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Master Thesis U.S.E.

The Influence of Political Climate in North Macedonia and Greece on the
Bilateral Trade Flow

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Abstract

North Macedonia and Greece have experienced fraught diplomatic relations since the independence of Macedonia in 1991, with Greece objecting to Macedonia's use of the name. As neighbouring countries, the geographical proximity makes them good trading partners. This study aims to answer the question whether the political ideology of the ruling parties in both countries contributed to the increase or decrease in the bilateral trade flows. Using a political index which places all ruling coalitions from 1991 to 2022 on a spectrum from fully left-wing to fully right-wing, the study uses a panel data approach, with the dependent variables being total trade volume, imports, and exports. The study finds that the political leanings of the governments impacted imports – the countries imported more from each other under a right-wing rule. The results are further proven when conducting a placebo test between Bulgaria and Greece as a dyad with amicable political relations where no impact was found on trade by ideology.

Key words: issues in international trade, negotiations, panel data, political relations, dyadic trade, North Macedonia, Greece

Contents

I. Introduction.....	4
II. Literature Review.....	8
The Gravity model of trade.....	8
III. Methodology.....	12
IV. Results.....	17
Alternative specifications.....	20
Placebo test.....	22
V. Discussion.....	24
Limitations.....	25
Conclusion.....	26
References.....	27
Appendix: classification of parties.....	32

List of tables:

Table 1: Peaks and troughs in trade flows compared with ideology of ruling party in Macedonia and Greece.....	7
Table 2: Overview of hypotheses.....	12
Table 3: Control variables used in the model.....	14
Table 4: Descriptive statistics of variables included in the model.....	15
Table 5: Results of the first specification of the model, clustered standard errors.....	17
Table 6: Lagged results of first specification, clustered standard errors.....	19
Table 7: Results of alternative specification, clustered standard errors.....	20
Table 8: Lagged results, alternative specification.....	21
Table 9: Results of placebo test.....	23

Table of figures:

Figure 1: Macedonian imports from Greece and exports to Greece in the years 1993-2022.....	6
Figure 2: Greek imports from Macedonia and exports to Macedonia in the years 1993-2021.....	6

I. Introduction

The Republic of North Macedonia is a young country, having gained independence from the Socialist Federal Republic of Yugoslavia in 1991 (Government of the Republic of North Macedonia, n.d.). From the early days of the new Republic, Macedonia was faced with contention from Greece (MFA of the Hellenic Republic, n.d.), culminating in Greece enacting an embargo in 1995 (Nikas, 2005). In 2018, The Republic of Macedonia, which at that time was internationally known as Former Yugoslav Republic of Macedonia (FYROM), signed the Prespa Agreement with Greece, agreeing to change its name to Republic of North Macedonia (Nimetz, 2020). The non-recognition of Macedonia's name has been a widely discussed issue for decades, and there are still political and civil movements within both countries that object to it (CNN, 2019; The Guardian, 2019; Nimetz, 2020).

Since the dissolution of Yugoslavia and the subsequent creation of six new independent states - Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia, and Slovenia – Macedonia and Greece have frequently been intertwined in the international diplomatic scene due to the naming dispute. Greece objects to the name “Macedonia” because there is a geographical region in Greece with the same name. The country of Macedonia is inhabited by Slavic Macedonians, whereas the region in Greece is inhabited by Hellenics (MFA of the Hellenic Republic, n.d.). This is the reason for the long-lasting dispute between the two nations. The first signs of worsened diplomatic relations appeared in 1994, with Greece enacting an embargo on Macedonian products, although the embargo only reduced the bilateral trade instead of halting it (Nikas, 2005). The dispute was settled by the United Nations in 1995, with the signing of an agreement where the Republic of Macedonia would henceforth be known as the Former Yugoslav Republic of Macedonia (FYROM) in all international organizations of which both countries are members (UN, 1995). In 2008, Greece vetoed Macedonia's attempt of joining NATO (Reuters, 2008).

In 2017, the two countries sign the Prespa Agreement. Macedonia takes on a geographical attribute to the name, becoming North Macedonia, and Greece agrees to support North Macedonia's efforts in joining any international organization of which Greece is a member (Government of the Republic of North Macedonia, 2020). The new name has officially been in use since 2019 (Official Gazette of the Republic of North Macedonia, 2019), and North Macedonia joined NATO the following year (NATO, 2023). The agreement improved diplomatic relations between the two countries.

Although historically the two countries have experienced political tensions, they are sizeable trade partners (Nikas, 2005; OEC, 2013). In 2022, the official Greek investment and trade promotion agency called the 101% increase in exports to North Macedonia a “noteworthy increase” (Enterprise Greece, 2023). Their proximity and the fact they have a shared border makes trading easy. This can be explained through basic theoretical concepts in international trade, notably through the gravity model, which estimates the relationship between the economic size of the countries and a measure of trade frictions such as tariffs or distance (Baier and Standaert, 2020). According to this theory, the geographical proximity of North Macedonia and Greece creates favourable trading conditions. In 2021, Greece was the fourth biggest export destination for products from North Macedonia, with an amount of USD 289 million, exporting metals, textiles, and foodstuffs (OEC, 2023). North Macedonia is Greece’s ninth biggest export market, with exports valued at USD 1.84 billion. Most of Greek exports to North Macedonia (60%) is refined petroleum (OEC, 2023). Although they have been at odds for the better part of North Macedonia’s existence as an independent country, in 2021 Greece was the fourth largest trade partner of North Macedonia, which represents a drop of two places from the historically highest position of second place (OEC, 2023). Figures 1 and 2 show the movement of inward and outward flows between North Macedonia and Greece.

