



SCHOOL OF
ECONOMICS AND
MANAGEMENT

Flames of Controversy

Investigating the Impact of Quran Burnings on Swedish
Exports to Muslim Countries

Authors: Teo Risberg & Victor Rudolfsson

Supervisor: Maria Persson

Department of Economics

2024-05-30

Abstract

This thesis investigates whether the Quran burnings led to diminishing Swedish export flows to Muslim countries. By implementing a synthetic control method, the findings indicate no significant effect on Swedish exports. However, the alternative method, synthetic difference-in-differences, demonstrates a statistically significant decrease of 0,212% in Swedish exports, although negligible in terms of overall export volumes. Swedish export composition, including high dependency on non-consumer export, could have mitigated the impact. These findings imply that although there is some evidence of decreased exports to Muslim countries, further research is needed to conclusively assess the extent of these effects, if any, on Swedish exports.

Keywords – Sweden, Synthetic control, Quran burnings, trade

Acknowledgements

We wish to express appreciation for our supervisor Maria Persson's support and guidance during the process of writing this thesis.

Table of contents

Abstract	2
Acknowledgements	3
1. Introduction	5
2. Changing the international image of Sweden.....	6
2.1 The LVU disinformation campaign	6
2.2 The Quran burnings.....	7
2.3 Has the image of Sweden really changed lately?	8
3. Previous research.....	9
4. Theoretical consideration	11
4.1 How does a country's reputation affect its trade relations	11
5. Empirical strategy	12
5.1. The Synthetic Control Method	13
5.2. Applying the SCM to the case of a deteriorated image of Sweden.....	16
5.3 Synthetic difference-in-difference.....	18
5.4 Data	19
6. Results	20
6.1 Main results	20
6.2. Country specific synthetic control method.....	23
6.3. Are the main results robust?	25
6.3.1 In-time placebo tests.....	25
6.3.2 In-space placebo tests.....	26
6.3.3 Lag structure.....	27
6.3.4. Donor pool.....	28
6.4 Synthetic difference-in-difference.....	28
7. Summary and conclusion	30
8. Reference.....	31
9. Appendix	35

1. Introduction

In recent years, Sweden has been facing domestic and international outrage over several acts of Quran burnings. In March 2024, the Swedish newspaper SvD noted that exports to the Middle East had been doing very well despite the reputational crisis caused by the Quran burnings (Fogde/TT, 2024). However, this might be a faulty conclusion. To truly answer this question, one must consider a what-if scenario without Quran burnings taking place. Thus, this thesis will use a synthetic control method to investigate how these Quran burnings affected Swedish exports to Muslim countries.

The Quran crisis reached its peak after a Quran burning outside the Turkish embassy in late January 2023 when Svenska Institutet (SI), (2024) noted 700,000 articles and posts in media and social media painting Sweden as an Islamophobic and racist country. This event coincided with Sweden's ongoing accession to NATO, with Turkey as one of the countries stalling the process since it was hesitant to accept Sweden as a member. The event may have affected Swedish security by stalling the NATO accession and further deepening divisions between groups in Swedish society. The division and distrust between Muslims and the Swedish state had already been growing due to an extensive disinformation campaign claiming that the Swedish social services were targeting and kidnapping Muslim children from their parents.

The Quran burnings managed to capture a lot of this already negative sentiment, which led to Swedish reputation deteriorating in the Muslim world. The negative sentiment culminated, and in 2023, Sweden had been an appointed target for terror attacks by Islamist terror groups. Safety concerns have raised the terror level from 3 to 4 on a scale of 5. Tragically, on the 16th of October in 2023, before a football game, there was a terror attack in Belgium against Swedish citizens. Swedish supporters were targeted as the terrorist sought out individuals wearing the Swedish football jerseys. Two Swedes were killed, and three more were injured (NCT, 2024).

Quran burnings have been presumed to negatively affect Swedish security and harm Sweden's national reputation from a Muslim viewpoint. Sweden both dropped in the overall

ranking and fell drastically in rankings amongst Saudi respondents in the Nation Brand Index (NBI) survey. NBI measures a country's national reputation by gathering other countries' opinions on countries and its people.

This thesis aims to investigate if the reputational crisis caused by the Quran burnings and LVU disinformation campaign affected Swedish exports to Muslim countries. Understanding this is important as guidance for Swedish policymakers. It will help policymakers assess the damage resulting from events such as the Quran burnings and the proper level of damage control and preventive actions. I.e. what is the cost in terms of lost trade from allowing political activists such as Rasmus Paludan to exploit Sweden's extensive free speech legislation to burn the Quran? The main results of this thesis are not significant enough to draw any more comprehensive conclusions on this, but our alternative methods seem to hint that there was a slight decrease in Swedish Exports to Muslim countries.

2. Changing the international image of Sweden

Sweden has consistently ranked high in Nation Brand Image, which is a way of measuring the perceived view of Sweden in foreign eyes. However, recent events may have shifted people's beliefs about Sweden and its people, especially in the Middle East, as the Quran burnings and LVU campaign have fueled hatred in that region (SI, 2023a). But has the view of Sweden changed?

2.1 The LVU disinformation campaign

Precluding the major Quran burnings, a severe disinformation campaign regarding the Swedish social services with the use of the law of care for youths LVU intentionally separating Muslim or ethnically foreign children from their parents hit Sweden internationally. An extensive report by Ahlerup and Ranstorp (2023), requested by the Swedish Psychological Defence Agency, describes the campaign and how it can be linked together with the Quran burnings.

The report describes how Swedish Psychological Defence Agency representatives called this the most extensive disinformation campaign Sweden had ever faced. The campaign preyed

upon existing mistrust against Swedish institutions, especially from socio-economically worse areas. The result was a deepened mistrust that was exploited by national and international extremist Islamist organizations who contributed to spreading the campaign globally.

According to Ahlerup and Ranstorp (2023), some of the actors behind the spread of the LVU campaign can also be linked to spreading negative sentiment and painting Sweden as a racist and Islamophobic country regarding the Quran burnings as well. It is, therefore, a crucial part of the buildup to the Quran burnings; most likely, the impact of the burnings would not have been as severe without the LVU campaign acting as a catalyst.

