic of Turkey Ministry of Foreign Affairs web page by author.

(historical relations, mediator country role, etc.) more Islamic discourse and less coercive policies. Turkey benefits from the capacity to build effective coalitions with both regional countries and developed western allies as well as contributing uniquely to regional and global governance in this period (Coşkun, 2015).

As a policy shift dummy, Figure 2 and Figure 1 show that 2008 was a breaking point so after 2008 was identified as a policy shift dummy, which is one of the main focuses of this paper. In addition to this, the Arab Spring period was identified as a dummy variable after 2012. Our intuitive expectation was a positive impact for the policy shift period and a negative impact for the Arab Spring period. The reason behind this intuition is that for the first period the interest of Turkey was more inclusive for all regional countries, and for the second period –post Arab Spring- it was more exclusive due to becoming part of the regional conflict.

4. GRAVITY MODEL

This section describes the gravity model approach and discusses the findings of previous researches. The gravity model approach, which was originally conceptualized by Tinbergen (1962) has become one of the most commonly used toolkits for analyzing the patterns in international trade. With reference to Newton's gravity theory, this model defines bilateral trade as a function of the economic size of two countries and the distance between countries (Tinbergen, 1962). In its simplest form, trade between the two countries is proportional to their economic size measured by countries' GDP and inversely proportional to the distance between them.

$$\ln T_{ij} = \beta_0 + \beta_1 \ln GDP_i + \beta_2 \ln GDP_j + \beta_3 \text{Distance} \quad (1)$$

Equation 1 argues a clear direction of causality that runs from income and distance to trade. In contrast to empirical advantages and explanatory power, the theoretical framework doesn't exist in earlier research. Anderson (1979), Bergstrand (1985;1989;1990) and Helpman (1987) showed the theoretical framework and extended the gravity equation with new variables, which may affect bilateral trade. Theoretical research in this field has shown that the gravity equation can be derived from different trade frameworks (Salvatici, 2013).

Equation 1 has been augmented with different groups of variables: demand similarities, transport costs, information costs, transaction costs and political variables. Usually, adjacent, landlocked and island dummies are used to test the hypothesis that transport costs are higher for landlocked and island countries, but lower for adjacent countries. Common language, colonial tie, common religion, migrants from exporter country who reside in importer country dummies are used for demand-side preference similarity and information costs. Regional trade agreements, bilateral trade agreements, and tariff/quota restrictions are used as transaction costs proxy. International political economy scholars use political variables, such as conflict, alliances, dyadic level diplomatic relations dummies, to test impacts of political relations on bilateral trade (Pollins, 1989; Mehanna, 2003; Carrere, 2006; Hegre *et al.*, 2010; Neumayer, 2011).

Model specification and econometric strategy are important issues for the gravity model estimation. The existence of unobserved country heterogeneity, endogeneity, and unit root problems are discussed as causes of biases in estimation results. Several scholars criticize and explore different methods both in terms of analytical perspective and econometric issues of the gravity model. Wall and Cheng (1999) found that ignoring heterogeneity creates biased estimates. Anderson and Van Wincoop (2003) added the gravity equation multilateral resistance term (MTR). In contrast to analytical foundations, the computational cost of MTR is very high and the interpretation of coefficients becomes complicated. In order to deal with these problems, simpler –and more common– methods have been used, such as country fixed effects for importers and exporters (Feenstra, 2004; Baldwin and Taglioni, 2006; Bergstrand and Egger, 2013).

In the literature, gravity equations are estimated for analyzing trade policy effects, particularly trade agreements' impacts on bilateral trade. In the related literature, several researchers underlined potential trade agreement endogeneity and non-trade goals in regional integration agreements (Martin *et al.*, 2012). In a comprehensive literature survey, Kepaptsoglou *et al.* (2010) found that results on trade agreement performance are

still contradictory; dependent on both the technical selection biases and the case under study. For a research frontier authors note that the accounting for free trade agreement (FTA) endogeneity may be an important research agenda. In addition to these, the intuitive time lag between the signing date of agreement and the enforcement date may create mixed results about trade policy variables.