The importance of trade cannot be underestimated. Standard economic theory states that a country cannot produce everything by itself and must rely on imports to receive goods for which it does not specialize in. The country can export the surplus of goods it has and that other countries require. Exports are a sizeable part of a country’s GDP, therefore an increase in exports makes the country richer. This leads to an increase in social welfare for the citizens, as an increased GDP symbolizes economic growth and development through public expenditure and investment in public goods and services. Hence facing a worsening trade partnership with a valuable trade partner for which trade is easy to begin with because of the short geographical distance would mean a decrease in economic growth. Variances in trade cause divergence of growth rates of per capita income, worsening the rift between developed and developing countries (Lee, 1993). Dowrick and Golley (2004) find that increasing trade has a direct benefit on economic growth, although the benefits are greater for developed economies rather than developing economies. Dristaki et al. (2004) conclude that there is a causal relationship between exports and economic growth for Greece, with the use of a Granger causality test. Decreased trade flows lead then to a lower GDP, hindered economic growth and development, and decreased social welfare.

The Macedonian economy is a small and open one, with trade contributing up to 90% to its GDP (ETF, 2021). Worsened trade ties due to the political climate might then cost it a sizeable part of the GDP of the country. In contrast, Greece is considered a small, closed economy, that underperforms in exports (Böwer et al., 2014).

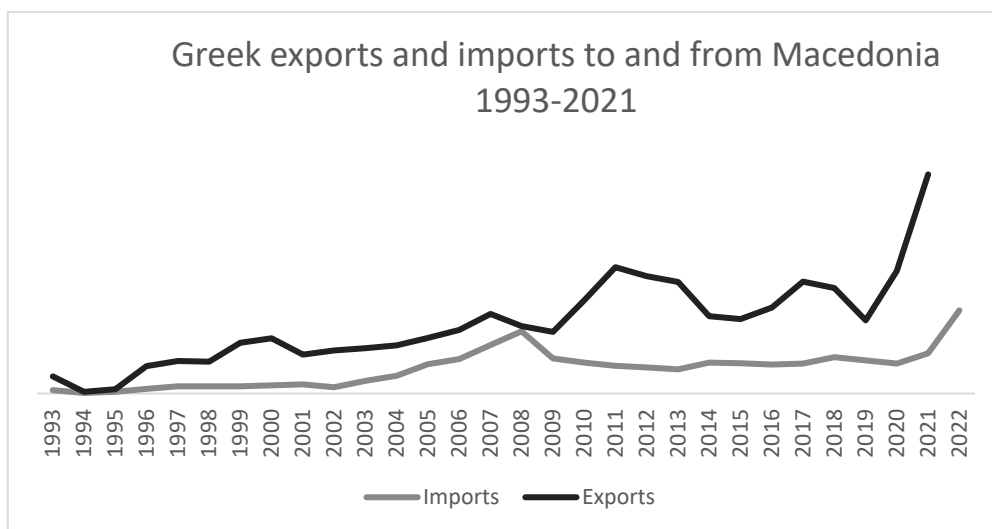
Figure 1: Macedonian imports from Greece and exports to Greece in the years 1993-2022



Source: UN Comtrade Database

Macedonian exports are relatively constant, with peaks in 2003 and 2010, and a sharp decline in 2021. Macedonian imports show a clear upward trend, peaking in 2014 and declining in 2018 and 2021. A potential explanation for 2018 would be the recently signed Prespa agreement, whereas the decline in 2021 could be explained by the Covid-19 pandemic.

Figure 2: Greek imports from Macedonia and exports to Macedonia in the years 1993-2021



Source: UN Comtrade Database

Greek imports remain constant throughout the years, with an uptick after 2021, and a marked peak in 2008 – a year where one would presume the Macedonian population would be dissatisfied regarding the Greek objection to NATO accession. Exports are more volatile, with a peak in 2011 and a decrease in the years 2009, 2015 and 2019. The embargo of 1994, which lasted until 1995, reduced but did not completely stop trade relations. After the embargo, trade bounces back almost immediately, consistent with Barbiery and Levy’s (1999) findings that trade relations resume almost instantly after a conflict. Furthermore, both imports and exports decline exactly around the time of the Prespa agreement negotiations and signing. One reason might be the dissatisfaction of the Greek and Macedonian populations about the compromise. Furthermore, firms that are largely state-owned participate in politicized trade, and are therefore more sensitive to changes in the political relations between countries (Davis et al., 2019), which could also account for drops in trade. An overview of the peaks and troughs in trade and the political orientation of the government for the year in question can be found in Table 1.

Table 1: Peaks and troughs in trade flows compared with ideology of ruling party in Macedonia and Greece

	Movement	Year	Trade flow	Government Greece	Government Macedonia
Macedonia	Peaks	2003	Exports	LW	RW
		2010	Exports	RW	RW
		2014	Imports	RW	RW
	Falls	2018	Imports	LW	LW
		2019	Exports	LW	LW
		2021	Imports	RW	LW
Greece	Peaks	2008	Import	RW	RW
		2011	Exports	LW	RW
		2022	Imports	RW	LW
	Falls	2009	Exports	RW	RW
		2015	Exports	LW	RW
		2019	Exports	LW	LW

Source: Author’s calculations, with data from CPDS. LW stands for left-wing, RW for right-wing.

In Macedonia, all peaks are during the rule of a right-wing party, and all falls are during the rule of a left-wing party. However, there is no clear trend in the Greek ruling party's ideology. Because of the political disagreements between North Macedonia and Greece, one might assume that the disagreement between the nations is also present on a more individual level, i.e., in the population and firms of the countries. By extension, this would mean that people and firms would refuse to trade with each other, based on political disagreement with the trading partner.

This study will aim to answer the question whether the political ideology of the ruling government has an impact on the trade volume between North Macedonia and Greece in the time since the independence of Macedonia in 1991, until 2022. Through using a panel data model, the study will analyse the impact of the political climate on the total value of the trade, as well as exports and imports separately. A further question arises: does the name change, as a culmination of three decades of problematic bilateral relations, have an impact on trade? The analysis finds that the rule of right-wing governments increases the imports from country i to country j and has no impact on the exports or trade as a whole. Furthermore, the study does not find a link between the name change in 2019 and a change in the amount of trade, imports, or exports. This paper is structured as follows: Section II will provide a review of the empirical research done into the subject as of date, Section III presents the data and methodology used, Section IV presents the results, section V discusses the results and their implications.