2.2 The Quran burnings

The first publicly noticed Quran burning appeared in Sweden in August of 2020, resulting in protests in Rosengård, Sweden (SVT, 2020). This event became the starting point for multiple recurring Quran burnings in the following years of 2021 and 2022, where Rasmus Paludan gathered much attention for his Quran burnings. Paludan is a Danish-Swedish lawyer, politician, and party leader of the right-extremist party Kurs Stram. During 2022, Paludan arranged for multiple Quran burnings around Sweden, which ended up leading to the easter riots of 2022 in Sweden. In connection with the Quran burnings, the easter riots then got heavily criticized and raised a debate surrounding value differences linked to freedom of speech and freedom of religion, but also openness and tolerance (SI, 2023a). Paludan, then made in January of 2023, his most controversial Quran burning yet, gathering much international attention amongst Middle Eastern countries. According to SI (2024), this event became the focal point of discussion about Sweden on foreign news outlets, blogs and social media. Around 700,000 publications were posted regarding this particular burning of the Quran outside the Turkish embassy in Stockholm. Around 40% of the publications about Sweden occurred in Turkey and Saudi Arabia and were about the Quran burnings. News about the events spread further and reached primarily in Turkey, the Middle East, and Northern Africa.

Furthermore, 2023 saw multiple Quran burnings, one of which in June, a Quran burning outside the Stockholm Mosque caused widespread hatred in Bagdad. Where protests erupted outside the Swedish embassy, and some protestors breached the embassy. Later in July, these actions were condemned by the pope, Pakistan's prime minister and Saudi Arabia's department of foreign affairs. There was an overall increase in publications regarding the

Quran burnings in Sweden in 2023 compared to 2022, and the main narrative told of an Islamophobic Sweden.

2.3 Has the image of Sweden really changed lately?

The organization SI provides an annual report on Sweden's international image. According to their findings, perceptions of Sweden have seen both positive and negative trends internationally. Generally, most countries hold a positive image of Sweden, especially in the Western world, where Sweden's opinion has improved in 2023 (SI, 2024). However, in certain regions, such as Muslim countries like Saudi Arabia, Iran and Turkey, the perception of Sweden has deteriorated and appears to be on a negative trend. The report attributes the declining trend to the Quran burnings, the LVU disinformation campaign, and the general attitude towards Western secular values. Further development of this narrative about Sweden could lead to the image of an Islamophobic Sweden (SI, 2024).

SI concludes that Sweden's Nation Brand image is decreasing in the Middle East, northern Africa, and Turkey. From the habitual overall ranking of 9th place in the Nation Brand Image, it fell by one spot in 2023. Scores from Saudi Arabian respondents fell by a notable 28 places, making it the second most significant drop after the record of 36 places from Egyptian respondents ranking of Denmark in 2006 (SI, 2023b). This record drop was due to the publication in Jyllands-Posten about the depictions of Muhammad that were highly offensive to Muslims and caused much controversy in Middle Eastern countries (HRW, 2006).

Similar to the boycott of the Danish Muhammad cartoons controversy, the reputational damage extended beyond Sweden, affecting perceptions of other Nordic countries and nations with similar names and what are perhaps presumed to be shared values. Saudi Arabia's perception of Switzerland plummeted by fifteen places, a significant drop by NBI standards. Furthermore, Finland decreased by eight places, Canada and the Netherlands fell by seven, and Norway and Austria fell by six. However, Saudi respondents placed Australia, France and Scotland 7, 9 and 10 places higher, respectively. Sweden experienced the furthest drop in ranking, and the increase of Australia, Scotland, and France indicates that it is not a widespread increase in anti-western sentiment but rather a specific reaction to an event (SI, 2023b).

3. Previous research

This paper intends to investigate the effect of a boycott on Swedish exports due to the Quran burnings. The most relevant previous study for this thesis is by Heilmann (2016), who studied different kinds of boycotts. One of the boycotts studied in that paper is the 2006 Muhammad cartoon crisis, which started after the Danish newspaper Jyllands-Posten published cartoons depicting the Prophet Mohamed. The cartoons did not favourably paint Mohamed; for example, Heilmann describes one depiction of the Prophet with a bomb in his turban. As a result, this caused an outrage in the Muslim world, and Muslim religious leaders called for a boycott of Danish goods. Heilmann finds that by using a difference-in-differences approach, Denmark's exports decreased to some Muslim countries by 18,8% in the first year because of this religious boycott.

Additionally, Heilmann used a synthetic control group to exclude any possible spillover effects that may have occurred. Counterfactuals consist of countries that either exceed 75% or fall below 10% of the Muslim population share. Heilmann concludes that consumer products were more affected than capital products and that a 10% higher percentage of Muslims will lead to a 6,5% drop in imports from Denmark. Chen (2023) conducted a similar study where he examined the impact of the boycott of Denmark on export flows to Muslim countries. Chen's research was based on a diff-in-diff with Scandinavia as a control group. The findings show that the effect on export flows to these countries decreased by 31% and did not rebound for 20 months. Moreover, the results show both a more extensive response and rebound for countries with a higher population of Muslims. Both studies indicate that the religious boycott of Denmark has, to some extent, affected their export to Muslim countries.

Moreover, evidence of decreased trade in the presence of boycotts can be derived from the Michels and Zhi (2010) paper about the US and France boycott. The boycott was a result of France opposing the US in the United Nations (UN) Security Council when the US tried to gain a UN mandate for the use of military force against Iraq. Worsening attitudes between the countries in 2002-2003 led to a 9% bilateral trade decrease in 4-digit commodity groups. Results further show an 8 percent trade decrease in commodities used for firm inputs. Business transactions such as business travel, trade in services and income payments decreased in both directions. These observations indicate a relationship between a country's image and bilateral trade. This preference bias is identified by Chang et al. (2022) via

collecting BBC World Service poll surveys to examine bilateral trade flows. The authors conclude that consumer preference is affected by country image perceptions and the general equilibrium effects on bilateral exports. Results show that consumer preference bias can change due to political, economic or social events. They find that Canada's improved country image from 2010 through 2017 led to more than 8% of its total welfare gains from trade.

Furthermore, they note that the deteriorating image of the US due to Donald Trump's presidential election may have cost the US up to 4%- 5% of its total exports and welfare gains from trade. A country's reputation can be crucial, as Dimitrova et al. (2017) support with their findings. Results show that improvement in world ranking reputation for products in a targeted country can lead up to a 2 percent increase in exports to that particular country.

Political conflicts can be used as a trade instrument, as Fuchs and Klann (2013) investigated in their report about countries' trade when China officially acknowledged the Dalai Lama. They found a significant negative short-term effect on trade up to one year before it rebounded. The authors point out that trade can be used as an instrument to enforce political views.