Gravity models are estimated for the MENA region with different purposes. Robles *et al.* (2012) analyzed FTAs in the MENA region trade using 1990-2010 aggregated data and found that the Euromed FTA had a positive and significant impact on exports from the EU to the MENA countries but not the MENA region's exports to the EU. Turkey and the MENA region's FTA had a positive and a significant impact on exports from Turkey, and a positive but insignificant impact on imports to Turkey. Turkey and EU custom union agreement has significant positive impacts on both imports and exports. Cieřlik and Hagemeyer (2009) investigated the impacts of the EuMed FTA and the findings were similar both in policy as they refer to the impacts of agricultural protection in EU market and asymmetric trade liberalization in the MENA countries.

The Greater Arab Free Trade Area (GAFTA) agreements which were signed in 1997 are an important trade policy variable in the Arab region trade. Abedini and Périddy (2008) showed empirically that regional trade increased by 20% since the GAFTA was implemented. Mehchy *et al.* (2015) focused on exports from Syria in the 1995-2010 period, and suggested that cultural similarities, the institutional performance of Syria, and trade agreements with the Arab region (GAFTA), and the EU countries and Turkey had significant and positive impacts on Syrian non-oil exports.

Potential and actual trade within the MENA region is a challenging research question. Nugent and Yousef (2005) analyzed the MENA regional trade with both actual data and simulation data, and found that actual trade was less than potential (predicted) trade and the biggest gap was in intraregional trade. For them, regional trade agreements failed to increase intraregional trade. Bhattacharya and Wolde (2010), Al-Atrash (2000), Bobol and Fatheldin (2005), Nugent (2002), Minesy and Nugent (2005) using different time periods extended various types of gravity variables, found similar empirical evidence: Intra-region trade was lower than its predicted or expected potential, and trade agreements failed to increase intra-region trade. Similar to Robles *et al.* (2012) a trade agreement with the EU or other countries had positive and significant impacts on imports, but this same mechanism didn't work on the export side.

On the other hand, Boughanmi (2008) showed that the Arab Gulf Cooperation (GCC) countries traded more with each other than expected, noting that the GCC trade agreement creates trade without trade diversity. Richter (2012) claimed that the dynamics behind the low intra-region trade are the high non-tariff barriers, the exclusion of trade in service, the diversified and complicated legal systems, and high transport costs. Hisarciklilar *et al.* (2006) made a study of FDI inflows to the MENA region, and the empirical results suggested that the market size was the main factor and that FDI in the MENA region was not vertical. In contrast to these results, AbuAl-Foul and Soliman (2008) found that the FDI activity in countries had positive effects on both merchandise and manufacturing exports, but they also noted that the magnitude of coefficients suggested that exports were not highly responsive to imports.

Related to the paper's research question, Gylfason *et al.* (2015) focused on the power of potential trade over conflict resolution and the normalization of relations, concluding Turkey as a pivotal country had incentives to play a key role as a bridge between the EU and the MENA region.

5. MODEL SPECIFICATION AND EMPIRICAL STRATEGY

We estimated the impacts of the Arab Spring on foreign trade in two different model types. The first was similar to Dixit- Stiglitz type new-trade theory model that was extended with several security and institutional variables. Factor endowment-based new-trade theory implies that bilateral trade is directly related to bilateral

income (G), relative country size (S) and difference in relative factor endowments. Egger (2002) formulated endowment (R) determinants as shown below:

$$G_{ijt} = \log(\text{GDP}_{it} + \text{GDP}_{ij}) \quad (2)$$

$$S_{ijt} = \log\left(1 - \left(\frac{\text{GDP}_{it}}{\text{GDP}_{it} + \text{GDP}_{ij}}\right)^2 - \left(\frac{\text{GDP}_{jt}}{\text{GDP}_{it} + \text{GDP}_{jt}}\right)^2\right) \quad (3)$$

$$R_{ijt} = \left| \log\left(\frac{\text{GDP}_{it}}{\text{Population}_{it}}\right) - \log\left(\frac{\text{GDP}_{jt}}{\text{Population}_{jt}}\right) \right| \quad (4)$$

Equation 2 captures bilateral income of countries, which shows the market potential, Equation 3 shows the relative size of countries, and Equation 4 demonstrates the difference of productivity of countries.