II. Literature Review

The Gravity model of trade

The most widely used model in literature regarding international trade is the gravity model. Often called the workhorse of international trade, it analyses bilateral trade as a function of the economic size of the two countries and the trade frictions between both countries (Anderson, 2011). The gravity model is mathematically annotated in the following way:

$$\ln X_{ij} = \ln(G) + \beta_1 \ln(Y_i) + \beta_2 \ln(Y_j) + \beta_3 \ln(\text{dist}_{ij}) + \ln(\varepsilon_{ij}) \quad (1)$$

where X_{ij} is the bilateral trade between exporting country i and importing country j , Y_i is the GDP of the country i and j , dist_{ij} is the distance between country i and j , and ε_{ij} is assumed to be a log-normally distributed error term (Baier and Standaert, 2020). Therefore, the GDP of the

importing and exporting country and the distance between both countries have an impact on exports, and by extension, the total trade volume. This is the theoretical framework that will be used in this study.

The gravity model is used in most studies about international trade. The following authors have contributed to the development of the basic gravity model. Baltagi et al. (2003) find significance in time-variant factors such as cultural, institutional or political change. Linders et al. (2005) contribute a significant addition to the basic gravity model with variables about cultural similarity of the trading countries. These are dummy variables for shared religion, language, and colonial past. Common main religion and having a shared colonial past increases trade. Tevdovski & Tosevska-Trpcevska (2014) use the augmented gravity model with a sample of ten southeastern European countries, including both Greece and North Macedonia to prove that sharing the same border and being part of the former Yugoslav market are important determinants of trade in the region. They further find that the costs associated with trade and days spent at the border in both the importing and exporting country are significant trade obstructors, however other administrative costs such as the number of documents needed to export (or import) do not constitute a significant barrier to trade. Although Macedonia's participation in free trade agreements such as CEFTA-2006 guarantees tariff-free trade, bilateral trade is not realized to its full potential existence due to the presence of non-tariff barriers such as the administrative costs mentioned in Tevdovski & Tosevska-Trpcevska. (Mojsoska-Blazevski & Petreski, 2010). Mátyás et al. (2004) find that both importer and exporter GDP, as well as the countries' population, have a strongly significant positive impact on export flows. The GDP has a larger effect in the country of origin, while population has a larger effect in the importing country. Price effects negatively affect exports flows through the proxy of the exchange rate. Finally, high inflation causes a decrease in exports and ultimately a decrease in economic growth (Gylfason, 1997).

Numerous authors have investigated the impact that conflict has on trade flows. Polachek (1980) tests the hypothesis that trading partners seek to avoid conflict as to not decrease trade. The author uses events data to gather data on conflicts in the dyads. Here, conflict is not necessarily an armed operation, which is why the author uses multiple categories of conflict. He hypothesizes that dyads having a very strong bilateral trade should have the least conflict, and the more the dyads trade, the less they would want a conflict. Analysing 841 dyads in a period spanning 10 years, and with 15 categories of conflict, he finds that conflict does affect trade. Greater levels of conflict increase the difficulty of trade because of the

implementation of trade barriers (for example, tariffs, quotas, or embargoes). Hostility increases the price of trade, which leads to decreased welfare from trade losses. His findings hold when tested for causality: an increase in trade diminishes conflict. Trade increases cooperation and decreases conflict. Although, war is rarely the outcome of tense diplomatic relations, and bilateral relations fluctuate on a spectrum from friendly to tense. It is still of note to analyse how this rare event impacts trade. Barbieri and Levy (1999) find that war has no permanent long-term effect on trading relationships, and in fact causes trade to return to its original intensity rapidly in the post-war period. The authors analyse seven dyads that undertook a war shorter than a year (i.e., excludes longer wars such as World War Two, as long wars have a direct negative impact on the GDP of the country). There is no sharp or substantial decline in trade between adversaries during a war, and trade levels bounce back shortly after the end of the war, findings which go against both liberal and realist economic theories. Sanctions as a result of war have a negative effect on trade (Dai et al., 2021). The Balkan region is no stranger to armed conflict, considering the Bosnian civil war (1992-1995), the Kosovo war in 1999 and the insurgency in Macedonia in 2001. Petrakos (2007) states that Greece should increase its trade relations with Balkan countries and is in a unique position to do so, being the only EU member state of the region. Improved trade relations help with avoiding conflict and maintain peace and stability in the region. Geographical regions cluster the trade relations between them for efficiency reasons: the geographical proximity that they enjoy means that the shipping expenses are smaller. It is also convenient for these countries to trade amongst themselves as they are further away from the economic center of Europe. Greece can then act as a peacekeeper of the region through the means of trade.

Political factors of trade are not as well researched as other factors which impact trade more directly, such as FDI or inflation. Osgood (2022) claims that protectionist firms often share an affinity for right-wing parties, and left-wing parties are anti-globalization, making them more opposed to trade. Osgood uses the US Congress to analyse how ideology plays a role in the voting patterns of US congressmen. He finds that left-wing parties are more likely to vote for anti-trade measures in order to protect the interests of the domestic firms and production. A weakness in Osgood's methodology is whether the findings can be replicated in other countries with a different political system and composition of parliament (i.e., whether the workings of the American Senate are applicable to other systems). Tense bilateral relations do not often lead to war. The consequences are oftentimes more subtle. For instance, a nation can enact an embargo, as was the case with Greece and Macedonia in 1994, or the United States

embargo against Cuba. Morrow et al. (1998) classify this as a direct political effect in their research of political determinants on international trade, rather than an indirect effect. An indirect effect is when individual agents fear a political risk and therefore decrease (or stop completely) their trade relations. Political uncertainty is a risk premium, making it that only the most profitable trade carries on. The authors hypothesize that country pairs that are in good political standing with each other should trade more than countries in bad political standing, since the political risk and therefore risk premium, are smaller. Using a cross-sectional time series, they analyse the dyadic relationships of the six biggest powers in the beginning of the last century (the United States, Great Britain, Italy, France, Germany, and Russia) in the years 1907 to 1990, excluding the years of the two World Wars. Using the gravity model approach, and adding control variables for conflict, joint democracy, alliance, and interests, their analysis finds that close political relations increase trade in a dyad, and that dyads where both countries are democratic trade more than nondemocratic countries. Furthermore, they find that a militarized conflict does not significantly reduce the trade between the conflicting countries, consistent with Barbieri & Levy's (1999) findings, and an alliance between two countries reduces its trade. In a corrigendum to this study, published in 1998, the authors correct part of the results of the original study. The first three findings are consistent with the original findings of the study, but alliances under bipolarity have been found to increase trade compared to alliances under multipolarity.