Another notable example of a conflict affecting trade in the literature is a study on the 2014 Ukrainian–Russian conflict by Korovkin and Makarin(2023). They study how an armed conflict erodes intergroup trust and relations in trade between Russians and Ukrainians in non-combat areas not directly affected by the war. Their study is an interesting natural experiment since, during the conflict, Ukraine and Russia still had a free trade agreement, with Russia also remaining Ukraine's largest trade partner. It is also similar to the case researched in our thesis, where intergroup relations drastically deteriorate in a short amount of time with consumer boycotts and firms facing reputational pressures as a result. The main difference is that the groups involved in the Korovkin and Makarin study differ ethnically, while the boycotting group, in our case, do it on religious and value-based grounds. The consumer boycotts described also seem more sophisticated in the Korovkin and Makarin study; for example, a phone application was created to trace if products were of Russian origin by scanning a barcode. The consumer boycotts also put pressure on Ukrainian firms dealing with Russian goods, resulting in even intermediate goods being affected by the boycott. Their results show that trade and trust decreased when a switch in contracts was

observed at the firm-level trade data. After the conflict, open accounts contracts decreased while cash-in advance contracts increased, indicating a decrease in trust and higher barriers to trade.

Another notable contribution to the literature on consumer boycotts resulting from a reputational shock is the Koenig and Poncet (2022) study on the effects of the Rana Plaza collapse on imports from Bangladesh at the firm level. They describe how Rana Plaza was not originally meant to host garment factories; because of this, along with a general lack of safety activities, the building disastrously collapsed, with garment workers inside the building being ordered back in contradiction to the government evacuation order. The collapse of the Rana Plaza represented one of the worst textile manufacturing disasters in history, with 1314 killed and 2500 injured. The response from NGOs and trade unions was harsh; they viewed brands and retailers who were sourcing their goods from Rana as being responsible for the disaster. This sentiment was also captured by the media, highlighting these brands' involvement in the disaster. Koenig and Poncet studied how the event affected French imports of garment consumer goods from Bangladesh if firms connected to the Rana Plaza were exposed to a consumer boycott and if firms connected to the Rana Plaza decreased their imports from Bangladesh. Their results imply it was not caused by a boycott, instead, it seems that the companies named responsible for the disaster actively limited their imports from Bangladesh and substituted them for imports to four countries closer to the Western market and less associated with the harms of globalization.

4. Theoretical consideration

In this chapter, we will present our theory of use, the National Brand Index, which is a way of measuring a country's perceived image globally.

4.1 How does a country's reputation affect its trade relations

Simon Anholt (2007) created a way of ranking and determining a country's reputation worldwide. It is necessary for countries to understand their national brand and how other countries perceive their assets and people. Globalization has resulted in worldwide competition among countries, and to gain a competitive advantage in attracting investment, consumers, tourists, and immigrants is done by having a good reputation as a country. Simon Anholt provides an extensive framework of Nation branding, as well as two models that

describe the components of a national brand and strategies for maintaining a competitive national identity. Anholt's nation brand hexagon model outlines six key components: export, governance, tourism, people, investment/immigrants, and culture/heritage. These six components are then representative of the countries' national brand value. The method consists of collecting and measuring global opinions of a nation's brand value. The collective opinions then serve as an assessment of a country and its people across the six national assets. This assessment then serves as the country's national brand index. Anholts (2007) provides a thoughtful example of how a countries reputation might affect its exports:

- the country's reputation powerfully affects the way people inside and outside the place think about it, the way they behave towards it, and the way they respond to everything that is made or done there
 - if you had a choice between two DVD players from unknown makers with identical features, would you expect to pay more for the Japanese brand or the Chinese brand?
- (Anholt, 2007)

We apply the same theoretical consideration to the consumer boycott that this thesis investigates. Using Anholt's logic, a Muslim consumer having a choice between a Swedish product and an identical product from a country not having a reputation for Quran burnings will most likely choose the product from the other country. Therefore, when a country is facing a severe reputation shock in a group of countries, it is not unlikely that consumers will start to boycott its goods.

5. Empirical strategy

The empirical strategy will consist of using a Synthetic Control Method (SCM) to investigate if the tarnished Swedish reputation in Muslim countries affects Swedish exports to these countries. Like Heilmann, we will use the SCM to investigate the causality of the Quran burnings and the subsequent boycott of Swedish goods impact on Swedish bilateral export flows to Muslim countries. As well as, implementing country specific synthetic control methods. The SCM allows for us to construct a synthetic counterfactual to investigate if the Quran burnings had an effect on Swedish exports to Muslim countries. To ensure robustness of the results from the SCM, an alternative strategy using a Synthetic Differences-in-

Differences method will also be utilized. Another motivation for using the synthetic control method is that a good control group might not exist naturally. Previous research of similar cases such as Chen (2023) uses a very rudimentary control group consisting of the other Scandinavian countries and their export flows. There is a risk of spillover effects from the boycott on a control group such as this, thus leading to biased results. Additionally, the control group we use does not provide a valid parallel trend, thus, this report will exclude the usage of an ordinary difference-in-difference. The following section will introduce the Synthetic control method in further detail, how we apply it to the case of Sweden's deteriorated image due to Quran burnings, further information on alternative methods used for robustness and finally details on the data used.

5.1. The Synthetic Control Method

The Synthetic Control Method (SCM) was originally developed by Abadie and Gardeazabal (2003) to study the economic effects of the Basque terrorist conflict. The method is primarily used in quantitative comparative case studies in the absence of a control group to act as a naturally occurring counterfactual. If there is a lack of a counterfactual group, the results tend to become speculative as there is no good comparison for the treatment group. Hence, to obtain satisfactory results, one may implement a synthetic control group by optimally choosing weights for a group of corresponding units, in our case, export destination countries. The nature of these related countries is in some way similar to that of the treated countries. By asserting weights to the countries in the donor pool depending on their predicative power, higher weights are asserted to countries that are more able to replicate the treatment group; we can generate a new synthetic group that is meant to reflect the behaviour of the examined country but in the absence of treatment. (Scott Cunningham, 2021). The SCM will, therefore, allow us to check for a causal effect of a specific event such as a boycott. Diamond and Hainmuller (2010) provide further insights into how the synthetic control method can be implemented. Their implementation will lie as the foundation for how we construct our Synthetic control model, much like Heilmann (2016)

Using the same methodology as Heilmann (2016) provides for implementing the SCM for a boycott. We assume that we have $J + 1$ units, in our case country pairs, in a balanced dataset and T observations. Thus, we have a dataset with one treatment unit and J units to be used as

potential controls in the donor pool. The pretreatment time periods are denoted T_0 with treatment occurring at $T_0 + 1$. The first unit is defined as the treatment unit and with 2, 3, 4, ... , $J + 1$ serving as control units. Since we will have multiple treatment units the procedure will be repeated for each individual treatment unit. Note, it is important that the other treatment units are dropped for each iteration of such a process so that the donor pool is not influenced.