The main focus of this paper is to analyze the foreign policy adjustment in the AKP's ruling period and the impacts of the Arab Spring on Turkey MENA region trade. Because of this, the model was augmented with foreign policy adjustment dummies: political shift and Arab Spring. Bilateral trade is affected by exporter and importer countries institutional quality, (political violence⁽⁻⁾, control of corruption⁽⁺⁾). Additionally, free trade agreements (FTA) and regional trade agreements (RTA) dummies were added together with traditional measure of transport costs as a transport cost proxy. The expected sign of both of them was positive. The augmented model was formulated as shown below:

$$\ln \text{Trade} = \beta_0 + \beta_1 G_{ijt} + \beta_2 R_{ijt} + \beta_3 S_{ijt} + \beta_4 \ln \text{Distance} + \beta_5 \text{Politicalviolencet} + \beta_6 \text{Politicalviolencei} + \beta_7 \text{Politicalshift} + \beta_8 \text{ArabSpring} + \beta_9 \text{FTA} + \beta_{10} \text{RTA} + \text{ControlofCorruptioni} + \text{uit} \quad (5)$$

The error term *uit* is composed of two error components, where μ_i is the unobservable individual effect, and ν_{it} is the remainder error term. μ_i and ν_{it} are assumed to be $iid(0, \sigma_\mu)$ and $iid(0, \sigma_\nu)$ respectively. GDP, bilateral trade variables were real and logarithmic; political violence and corruption were index variables; the Arab Spring, the political shift, FTA and RTA were dummy variables.

5.1. Data and Estimation Results

The dataset covers a panel of bilateral trade between the MENA region countries and Turkey from 2003 to 2014. Nominal bilateral trade data in the current US dollar was collected from the COMTRADE database. Data on the current US dollar, GDP and corruption index were collected from the World Bank data sources. The Center of Systemic Peace Major Episodes of Political Violence data was used as a proxy of violence for each country. Free trade agreement and regional trade agreement data was collected from the Turkish Republic Ministry of Economy for all the MENA countries. Political shift was defined as a dummy variable for the period of 2008 to 2014 and the Arab Spring for 2011 to 2014.

The summary statistics of the variables are shown in Table 1.

For a proper econometric specification of gravity type panel data models, most of the research focuses on random or fixed effect models. The decision between the random effects and fixed effects models is based on the Hausman test. However, homoscedasticity, uncorrelated error terms, and no serial correlation are the key assumptions of both the fixed and random effect models. When ν_{ijt} follows an autoregressive process, estimations results become consistent but inefficient. Several researchers work with two alternatives in these cases: the Hausman-Taylor and Prais-Winsten estimator. The comparison of different estimators' performance was not the aim of this paper but different estimators were used for coefficient consistency.

Table-1. Summary statistics.

Variables	N	Mean	Sd	Min	Max
G _{ijt}	228	11.92	0.0894	11.72	12.18
S _{ijt}	228	-0.839	0.494	-2.559	-0.310
R _{ijt}	228	0.483	0.243	0.0480	1.013
PoliticalViolence _i	228	0.724	1.576	0	6
PoliticalViolence _t	228	0.917	0.277	0	1
TPSOIC	228	0.829	0.377	0	1
FTA	228	0.206	0.405	0	1
Arabspring	228	0.417	0.494	0	1
Lntradeti	228	20.59	1.494	15.69	23.15
Ln distance	228	7.490	0.498	6.567	8.200
Politicalshift	228	0.583	0.494	0	1
Lnexport _t	228	20.20	1.410	15.67	23.14
Lnimport _t	228	18.76	2.556	11.22	22.57
LnPopulation _i	228	16.03	1.353	13.41	18.31
Ln gdp _i	228	24.97	1.365	20.53	27.20
Ln gdp _t	228	27.28	0.147	26.99	27.49
corrupt _i	228	1.797	0.750	0.390	3.723
corrupt _t	228	2.006	0.116	1.772	2.167
Ln population _t	228	18.08	0.0495	18.01	18.17
Number of ID	19	19	19	19	19

Table-2. Endowment based regression results.