The political orientation of the government can also play a factor in trade relations. Dajud (2013) finds that political differences in trading countries impact negatively their trade relations. Van Bergeijk (1992) concludes that diplomatic cooperation between two countries increases trade flows, whilst political hostility decreases it. Dutt and Mitra (2005) empirically research how the ideology of the government affects trade policy using a Heckscher-Ohlin framework, in a two-sector, two-factor economy. The hypothesis is left-wing governments (assumed pro-labour, contrary to pro-capital) are more protectionist and would therefore adopt the appropriate protectionist trade policies in capital-rich countries, but inversely, adopt pro-trade policies in labour-rich countries, than right-wing ones. Left-wing policies increase the redistribution of wealth in a country which directly benefits the labour force of the country. In an economy which has more labour than capital, the import sector is capital intensive, requiring policies that would impede the imports. In a capital-intensive economy, the reverse is true. The authors use a research design of a cross-sectional analysis that averages variables for the years 1980-1988, regressing the measure of ideological orientation (left-wing, center, and right-

wing), the capital-labour ratio, a democracy indicator, and a political rights indicator, on trade protection. Left-wing governments are found to be more protectionist in capital-rich countries, and support more pro-trade policies in labour-rich countries. Without distinguishing the ideological leanings of parties, Pollins (1989) finds that political relations affect trade flows. Using a model that analyzes how prices affect trade flows in bilateral trade and adding a variable capturing the amity/hostility between the analyzed states, with data from the yearly exports from 25 states to six importer states in the years 1955-1978 and controlling for price levels, he finds that imports increase when political relations improve.

The review of the literature shows that the relationships between trade and economic growth, the different factors that impact trade, such as conflicts, have been studied extensively. As Dajud (2013) confirms, very few studies control for political characteristics. This study aims to fill a gap in the research by analyzing the political factors of trade between Greece and North Macedonia since the latter's existence as an independent country, but also the recent developments in the diplomatic relations i.e., after the signature of the Prespa agreement and the following name change.

III. Methodology

The research question is the following: does the political climate in North Macedonia and Greece have an impact on the trade flows between the two countries? And does the name change, as a culmination of three decades of delicate bilateral relations, have an impact on trade? The hypotheses of this study are the following:

Table 2: Overview of hypotheses

Hypothesis 1	Political factors play a role in trade flows.
Hypothesis 1a	The rule of a left-wing government is more likely to lead to a favourable trade environment.
Hypothesis 1b	The rule of a right-wing government is more likely to lead to a favourable trade environment.
Hypothesis 2a	The name change impacted trade relations.

Hypothesis 2b

The name change did not impact trade relations.

The main explanatory variable is the political index. It has been constructed in the following way: For Greece, the data for parliament composition was taken from the Comparative Political Dataset (CPDS), which classifies parties by their ideology¹ (left-wing, center, and right-wing) and based on that definition, calculates the proportion of seats held by left-wing, center and right-wing parties, weighted by the number of days in power of the government. The CPDS classifies social-democratic parties as being left-wing; liberal, conservative parties as right-wing; and center parties are mostly religious parties. The variables *gov_left2*, *gov_right2* and *gov_cent2* are used, which calculate “the relative power position of right-wing, center or left-wing parties in government based on their seat share in parliament, measured in percentage of the total parliamentary seat share of all governing parties”. This variable was chosen to represent the relative power of each ideology in the parliament, as both parliaments are mostly ruled by coalitions. The index is then constructed by subtracting the share of right-wing seats from the share of left-wing seats (the Greek political system does not have any center parties²), to obtain a value between -100 for a parliament made up of fully right-wing seats, and 100 for a parliament made up of fully left-wing seats.

For North Macedonia, the data for parliamentary seats was taken from reports from the website of the Macedonian Assembly. Following the CDPS’s methodology, Macedonian parties were classed by their ideological orientation (see Appendix). The share of left-wing, right-wing, and center seats was calculated manually as the share of seats that each party holds, divided by the total number of seats in the Parliament, and weighted by the total days in power of the government. The index was obtained with the following formula:

$$\text{Macedonian Political Index} = (\text{left-wing seats} - \text{right-wing seats}) + (0.5 * \text{center seats}) \quad (2)$$

Center seats were assigned a weight of ½. The Macedonian political system is comprised of a few big parties with a clear left or right-leaning ideology, and numerous small parties that mostly represent the interests of minority populations in the country, which were

¹ See Appendix

² See also: Pappas (2003).

all classed as center parties following the CDPS methodology. An overview of the rest of the control variables can be found in Table 3.

Table 3: Control variables used in the model

Variable name	Description	Source
Inflation_{it}	The rate of inflation in both countries in year t	IMF
$\log\text{GDP}_{it}$	The logarithm form of the GDP of Greece and North Macedonia in year t	World Bank
$\log\text{Imports}_{it}^3$	Logarithm of total yearly imports (MK-GR and GR-MK) in USD	UN Comtrade Database
$\log\text{Exports}_{it}$	Logarithm of the total yearly exports (MK-GR and GR-MK) in USD	UN Comtrade Database
$\log\text{TotalTradeVolume}_{it}$	The logarithm of total trade values for country i in year t	Own calculations
Name Change	Dummy variable coded 1 for years after the name change, 0 for years before the name change	

³Note on $\log\text{Imports}_{ijt}$ and $\log\text{Exports}_{ijt}$: originally, there are four different values per year for dyadic trade. In bilateral trade, exports from country A do not always equal imports to country B because of a specificity in trade statistics known as bilateral asymmetry (UN Statistics, n.d.). Possible causes for this asymmetry are: the time lag between exports and imports (for instance, if country A exports the good in 2020, but it only arrives in country B in 2021); goods that pass through third countries (if the good is exported through country C, country B might attribute it as imported from country C instead of from country A); or difference in the way goods are classified in the different countries (UN Statistics, n.d.).