The following factor model can be used for further understanding:

$$Y_{j,t} = \delta_t + \theta_t X_j + \lambda_t \mu_j + \beta_t \text{Boycott}_{j,t} + \epsilon_{j,t} \quad (1)$$

where $Y_{j,t}$ represents the export flows from a boycotted country to its trading partners j . δ_t is an unknown common factor across all units over time, θ_t and λ_t represent vectors of common factors that are $(1 \times r)$ and $(r \times 1)$, X_j and μ_j represent vectors of factor loadings that are $(r \times 1)$ and $(F \times 1)$, the error term $\epsilon_{j,t}$ is iid with a mean of zero also capturing idiosyncratic shocks. The $\{\beta_t\}_{t=T_1}^T$ coefficient, measuring the effect of the $\text{Boycott}_{j,t}$ dummy variable, is the parameter of interest. X_j and μ_j differ in the way that the former is known trade determinants i.e. typical gravity data such as bilateral distance and GDP while μ_j represents unknown or unobserved variables such as consumer preferences and industry composition.

In an ideal world the optimal experiment on boycotts would be to compare the outcome of the boycotting country and compare it to a non-boycotting country with identical factor loadings X_j and μ_j . Unfortunately, this is not a possible scenario since there are no export destinations that are identical. Furthermore, since μ_j is unobserved it would still not be possible even if another unit with identical factors existed. This can be solved by implementing the SCM to create a synthetic counterfactual as weighted average of the control units available.

For the synthetic counterfactual $Y_{j,t}^T$ is the value of the exports if a boycott never happened. Assume that for all countries in the control group $Y_{j,t}^I = Y_{j,t}$ for $j = 2, 3, \dots, J + 1$ and all periods $t = 1, 2, 3, \dots, T$. We want to estimate $\hat{\beta} = Y_{1,t} - Y_{1,t}^I$ for the treatment effect at time t by creating our counterfactual export levels for the boycotting country.

The synthetic control group can be defined as a set of J weights for w_j for $j = 2, 3, \dots, J$ determining a weighted average of the units in our control group. An ideal synthetic control group would have factors X and μ that are identical to the treated unit, though due to μ being unobservable this is impossible. However, under mild regularity conditions the synthetic control group can match μ if it also matches a long period of pretreatment outcome variable $Y_{j,t}$ as shown by Abadie et al. (2010). Thus, the optimal weights that minimize deviation in both X and $Y_{j,t}$ should be chosen.

Assume that we have weights w_j^* where $\sum_{j=2}^{J+1} w_j^* X_j = 1$ and $0 < w_j^* < 1 \forall j = 2, 3, \dots, J + 1$ s.t.

$$\sum_{j=2}^{J+1} w_j^* X_j = X_1 \quad (2)$$

$$\sum_{j=2}^{J+1} w_j^* Y_{j,t} = Y_{1,t} \forall t = 1, 2, \dots, T_0 \quad (3)$$

Thus, when this holds, both pre-treatment outcomes as well as the known explanatory variables from the synthetic control group will have a perfect fit to the ones from the treated unit.

If we then apply the synthetic control group for the model in (1) we get:

$$\sum_{j=2}^{J+1} w_j^* Y_{j,t} = \delta_t + \theta_t \sum_{j=2}^{J+1} w_j^* X_j + \lambda_t \sum_{j=2}^{J+1} w_j^* \mu_j + \sum_{j=2}^{J+1} w_j^* \epsilon_{j,t}$$

The difference between the treated unit and the synthetic control group in the pretreatment period leading up to T_0 will then be

$$\underbrace{Y_{1,t} - \sum_{j=2}^{J+1} w_j^* Y_{j,t}}_{=0} = \underbrace{\theta_t (X_1 - \sum_{j=2}^{J+1} w_j^* X_j)}_{=0} + \lambda_t \left(\mu_1 - \sum_{j=2}^{J+1} w_j^* \mu_j \right) + \sum_{j=2}^{J+1} w_j^* (\epsilon_{1,t} - \epsilon_{j,t})$$

By rearranging and dividing by T_0 we then get

$$\left(\mu_1 - \sum_{j=2}^{J+1} w_j^* \mu_j \right) \frac{1}{T_0} \sum_{t=1}^{T_0} \lambda_t = - \sum_{j=2}^{J+1} w_j^* \frac{1}{T_0} \sum_{t=1}^{T_0} (\epsilon_{1,t} - \epsilon_{j,t})$$

When the number for pretreatment periods T_0 becomes large, the right side of the equation will go to zero. If the average effect of unobserved factors is not zero over time

$\frac{1}{T_0} \sum_{t=1}^{T_0} \lambda_t \neq 0$, then the unobserved characteristics difference will also go to zero.

From this it is quite intuitive that we can use $\sum_{j=2}^{J+1} w_j^* Y_{j,t}$ as our counterfactual and thus calculate treatment effect as:

$$\hat{\beta} = Y_{1,t} - \sum_{j=2}^{J+1} w_j^* Y_{j,t} \quad \forall t > T_0$$

However, when applied in practice it may be difficult to find perfect weights so that both equation (2) and (3) holds precisely. This may be the case if the treated countries have some characteristics that may be difficult to replicate from the control countries while still ensuring that the w_j restrictions hold. When this is the case, weights have to be assigned to allow the equations to hold approximately. To do this we can define a column vector stacking all the export values and the known characteristics for country j in the pretreatment period $1, 2, \dots, T_0$ as $Z_j = (Y_{j,1}, Y_{j,2}, \dots, Y_{j,T_0}, X_j')'$. Using these vectors for all potential control group countries we can form a matrix $Z_C = [Z_2, Z_3, \dots, Z_J]$. We can then get the $(J \times 1)$ vector W^* by solving the minimization problem

$$W^* = \arg \min_W \|Z_1 - Z_C W\| = \arg \min_W \sqrt{(Z_1 - Z_C W)' V (Z_1 - Z_C W)} \quad (4)$$

for a given weighting matrix V . The weighting matrix V is used to assign different importance to our control variables and specific pretreatment outcomes (lags). To optimize for the lowest deviation between treatment and the synthetic control group, the factors that are best at predicting the treatments pre-treatment outcomes should be assigned the highest weights.