Variables	(RE)	(FE)	(PW)	(HT)
	Lntradeti	Lntradeti	Lntradeti	Lntradeti
Ln distance	-1.771*** (0.678)		-6.747*** (1.229)	-0.479 (0.432)
G _{ijt}	6.769*** (1.088)	6.769*** (1.042)	6.423*** (0.866)	6.729*** (0.857)
S _{ijt}	0.790* (0.474)	0.790* (0.454)	0.920 (0.808)	1.173*** (0.369)
R _{ijt}	-2.359*** (0.638)	-2.359*** (0.611)	-2.239*** (0.507)	-2.084*** (0.405)
Politicalshift	0.238*** (0.0498)	0.238*** (0.0477)	0.242*** (0.0676)	0.234*** (0.0699)
FTA	0.203** (0.0984)	0.203** (0.0942)	0.165** (0.0808)	0.199** (0.100)
RTA	0.396*** (0.144)	0.396** (0.138)	0.444 (0.309)	0.339 (0.272)
Arabspring	-0.200** (0.0989)	-0.200** (0.0947)	-0.149* (0.0813)	-0.196** (0.0863)
Violence _i	0.0614** (0.0290)	0.0614** (0.0277)	0.0500* (0.0296)	0.0653** (0.0317)
Violence _t	0.0261 (0.0673)	0.0261 (0.0645)	0.0578 (0.0900)	0.0298 (0.108)
Control of Corruption _i	0.395* (0.216)	0.395* (0.207)	0.334** (0.140)	0.345*** (0.120)
Control of Corruption _t	0.105 (0.333)	0.105 (0.319)	0.112 (0.225)	0.112 (0.260)
Constant	-44.96*** (14.54)	-59.68*** (12.54)		-55.31*** (10.47)
Country fixed effects	Yes		Yes	
Observations	228	228	228	228
R-squared	0.96	0.760	0.969	
Number of ID	19	19	19	19

Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1.

Table 2 shows the factor endowment based estimation results with different estimators. Diagnostic tests showed that both heteroscedasticity and first order autocorrelation existed in our estimations. Dealing with these problems, Equation 5 estimated with the Prais-Winsten estimator and time and country effects were controlled by the country and time dummies. The results were reported together with random effect estimation with country dummies, fixed effect with regard to our main focus in this paper, and Hausman Taylor estimations.

Although the sign of coefficients was consistent for all estimators, size and statistical significance were highly sensitive to estimation strategy. Turkish foreign policy adjustment, the Arab Spring and bilateral trade relation were the main focuses of this paper. The results indicated that there was a positive relationship between foreign policy adjustment and bilateral trade. Statistically significant positive free trade agreement and regional trade agreement coefficients supported this claim. Additionally, the statistically significant political shift dummy supported that Turkey's focus on MENA region since 2008 has had positive impacts on bilateral trade but that the Arab Spring has had negative impacts on bilateral trade even after the control for violence.

The results showed a positive significant relationship between the political violence in the MENA countries and trade with Turkey. This counterfactual result may be explained with political ties, as the information advantages create a comparative advantage for Turkey in comparison to other countries. According to these regression results, we couldn't find any negative evidence for insecurity and trade relations. The control of corruption in the MENA region countries also has had positive impact on bilateral trade. This was consistent with the institutional quality and trade relation arguments.

Control variables such as the distance, bilateral sum of factor income and relative country size, had similar results with previous studies but the statistical significance varied across estimators. The relative difference in GDP per capita was statistically significant and negative. This variable was used as a proxy of relative factor endowments but in the Turkey MENA context, where Turkey is an exporter country, the GDP per capita can be a proxy of relative export market size. Sector or firm level analysis could provide more information about the structure of trade relations.

5.2. Robustness Check

As the robustness control of our hypothesis, the second empirical model was specified in line with common augmented gravity methodology. The gravity model in its basic form postulates that the volume of bilateral trade between the two countries is a function of their incomes and distance. Related with the research aim, the model was augmented by Turkish foreign policy tool adjustments, the Arab Spring, and institutional variables. Equation 6 shows a general static panel data model is used for model specification:

$$Y_{ijt} = \beta_1 X_{ijt} + \beta_2 Z_{ij} + u_{it} \quad (6)$$

Where (i) is the cross section dimension, (t) time dimension of panel, X_{ij} is time variant variables vector, Z_{ij} is time invariant variables vector β 's are coefficient vectors.

$$\text{Log Trade}_{ijt} = \beta_0 + \beta_1 \log \text{GDP}_t + \log \text{GDP}_i + \ln \text{Population}_i + \ln \text{Population}_j + \ln \text{Distance} + \text{Politicalviolence}_t + \text{Politicalviolence}_i + \text{Politicalshift} + \text{ArabSpring} + \text{FTA} + \text{RTA} + \text{ControlofCorruption}_i + \text{ControlofCorruption}_t + u_{it} \quad (7)$$

Equation 7 shows the reduced form augmented gravity model. Table 3 shows the common gravity type estimation results Equation 7 with different estimators. The political shift had statistically significant positive impacts on Turkey and the MENA region countries, and the post-Arab spring period had statistically significant negative impacts on trade. There was no statistically significant impact of political violence. The regional trade agreement (TPSOIC) had a positive significant coefficient, but the free trade agreement coefficient was statistically insignificant. The control of corruption in region countries increased bilateral trade and gross domestic income had

positive impacts on trade. The population of the MENA region's countries and bilateral trade had positive relationship, but the population increase in Turkey had negative impacts.