Covid-19	Dummy variable: coded 1 for years with the pandemic, 0 otherwise
Year	Time trend

Data for imports and exports were taken from the UN Comtrade database. The imports from Greece and from North Macedonia were added together in one variable, as were the exports to Greece and North Macedonia. The variable Inflation is the inflation rate in country i in year t ; GDP is taken in the logarithm form to account for linearity in the analysis and measures the real GDP of North Macedonia and Greece in year t in US dollars; Name Change is a dummy variable to observe the difference in trade in the years before and after the name change; Covid-19 is a dummy variable to control for the effects of the pandemic on trade; year is the time trend variable.

Table 4: Descriptive statistics of variables included in the model

Variable	Obs	Mean	Std. Dev.	Min	Max
Year	64	2006.5	9.306	1991	2022
Inflation	63	32.258	165.249	-1.4	1271.7
GDP	62	104.7	109.5	2.437	355.9
Imports	59	324.8	269.9	4.763095	1431
Exports	59	395.5	339.5	12.721795	1847
Political index	64	6.282	35.056	-55	56.7
log GDP	62	24.294	1.749	21.614	26.598
log Imports	59	19.161	1.119	15.376	21.082
log Exports	59	19.38	1.064	16.359	21.337
Total trade value	59	72.01	421.2	18.935836	2185
log Total Trade Value	59	20.135	.892	16.757	21.505

The data for inflation shows that the inflation rate fluctuates from -1.4 percent to an extreme value of 1271.7 percent. This is the inflation rate in Macedonia in 1992, which suffered an extremely high inflation rate due to the hyperinflation present in Yugoslavia at that time. A relatively high inflation rate is observed in Greece in the same year: 19.46 percent, which is the highest it has been in the analyzed period. For clarity, GDP in this table is presented as billions of US dollars, and imports, exports and total trade value are in millions of US dollars.

This is a panel data model comprised of 60 observations on average (yearly observations beginning in 1990, until 2022). Some variables have less than 60 observations due to missing data. Due to the small size of the dataset, missing observations are not omitted as it would further reduce the explanatory capacity of the model. The small dataset is a byproduct of the characteristics of this research topic. Macedonia has been an independent country for only 32 years, with data for the first years since the independence of the country sometimes not being available. Furthermore, the UN Comtrade database offers monthly bilateral trade observations for Greece and North Macedonia starting from 2013 onwards, hence the restriction to use only yearly observations. As exports are found to be highly correlated with the amount of the previous year (Harris & Mátyás, 1998), two specifications of the model are ran: one with no lagged explanatory variables, and one with one lag. Furthermore, adding lagged explanatory variables helps overcome the issue of endogeneity (Bellemare et al., 2017).

The study uses the following research design:

$$\text{Trade Volume}_{it} = \beta_0 + \beta_1 * \log\text{GDP}_{it} + \beta_2 * \text{Inflation}_{it} + \beta_3 * \text{Political Index}_{it} + \beta_4 * \text{Covid-19}_{it} + \beta_5 * \text{NameChange}_{it} + \beta_6 * \text{Time} + \alpha_i + \varepsilon_{it} \quad (3)$$

With the following two sub-specifications:

$$\log\text{Imports}_{it} = \beta_0 + \beta_1 * \log\text{GDP}_{it} + \beta_2 * \text{Inflation}_{it} + \beta_3 * \text{Political Index}_{it} + \beta_4 * \text{Covid-19}_{it} + \beta_5 * \text{NameChange}_{it} + \beta_6 * \text{Time} + \alpha_i + \varepsilon_{it} \quad (4)$$

$$\log\text{Exports}_{it} = \beta_0 + \beta_1 * \log\text{GDP}_{it} + \beta_2 * \text{Inflation}_{it} + \beta_3 * \text{Political Index}_{it} + \beta_4 * \text{Covid-19}_{it} + \beta_5 * \text{NameChange}_{it} + \beta_6 * \text{Time} + \alpha_i + \varepsilon_{it} \quad (5)$$

First, a Hausman test is ran to determine whether it is more appropriate to use the fixed effects or the random effects estimator. The result of the test concludes that for the Total Trade Value dependent variable, it is necessary to estimate the parameters with a fixed effects estimator, and a random effects estimator is needed for the imports and exports regressions. All results are with clustered standard errors to deal with the problem of heteroscedasticity.

Although North Macedonia and Greece have some similarities such as a shared main religion, a shared border and shared colonial past (both were under Ottoman rule for centuries), which are usually included in empirical research on international trade (Linders et al., 2005),

these variables are omitted from the analysis. Since all three are time invariant variables, for the purposes of this study it is not necessary to include them.

IV. Results

Table 5: Results of the first specification of the model, clustered standard errors

VARIABLES	(1) FE Log Total trade value	(2) RE Log Imports	(3) RE Log Exports
Log GDP	1.152*** (0.224)	-0.215*** (0.0356)	0.288*** (0.0546)
Inflation	-0.0175*** (0.00483)	-0.0117*** (0.00383)	-0.00615*** (0.00212)
Political Index	-0.00404 (0.00254)	-0.00880*** (0.00187)	-0.00291 (0.00288)
Covid-19	-0.0322 (0.650)	-0.186 (0.503)	0.157 (0.774)
Name Change	0.311 (0.587)	-0.745 (0.466)	-0.299 (0.717)
Year		0.104*** (0.00923)	0.0466*** (0.0138)
Constant	-7.867 (5.475)	-183.4*** (18.48)	-81.12*** (27.65)
Observations	57	57	58
R-squared	0.628		
Number of country	2	2	2

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The first specification of the model, which regresses the independent variables on the dependent variable logarithm of the total trade volume, finds that the size of the GDP increases trade volume, whilst an increase in inflation decreases the trade volume. A one percent increase in GDP increases the trade volume by 1.15 percent, whereas an increase in the rate of inflation causes a decrease in trade volume by 1.75 percent. All findings are significant at the 1% percent significance level, which makes them highly significant. It is important to note that interpreting these coefficients poses the challenge of reverse causality. Inflation can cause an increase in