5.2. Applying the SCM to the case of a deteriorated image of Sweden

Much like how Heilmann (2016) conducted his SCM on the event of Danish Mohammed caricatures, the sample will consist of the boycotted country, in our case Sweden, and its trading partners, with the treatment group consisting of Muslim countries with at least 75 %

of the population adhering to the Muslim faith. We have chosen this cutoff since the SCM only allows for binary treatment. It may have been possible to use a “level of treatment” variable depending on the share of Muslims with an alternative method. However, due to countries usually being relatively homogenous when it comes to religion, a binary treatment variable should suffice as most countries either have a very high majority or a low minority of Muslims. The reason for dropping the other European origin countries and focusing on Sweden is due to a method focusing specifically on creating synthetic Muslim countries as a counterfactual should be more robust rather than a more rudimentary difference-in-difference where Swedish exports to Muslim countries is compared alongside other Scandinavian countries as a control group like Chen (2023). The rationale for selecting countries with at least 75% Muslims is based on the hypothesis that these countries would be more reactive to events affecting Muslims globally, such as the Quran burnings. For example, in 2023, the Saudi Arabian view of Sweden dropped from 16 to 44 in the Nations brand index, as mentioned by the view of Sweden abroad report from SI (2023b).

In contrast, the donor pool, which the synthetic control group is constructed from, will consist of countries with a Muslim population share of less than 10%. The motivation for this is to create a synthetic control group less likely to be influenced by factors relating to Islam and to provide a rigorous baseline for comparison. Thus, by limiting the donor pool to countries with a low level of Islam, the aim is to isolate the effect of treatment on Sweden’s bilateral export flows from other confounding factors associated with Islam or Muslim-majority countries.

The time period used will be 2011-01 to 2024-01, with our time of treatment occurring at 2022-11, corresponding to months 108 through 265, with the treatment occurring at 251 in the Figures. Data is available from 2001, but we decided to exclude this first period due to the great financial crisis. Including the period of the great financial crisis, the SCM seems to perform quite poorly, with the control group and treatment group not visually matching well before treatment. This is likely due to the donor pool and treatment group countries reacting to the crisis differently.

The choice of time of treatment is made to ensure a sufficient treatment period and to be certain that treatment effects have occurred. Heilmann (2016) chose to postpone the treatment one month after the publication of the Mohamed caricatures for the boycott to have an effect. For us, it was more difficult since the Quran burnings in Sweden are difficult to pinpoint to a

single event; the time of treatment was postponed quite a bit after the first Quran burning in 2020 but still ahead of early 2023 when they started to receive much attention. Thus, the time of treatment is a bit of a compromise; it may be ahead of the most extensive calls for boycotts in 2023, but it is still well past earlier events. The reason for the length of the timespan is to ensure enough data before the time of treatment to allow our synthetic control to be as optimal as possible and sufficient time afterwards to examine the persistence of the boycott. Due to data availability, the time period stops at 2024-01; otherwise, a longer timespan after treatment would have been more optimal.

Using intuition from the gravity literature such as Head and Mayer (2014), our covariates will be logged GDP in the destination country and logged bilateral distance to be able to capture the multilateral resistance identified by Anderson and Van Wincoop (2003) as well as help our SCM predict Swedish export flows. These are in line with the covariates chosen by Heilmann (2016). In addition, we will also use logged and numeric GDP per capita purchasing power parity adjusted (PPP) to accurately reflect the varying levels of wealth among the donor pool and the treatment group. The trade covariates data is from the CEPII gravity dataset (Conte et al., 2022) and are fixed from 2021, right before treatment happens. We do not introduce outcome variable lags for the SCM when all the Muslim countries act as one treated group, as they did not seem to improve the fit of the synthetic control group. However, for the additional country-specific SCM, we introduced some sets of lags on the outcome variable Swedish Export flows, as this gave us better synthetic control groups.

5.3 Synthetic difference-in-difference

This paper intends to perform an alternative method to evaluate if the synthetic control method has given robust results: the synthetic difference-in-difference (SDID). As there is no natural counterfactual that has not been exposed to the treatment, an ordinary difference-in-difference may have caused faulty results. Otherwise natural candidates like countries within Scandinavia, as Chen (2023) utilizes, could have been considered. Moreover, we excluded using an ordinary difference-in-difference (DID) as a robustness check, as it requires a parallel trend assumption for causal inference (Clarke et al., 2023). For this thesis, the parallel trend between the treatment and control group, i.e. non-Muslim countries and Muslim countries, may not be optimal. If it was the main method, combining it with a structural gravity equation and a matching technique to identify a suitable control group, such as

coarsened exact matching from Iacus et al. (2011), could be used. However, since the DID would be used as a robustness check, the same dataset and control variables as the ones from the SCM would be used for consistency. Eventual bias arising from this should be resolved using the synthetic difference-in-differences method as an alternative method, which should be more fitting for our method and dataset.

First introduced by Arkhangelsky et al. (2021), SDID shares the same fundamental approach of creating a synthetic treatment group as the SCM but implements it in the form of a difference-in-differences method. Assigning weights to the SDID will allow us to analyze a parallel trend and use deviation from this as a causal inference. The core elements of the SDID are similar to an ordinary difference-in-difference and allow us to compare the treatment effect before and after the event. Although, SDID enables the analysis of a synthetic control group compared to the treated group. Implementing time and fixed effects together with time and country weights allows for investigating outcome differences. However, as the synthetic difference-in-difference is used as a robustness check for the main method, SCM, this report will not describe it further in detail, see Arkhangelsky et al. (2021) for further details. However, its usage as a robustness check to either validate or challenge our main results is sufficient.

5.4 Data

The bilateral trade flow data can be accessed from the Eurostat trade database Comext. The dataset “EU trade since 2002 by HS2-4-6 and CN8” (Eurostat, 2024) has been used to download the data for our period. The Eurostat data used in our gravity regression includes monthly bilateral exports and imports reported from all EU countries and all their trading partners. Smaller trading partners have been removed due to a lack of data, leaving 86 countries for the donor pool and 28 Muslim countries for the treatment countries. See Table A2 in the appendix for the full list of all donor pool countries and A1 for the treatment group that have been used. Moreover, some relevant economies like the United Arab Emirates, Kuwait and Afghanistan also had to be removed because of insufficient data. While we acknowledge that this is not optimal, we believe that the current treatment group should suffice, as it still contains a large number of Muslim partners, including the largest export partners.

The data for the percentage of a country's Muslim population is gathered from PEW research center (PEW, 2017). It is then assigned to the destination country within our dataset. There may be uncertainty surrounding the reliability of the Muslim percentage data as it is a collection of several reports and surveys, the oldest of which dates back to 1974 for the Falkland Islands. However, we consider the data sufficiently reliable for our purpose as it is used as a binary variable for the thresholds of 10% and 75%, rather than as covariates in the model.