Table-3. Trade regression results.

	(FE)	(RE)	(PW)	(H-T)
Variables	Lntradeti	Lntradeti	Lntradeti	Lntradeti
Lnpopulationt	-3.678 (3.270)	-3.678 (3.416)	-4.856*** (1.877)	-3.333 (2.771)
Lngdpt	2.827** (1.262)	2.827** (1.318)	3.058*** (0.584)	2.882*** (0.916)
Lngdpi	0.689*** (0.237)	0.689*** (0.247)	0.901*** (0.266)	0.580*** (0.139)
lnPopulationi	0.682** (0.312)	0.682** (0.326)	0.643** (0.258)	0.548*** (0.140)
Violence I	0.0165 (0.0420)	0.0165 (0.0439)	-0.0123 (0.0311)	0.0138 (0.0313)
Violence t	0.0143 (0.0791)	0.0143 (0.0827)	0.00790 (0.0745)	0.0184 (0.118)
TPSOIC	0.439* (0.229)	0.439* (0.239)	0.289 (0.330)	0.460* (0.245)
FTA2	0.175 (0.121)	0.175 (0.126)	0.0556 (0.0738)	0.155 (0.101)
Control of corruptioni	0.286 (0.213)	0.286 (0.223)	0.255* (0.136)	0.304** (0.120)
Control of corruptiont	-0.0129 (0.298)	-0.0129 (0.312)	-0.0216 (0.215)	0.0244 (0.319)
arabspring2	-0.177* (0.0908)	-0.177* (0.0948)	-0.168** (0.0687)	-0.178* (0.0917)
Politicalshift	0.310*** (0.0929)	0.310*** (0.0971)	0.321*** (0.0654)	0.326*** (0.0940)
Ln distance		-3.116*** (0.964)	-1.168 (2.637)	-0.514 (0.354)
Constant	-19.17 (33.41)	5.330 (36.35)		-18.33 (29.89)
Observations	228	228	228	228
R-squared	0.740		0.999	
Number of ID	19	19	19	19

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1.

The results of traditional gravity estimations were consistent with the factor endowment based gravity model. The focus of this paper was to analyze the policy adjustment mechanism and the Arab Spring impact on Turkey and the MENA region's bilateral trade. Our results showed that policy adjustments and Turkey's increasing diplomatic activities in the region increased bilateral trade, but that the impact of the Arab Spring was negative.

6. CONCLUSION

This paper explored the impacts of activist Turkish foreign policy on the MENA region's trade. Both gravity and endowment-based regression results showed that foreign policy adjustment had positive impacts on trade. When foreign policy was dominated by soft power tools (mediator role, democratic credentials, etc.), bilateral trade increased very sharply. In contrast to this, the post-Arab Spring interventionist activism had negative impacts on bilateral trade even after the control of gross domestic product population and distance. These results were consistent with Öniş and Kutlay (2017) limitation of midlevel activism. When Turkey had attractiveness both for established powers (the US, the EU, and Russia) and regional countries, trade had increased rapidly after policy adjustments. In contrast to this; while Turkey had sided in the regional conflict with Sunni allies and the target gap between Turkey and established powers increased, trade was negatively affected.

Our analysis showed that increasing political violence in regional countries had positive impacts on bilateral trade. The coefficient of political violence was positive for all regressions, but it was only statistically significant in the endowment-based model. These contradictory findings may stem from different reasons. All political datasets have problems in subjectivism and this subjectivism could be the reason for these contradictory results. If it is assumed that data has a proxy power, then this unexpected result may have related to Turkey's comparative advantage in comparison to other countries under high uncertainty and high risk political situation.

Domestic political changes in Turkey were omitted in this paper but for further research, sectoral and regional level analysis may provide more information about the results of foreign policy activism and the relationship between it and trade. For further research, the combination of domestic political changes and foreign policy changes could provide more detailed information about the results of these changes.

Funding: This study received no specific financial support.

Competing Interests: The author declares that there are no conflicts of interests regarding the publication of this paper.

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