GDP due to the rise of the price level, but an increased economic activity which would cause an increase in GDP can also be the cause for inflation. Inflation can also cause an overvaluation of the national currency (Gylfason, 1997), leading to difficulty interpreting whether the growth in GDP is due to increased exports in real quantities or because of the overvaluation of the currency. Imports are negatively impacted by the size of the GDP, the rise of the inflation rate, and the political index. The time trend is also significant. For each increase of one percent of the GDP, the imports decrease by 0.21 percent, and for an increase of one percent in the inflation rate, the imports decrease by 1.17 percent. The key finding is the impact of the political index on the imports. As the governmental ideology shifts to the left by one percent (in the range of values from -100 to 100, i.e., from fully right-wing to fully left-wing), the imports decrease by 0.88 percent *ceteris paribus*, which proves that a right-wing government creates a climate more favourable to trade. Similar to Pollins (1989) and Morrow et al.'s (1998) research, imports decrease when political relations are worsened. Furthermore, the significance of the political index is consistent with findings from previous studies such as Osgood (2022), but somewhat contradicts Dutt and Mitka (2005). The authors find that in labour-rich countries, left-wing parties adopt more pro-trade policies, and the opposite is true in capital-rich countries, left-wing parties are protectionist, adopting anti-trade policies. Macedonia is a labour-rich country yet trade decreases under a left-wing rule, whereas Greece as a capital-rich country should increase trade when under left-wing trade, but the inverse is proven in this study.

Exports increase by 0.29 percent when the GDP increases by one percent, all other things being equal, although the underlying question is whether the GDP increases because of exports or does the size of the GDP impact the exports. Furthermore, exports decrease by 0.62 percent when inflation increases by one percentage point. Exports are more strongly affected than imports by an increase in the inflation rate, in line with previous research done by Gylfason (1997), who has found that increased inflation is the cause of decreased exports and therefore slowed economic growth. The political climate does not have a significant impact on exports. The time trend is significant in both exports and imports, proving that business cycles also affect trade flows. An unexpected finding is that the Covid-19 pandemic did not have a significant impact on any trade dimension.

Table 6: Lagged results of first specification, clustered standard errors

VARIABLES	(4) FE Log Total trade value	(5) RE log Imports	(6) RE log Exports
First lag of log Total trade value	0.575*** (0.128)		
Log GDP	0.842 (0.680)	0.544 (0.724)	-0.200 (0.941)
First lag of log GDP	-0.416 (0.673)	1.030 (0.713)	0.509 (0.931)
Name Change	-0.135 (0.462)	0.563 (0.537)	0.118 (0.741)
Covid-19	0.349 (0.509)	-0.519 (0.594)	0.241 (0.818)
Political index	-0.000927 (0.00219)	-0.00651*** (0.00232)	-0.00614** (0.00289)
Inflation	-0.0462 (0.0311)	0.00280 (0.0154)	-0.0464*** (0.0170)
First lag of inflation	0.00533 (0.00492)	-0.00596 (0.00557)	0.0105** (0.00461)
Constant	-1.670 (4.549)	-19.14*** (5.010)	12.06*** (1.426)
Observations	55	57	58
R-squared	0.751	0.770	
Number of country	2	2	2

Standard errors in parentheses

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

When analysing the model with lagged explanatory variables, the conclusions change slightly: the political ideology of the government again has an impact on trade flows. Both imports and exports decrease by the same amount of 0.65 and 0.61 percent respectively, when the governmental orientations shift slightly to the left. Exports are negatively impacted by inflation, decreasing by 4.6 percent when faced with an inflation rate increase of one percent, whilst the first lag of inflation impacts positively on the export quantity, increasing the rate of exports by one percent with each percentage point that the inflation increases.

GDP loses its significance for total trade volume, imports, and exports. Furthermore, the political index becomes significant for exports as well as imports. The name change has no statistical significance in any of the specifications of the model, again confirming the rejection of the second hypothesis of this research. The impact of the pandemic on trade remains statistically insignificant.

Alternative specifications

Alternative regressions were used to compare the results between specifications. The total trade value is tested with a random effects estimator, where previously the fixed effects estimator was used. The imports and exports specifications are estimated with the fixed effects estimator, where previously random effects were used.

Table 7: Results of alternative specification, clustered standard errors

VARIABLES	(7) RE Log Total trade value	(8) FE Log Imports	(9) FE Log Exports
Log GDP	0.0588 (0.0378)	0.493** (0.245)	-0.233 (0.401)
Inflation	-0.0135*** (0.00407)	-0.0115*** (0.00357)	-0.00672*** (0.00215)
Political Index	-0.00462** (0.00199)	-0.00712*** (0.00184)	-0.00415 (0.00301)
Covid-19	0.183 (0.534)	-0.337 (0.471)	0.269 (0.773)
Name Change	-0.632 (0.495)	-0.355 (0.455)	-0.584 (0.744)
Year	0.0751*** (0.00981)	0.0751*** (0.0130)	0.0674*** (0.0209)
Constant	-131.9*** (19.64)	-143.5*** (22.00)	-110.0*** (35.18)
Observations	57	57	58
R-squared		0.852	0.527
Number of country	2	2	2

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

The findings are the following: an increase in the level of inflation leads to a decrease in the total trade volume, which is consistent with the original specification. On the other hand,

with this specification the political index becomes significant for the total trade volume, unlike the first specification where it was insignificant. Under random effects, a slight shift in the political index towards the left leads to a 0.46 percent decrease in total dyadic trade volume. This means that right-wing parties increase the total trade volume. The political index is significant at the 5% level, making it less significant than when estimated with the fixed effects estimator. All other variables retain the same significance as in the original specification, with year being the only statistically significant parameter. GDP now becomes positively tied to imports instead of negatively - an increase in GDP leads to an increase in imports. Inflation, political index, and year remain significant with the same sign. GDP loses its significance for exports, whereas inflation and year keep theirs.