For our SDID and SCM, we will also need the typical trade determinants such as GDP, GDP/CAP (purchasing power parity adjusted) and bilateral distance for gravity models. This data will be accessed from the CEPII Gravity dataset (Conte et al., 2022). The CEPII Gravity dataset contains the typical trade-determining variables needed for gravity equations, such as trade flows, bilateral distances, macroeconomic variables such as different versions of GDP, dummy variables for a shared language between the country pairs and dummy variables for trade agreements. The latest data available here is for 2021; thus, we use 2021 data for the trade determinants. It should not be an issue since we want to use data from right before our time of treatment.

6. Results

The following section will both provide the results of the methodology and discuss them in detail. Firstly, we will discuss the main results from the synthetic control method, followed by a country-specific synthetic control method for the largest Muslim export partners. Lastly, we are discussing the findings of the synthetic difference-in-difference.

6.1 Main results

The main results are derived from the synthetic control method (SCM). The two lines in Figure 1 below represents Swedish export flow. One of these is the blue dotted line, which represents the export flow from the synthetic control group that is made up of non-Muslim countries from the donor pool. The other black one represents the actual export flow to Muslim countries. These two are matched well, as the synthetic control group replicates the movement of the treatment group, i.e. the actual export to Muslim countries. The red line represents the month of treatment (November 2022), and from Figure 1, we can see that the

synthetic control group closely mirrors the treatment group after the treatment. Thus, we cannot see any substantial treatment effect from the boycott of Sweden.

One reason may be Sweden's high percentage of iron ore exports to large Muslim export partners. According to OEC (2022), Sweden's total exports in Saudi Arabia, Qatar, Turkey and Egypt are comprised of iron ore by 33,1%, 59,7%, 14,5% and 12,4%, respectively. Iron ore may be more challenging to boycott than more traditional consumer products, which could potentially restrict the magnitude of the boycott. These results would then align with Heilmann (2016) who found that non-consumer goods are less affected and show insignificance in many cases. Iron ore also saw a substantial increase in its pricing, as it nearly increased 45% during our treatment period (see Figure A11 in the appendix). This could have potentially mitigated the effects on total export in Euros, as the commodity price surge may have offset any decreases in export volume.

Compared to Denmark and the religious boycott occurring there in 2006, where Heilmann (2016) investigated and found a significant decrease in bilateral export flows to Muslim countries. Danish export goods differ significantly from Swedish goods regarding their large quantity of consumer products. While both countries share a significant export of medical supplies and machinery, Sweden differs, as the main export to the largest Muslim export partners is non-consumer products such as iron ore and sawn wood. However, during their export in 2006 (the time of their boycott), Denmark exported large quantities of milk, cheese, butter, and other edible preparations that are consumer products compared to Sweden. The French supermarket chain Carrefour reportedly removed Danish products from their shelves in the Middle East, which led to significant losses for Arla and several other Danish food producers (Heilmann, 2016). Having a larger proportion of consumer products compared to Sweden could have caused more trade discrepancies.

Moreover, there may still be an ongoing boycott of Sweden that we are not able to capture with our data, causing our results to be not significant. Chen's (2023) findings indicate that exports did not rebound until 18 months after the treatment. Heilmann's (2016) study revealed long-term effects on both 12 and 24 months after the treatment of consumer products in response to the Mohamed caricatures. Additionally, Heilmann's research indicated an absence of short-term (3 months) effects on consumer products. These results suggest that the publication itself did not cause the effect, but only after an official boycott announcement did

Denmark’s exports decrease. Hence, there may have been delayed effects that wouldn’t be captured in this report.

Denmark had also seen a more remarkable fall in NBI rankings during their boycott in 2006, which could potentially lead to less bilateral trade with Muslim countries. Denmark experienced a further fall in ranking, as they fell 36 spots in the ranking amongst Egyptian respondents. This is supported by findings by Chang et al. (2022), suggesting that consumer preference is affected by a country’s image and the general effect on bilateral trade. Their findings concluded that Canada’s welfare gains from trade increased by 8% from 2010 through 2017 as a result of improved country image. Yotov et al. (2017) found similar evidence as their findings indicate that improvements in world ranking reputation for products in a specific country can lead to a 2% increase in exports to that particular nation.

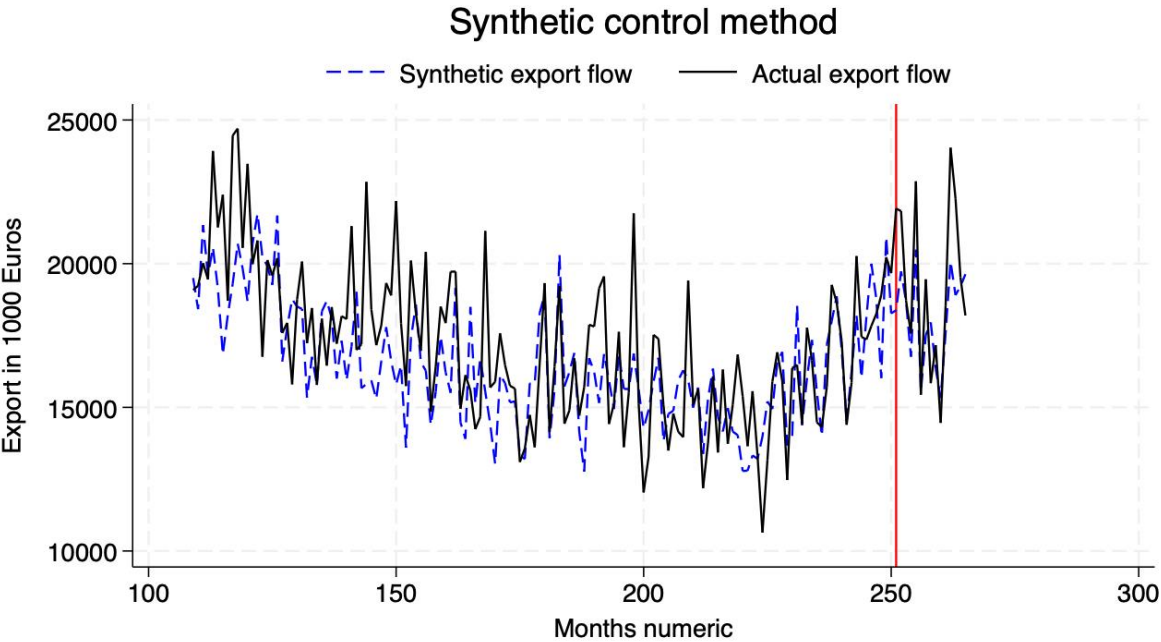


Figure 1. Synthetic control method for export flow

The following average treatment effect of treated (ATT) represents the effect on the treated group. We note that the treatment caused an increase of 414,174 Euros, although, with a P-value of 0.799, it is not statistically significant, and therefore, we cannot conclude any diminishing export flow.