Table 8: Lagged results, alternative specification

VARIABLES	(10) RE log_TotalTradeValue	(11) FE Log Imports	(12) FE Log Exports
Lagged log Total trade value	0.488*** (0.137)		
Log GDP	0.524 (0.654)	0.402 (0.568)	-0.0428 (0.892)
Lagged log GDP	-0.487 (0.650)	0.0918 (0.584)	-0.171 (0.909)
Inflation	-0.0235 (0.0304)	0.00898 (0.0121)	-0.0366** (0.0161)
Lagged inflation	0.00355 (0.00488)	-0.00756* (0.00438)	0.00812* (0.00435)
Political Index	-0.00203 (0.00207)	-0.00683*** (0.00182)	-0.00448 (0.00297)
Covid-19	0.362 (0.494)	-0.360 (0.466)	0.285 (0.762)
Name Change	-0.448 (0.458)	-0.317 (0.450)	-0.573 (0.734)
Year	0.0336** (0.0144)	0.0749*** (0.0134)	0.0622*** (0.0220)
Constant	-57.84** (27.17)	-143.0*** (22.57)	-100.1*** (36.88)
Observations	55	57	58
R-squared		0.862	0.559
Number of country	2	2	2

Standard errors in parentheses

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

In the lagged specification of the alternate regressions, GDP remains unexpectedly insignificant in all three trade flows, but the first lag of the total trade value does have an impact

on the current trade value. An increase in the inflation rate negatively impacts only exports. The first lag of inflation negatively impacts imports, which wasn't the case with the random effects estimator, whereas it positively impacts exports, reversing the sign of the original specification. Once again referring to Gylfason's (1997) study, this finding is to be expected, as inflation impacts more exports than imports. The political index remains significant only for imports; exports are no longer impacted by political orientation when adding lagged variables in the regression. The direction of the significance is the same – shifting the ideology index by one percentage point to the left decreases trade by 0.6 percent. In no specification of the model, alternative or otherwise, is the Covid-19 pandemic a significant disruption to trade.

The political index therefore affects imports in all four regressions: when using random effects with no time lags and with one time lag, and when using fixed effects with no time lags and with one time lag. Exports are only impacted when estimating the coefficient with a random effects estimator and including one lag in the dependent variables. The results prove that right-wing parties have increased trade. The name change remains statistically insignificant throughout all 12 regressions.

Placebo test

In order to further test the findings, a placebo test is conducted between Bulgaria and Greece. The choice was made because of the following reasons: both countries share a common border, but they have no political conflicts. Much like Greece and North Macedonia, they also share a common main religion (Orthodox Christianity), and they have a shared colonial past, both having been under Ottoman rule for approximately five centuries. Nowadays, they enjoy “excellent” bilateral relations (Christidis et al., 2017). This dyad lends itself perfectly as a control group to the Greek-Macedonian counterpart.

The methodology is much the same as the specification for the North Macedonia – Greece analysis. The political index is constructed from data obtained from the CDPS, with again the values -100 denoting a fully right-wing government, and 100 a fully left-wing government. Inflation and GDP are used as control variables, with Covid-19 as a dummy variable capturing the effects of the pandemic, and year as the time trend. The placebo test does not include a name change dummy variable since that effect is only limited to the Greek-Macedonian relations and is not applicable in this case. A Hausman test is conducted in order

to determine whether a fixed effects or a random effects specification is preferred, and the results for all three specifications of the model determine that random effects are preferred.

Table 9: Results of placebo test

VARIABLES	(1) Log Total trade volume	(2) Log Imports	(3) Log Exports
Inflation	-0.000238 (0.000683)	-0.000226 (0.000806)	-0.000229 (0.000642)
Political Index	-0.00129 (0.00177)	-0.00258 (0.00208)	-0.000890 (0.00166)
Log GDP	-0.786*** (0.0965)	-1.129*** (0.114)	-0.627*** (0.0908)
Covid-19	-0.924** (0.443)	-1.476*** (0.523)	-0.713* (0.417)
Year	0.147*** (0.0132)	0.178*** (0.0156)	0.134*** (0.0124)
Constant	-255.1*** (25.49)	-309.1*** (30.08)	-233.1*** (23.98)
Observations	58	58	58
Number of country	2	2	2

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

As hypothesized, the political index in Bulgaria and Greece has no impact on either the total trade volume, the imports, or the exports. A completely insignificant relationship in this case further confirms the results of the initial finding, that the political ideology of the ruling government in North Macedonia and Greece impacts their trade relations with each other. A notable difference in the findings between the placebo test and the main research model is that in the placebo test, the Covid-19 pandemic is statistically significant, impacting imports the most. GDP retains its significance for all three dependent variables, albeit with a negative sign.

V. Discussion

These findings are in line with what is found in the literature – political factors influence the trade relations of two countries (Baltagi et al., 2003), impacting mostly imports. As seen in Osgood (2022), the rule of a left-wing government decreases in trade. In order to keep the peace between the two countries, and to prevent further conflict, it is of great importance that both countries keep an open and sizeable trade relationship (Polachek, 1980).

The findings have proven that the political leanings of the ruling parties impact trade. In all specifications of the model, political index always impacts imports, and in a random effects specification with one lag, also exports. Pollins (1989) states that increased imports, rather than exports, are a result of improved political relations, so the finding that imports are more susceptible to political fluctuations is to be expected. But it has disproven the hypothesis that left-wing governments create an environment more favourable to trade. In fact, the rule of right-wing governments creates an environment more conducive to trade, rather than the opposite, which is in line with what the theory suggests. Although the Prespa agreement was signed during a concurring rule of two left-wing governments, disruptive events also happened during a left-wing government rule such as the Greek embargo. The research design attempts to capture all these fluctuations in the spectrum of openly hostile to collaborating governments. The result is clear – trade increases the more a government leans towards a right-wing ideology.

Interestingly, the change of the name of North Macedonia did not have a significant impact on the trade relations in any specifications of the model. One potential explanation is that the name change was the culmination of already warming bilateral relations, that have been consistently improving throughout the years. A tipping point that continued a trend of improved trade and diplomatic relations, as the population and therefore firms, expected a resolution to the dispute.