Table 1. Synthetic Control method

Export	ATT	Std.Err.	t	P>t	[95%Conf.	Interval]
Treatment	414.174	1620.000	0.250	0.799	-2770.000	3600.000

95% CIs and p-values are based on Large-Sample approximations.

6.2. Country specific synthetic control method

To investigate trade effects on different countries, we will implement country specific synthetic control method for the five biggest Muslim country export partners. These are Egypt, Indonesia, Turkey, Saudi Arabia, and Qatar, representing 0,5%, 0,27%, 1,05%, 0,66% and 0,2% of Sweden's total exports in 2022, in respective order (OEC, 2023). Below, in Figure 2 through 6, we are able to see the results from the country specific effects on export flow both prior and after the treatment. These results seem to further indicate the absence of any diminishing trade because of the treatment. Treatment effects show no substantial decrease in export flow, strengthening the not significant findings of the previous SCM for all Muslim countries.

However, in-space placebo treatments in Figure A2 in the appendix seem to indicate weakly significant trade effects on Turkey. The findings in Table A3 in the appendix contradict our previous beliefs as they demonstrate increased export flow with an average treatment effect of treated summing up to 5,834,308 Euros. These effects could be explained by Sweden's acceptance into NATO, which altered the regulations concerning the exports of weapon material to Turkey (Riksdagen, 2022).

We note, however, that Qatar does not match well with the synthetic control group, which could potentially affect the results. This may have been caused by Sweden's export flow with Qatar, as Figure 6 shows highly volatile exports compared to the other countries in Figures 2-5. The reason might be their high import of iron ore and iron pipe, representing nearly 70% of their total imports from Sweden (OEC, 2023). Due to their high dependency on imported iron ore and iron pipes, matching these fluctuations to the donor pool might be challenging.

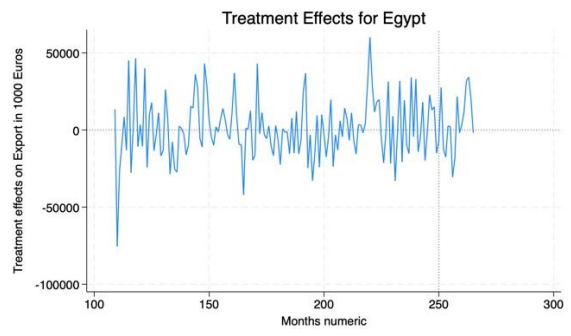
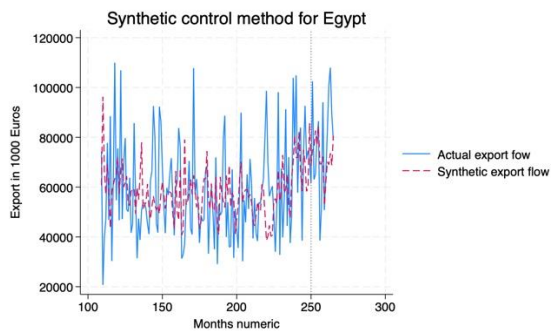


Figure 2. Synthetic control method for Egypt

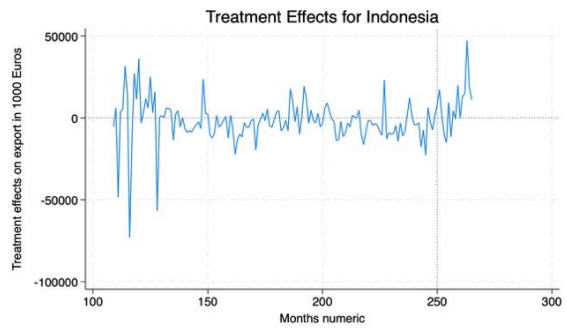
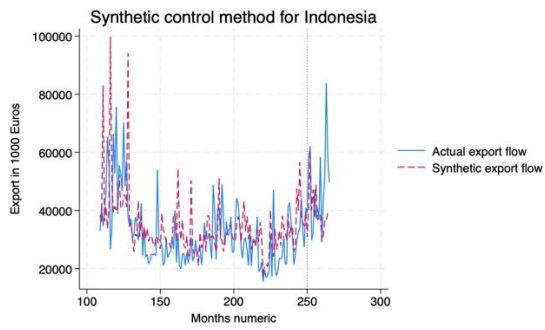


Figure 3. Synthetic control method for Indonesia

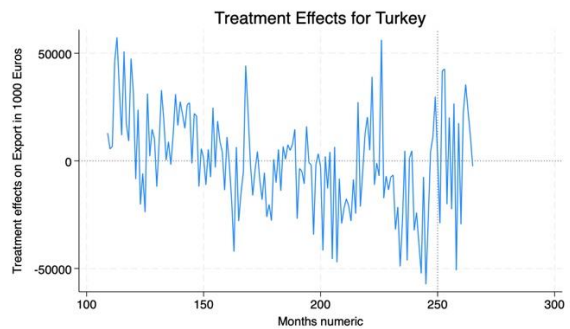
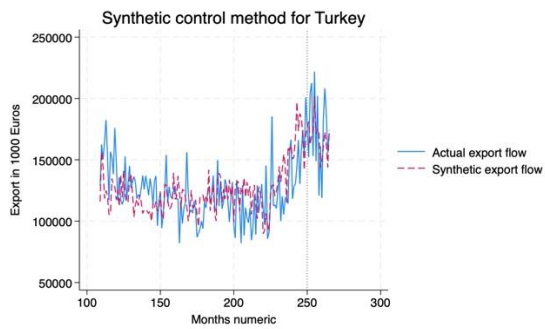


Figure 4. Synthetic control method for Turkey

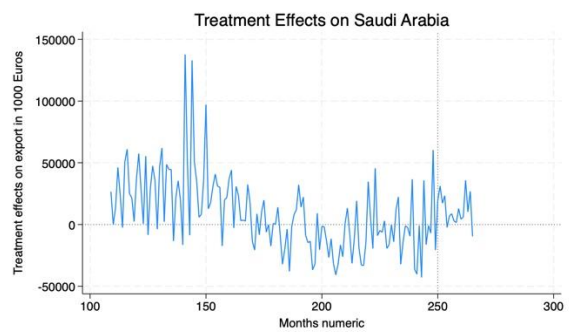
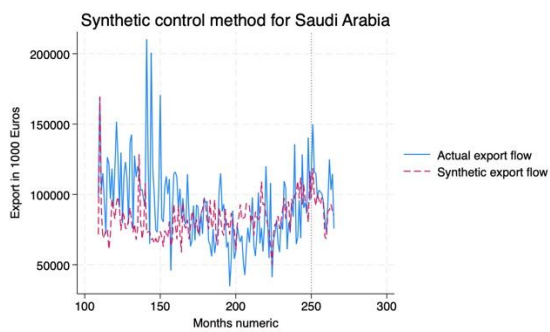