North Macedonia has a similar history with another sizeable trading partner: Bulgaria. This disagreement remains unresolved. A potential area of future research would be to conduct this study on their dyadic trade flows and see whether the conclusions are the same. If it is found that political factors play a role in the trade volume, then an important policy implication would be for the countries to try to reach an agreement similar to the one of Prespa as soon as possible, to keep the trade relationship open and not to impact economic growth.

When comparing the findings with results for Greece and Bulgaria's trading patterns, it can be concluded that countries in good diplomatic standing with each other have a favourable trading climate, with no impediments, as found often in the literature (Morrow et al., 1998; Pollins, 1989; Dajud, 2013). Therefore, it is crucial that bilateral political relations are maintained to ensure a smooth trading relationship. In any case, everyone benefits from an open and mutually beneficial trade relationship. Increased exports lead to a higher GDP, which stimulates economic growth through job creation, investment in public goods and services, and increased private investment. So, it is in North Macedonia and Greece's best interest to continue to cultivate peaceful relations and to keep trade constant and barrier-free.

A potential area of further research is the trade elasticity of different goods, and how different goods react to political fluctuations. This study only looks at the trade volume as a whole, but it would be interesting to observe the variations in the most traded goods. Additionally, a firm-level approach to this analysis might be another potential topic of research. As firm-level data was not available for this study, a more specialized researcher might find it an appropriate topic. Looking into the proximity of the firm to the border and whether firms closer to the border are more likely to decrease exports in times of tense political relations, and whether firms located more centrally within the country's borders are more impervious to ideological changes, accounting for firm size.

Limitations

The main limitation of this study is the size of the dataset. The characteristics of the researched topic make it that the dataset has only two countries and 60 observations. This limits the explanatory power of the model. Furthermore, there are potential omitted variables in this study. According to Harris & Mátyás (1998), the exchange rate in a dyadic gravity trade model is insignificant and would lead to biased coefficients for the other variables, which is why this study omits it. Greece is a member of the eurozone, and has a shared currency with several other countries, each with their own fiscal policies. The estimation would potentially be biased as it is difficult to detangle the shocks in the eurozone as a whole and Greece specifically.

Under the specification of the model, there is no possibility to add an interaction term between the political indices, which might add a bigger explanatory power to the model. To find out if the effect on trade is stronger if for instance, Greece is ruled by a left-wing party and

North Macedonia by a right-wing one, and vice versa. Finally, the subjectivity of the classification of the parties by their ideology also represents a limitation of the study. The authors of the CPDS classify the Greek parties according to their own methodology. The Macedonian parties are manually classified by the author, leading to potential discrepancies in the methods of classification between the dataset and this study.

Conclusion

Using a panel data model with observations starting from the independence of Macedonia from Yugoslavia in 1991, and concluding with 2022, this study attempted to answer the question whether the positioning on the political spectrum of the ruling parties in both Macedonia and Greece played a part in explaining the trade fluctuations between the countries. Research has been done into what causes trade to decrease (Linders et al, 2005; Mátyás et al., 2005; Mojsoska-Blazevski & Petreski, 2010; Tevdovski & Tosevska-Trpcevska, 2014), but there is little focus on studying political factors that impede trade.

The research design consists of one regression using the total trade volume as a dependent variable, and two regressions using separately the imports and exports as dependent variables. The main explanatory variable is a political index constructed partly with data from the Comparative Political Dataset (CPDS), and partly by the author, using the methodology provided by the CPDS. The study found that political ideology impacts trade, in that a shift to the right-wing increases imports in all specifications of the model. The name change as part of the Prespa agreement had no impact on trade in any specification. Testing the trade relations between Greece and Bulgaria as a placebo test found no statistically significant impact of political factors on trade, further confirming the results of this study.

The conclusion of this study is in line with existing research that states improved political relations cause an increase in trade (Pollins, 1989; Morrow et al., 1998), whilst opposing political relations cause trade flows to decrease (Dajud, 2013).

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Appendix: classification of parties

Classification of parties in Greece, according to the CDPS methodology

Left-wing

- Pan-Hellenic Social Movement (Panellinio Sosialistiko Kinima, PASOK)
- Communist Party (Kommunistiko Komma Elladas, KKE)
- Democratic Left (Dimokratiki Aristera, DIMAR)
- Coalition of the Radical Left (SYRIZA; former Coalition of Left and Progress)

Right-wing

- New Democracy (Nea Dhimokratia, ND)
- Political Spring (POLAN)
- National Radical Union (ERE)
- Progressives (KP)
- Centre Union, Union of the Democratic Centre (EDIK)
- Independent Hellenes (ANEL)

Classification of parties in North Macedonia, own methodology

Left-wing

- Social Democratic Union of Macedonia (SDSM)
- The Left
- Democratic Renewal of Macedonia (DOM)
- Democratic Union
- Socialist Party of Macedonia (SPM)
- New Social Democratic Party (NSDP)
- Party of Yugoslavs in Macedonia

Center

- Alliance for Albanians; (AA)
- Alternativa
- Democratic Union for Integration (DUI) (2006: Democratic Union for Integration-Party for Democratic Prosperity, DUI-PDP)
- Party for Democratic Prosperity (PDP)
- Democratic Party of Turks
- Democratic Party of Serbs in Macedonia
- New Alternative
- Democratic Party of Albanians (DPA)
- Party for the Movement of the Turks in Macedonia
- Democratic League of Bosniaks

- United Party of Roma in Macedonia
- Citizens' Option for Macedonia (GROM)
- Party for a European Future
- Democratic Alternative

Right-wing

- Internal Macedonian Revolutionary Organisation-Democratic Party for Macedonian National Unity (VMRO-DPMNE)
- Movement Besa (BESA)
- National Democratic Revival (NDP)
- Internal Macedonian Revolutionary Organisation-People's Party (VMRO-NP)
- Liberal Party
- Liberal-Democratic Party (LDP)
- VMRO Democratic Party
- Macedonian Renewal Reform Option