Figure 5. Synthetic control method for Saudi Arabia

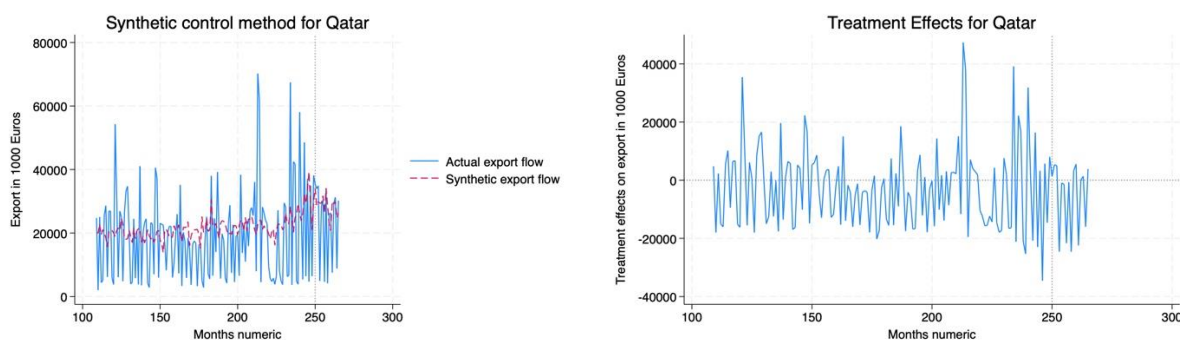


Figure 6. Synthetic control method for Qatar

6.3. Are the main results robust?

6.3.1 In-time placebo tests

To evaluate the robustness of these findings and to check for anticipation effects, we also implemented an in-time placebo test, as suggested by Abadie et al. (2015). Since it can be argued that the deterioration of Sweden’s image in Muslim countries started earlier than the point of our treatment, a placebo study will be performed at the beginning of 2021. For example, there were multiple incidents of Quran burnings in 2022, along with a massive disinformation campaign about Swedish social services targeting and abducting Muslim children. However, these incidents did not receive nearly as much media attention internationally as the Quran burnings in 2023 (SI, 2023a).

The in-time placebo tests are performed on the five largest treated Muslim export partners, such as Egypt, Indonesia, Saudi Arabia, Qatar and Turkey. The placebo in-time test period was set to July 2016 and February 2021, where the first one marks the middle of the data set and the second almost two years before the treatment. July 2016 was set to have a pre-treatment period as least as large as the post-treatment period, which is a sufficient requirement according to (Saia, 2017). The second placebo treatment is set for more than a year prior to the treatment. According to (Cunningham, 2021), this is sufficient to exclude treatment effects on the in-time placebo treatment.

From Figures A1 through A5 in the appendix, we find the placebo treatment in July 2016 and February 2021 for all five countries. We can deduce that neither country shows any evidence

of anticipated treatment effects in July 2016 as the bilateral export flow does not react to the placebo treatment, nor are there any substantial effects on export flow in February 2021. Export flows maintain the same trajectory as in previous months. Hence, we can conclude the absence of anticipation effects.

6.3.2 In-space placebo tests

As recommended by Abadie et al. (2015), we test the robustness of our results with in-space tests as well. These were performed on our country specific synthetic controls, which is done by applying the treatment to every control country in the donor pool. This allows us to see if the created synthetic control group was suitable and to check the significance of our results. The results of the In-space placebo tests can be found in the appendix in Figures A1 to A5; we present two types of Figures for each country. The left figure shows the treatment effect compared to applying a placebo treatment to each donor country, and the right one gives us the two-sided p-values of treatment effects on bilateral export flows, i.e. if the p-values are low, that speaks for a significant result for the treatment group in those time periods compared to all the placebo tests.

Starting with Turkey, we saw the most significant results, and our synthetic control method performed best at replicating Turkey's actual bilateral export flows. Our two-sided p-values of treatment effects on export tell us that there was a significant to weakly significant effect after the treatment. As previously mentioned in the results, this may have been due to a NATO effect, i.e. we may be capturing the effects of Sweden's ongoing NATO application where the regulation regarding weapons exports to Turkey was relaxed as a part of the ongoing negotiations. Nevertheless, the in-space placebo tests provide some robustness to this result.

If we go on to observe the in-space test for Qatar, we can visually see in the left Figure that most of the placebos seem to follow Qatar closely or yield some positive effects. When further examining the right Figure for the two-sided p-values of treatment effects on Exports, we see that the results are significant for some of the months, which could indicate the effects of several Quran burnings in 2023, thus, several short-term boycotts. However, it may be the effect of our synthetic control group being unable to capture the volatility in Swedish exports to Qatar. In summary, it is difficult to argue that the in-space tests indicate that treatment had any real lasting effects.

Continuing with the in-space placebo tests for Saudi Arabia, the left Figure does not seem to indicate any treatment. Additionally, some placebo effects are more substantial in both directions. This indicates that the treatment of Quran Burnings had no effect, which the two-sided p-values seem to indicate as well since they are at best weakly significant on some months, but over the whole treatment period, they do not appear to indicate significance.

In the case of Egypt and Indonesia, both Figures paint roughly the same picture. The left Figure in both cases is placebo tests that show placebos with a higher treatment, although in Indonesia’s case, it seems to have a positive effect that diverges from the placebo results in the last few periods. In both cases, there are two significant months in the two-sided p-values, as shown by the Figures to the right. However, most of them return high p-values, and thus, this speaks against the treatment having a significant effect.

6.3.3 Lag structure

We use two to five lags in our modelling of the country specific synthetic control method. All lags have been set within the pre-treatment period and are based on the outcome variable Swedish export. The following lags for each country can be found in Table 2 below.

Table 2. Country specific lags

Country	Lags
Qatar	250, 200
Indonesia	220, 200, 170, 150, 130
Saudi Arabia	230, 210, 200, 180, 110
Turkey	250, 200, 150
Egypt	200, 150, 130, 120

The chosen lags were based on an optimal pre-treatment period matching the export flow. The lags have been based upon extensive trial and error testing to assert the optimal lags for each country, i.e. we let the data decide the optimal lags for the countries. This is done to ensure better unbiasedness while still allowing our other covariates to gain some positive weights. One may decide to include all pre-treatment periods as lags, but Kaul et al. (2015) advise against this since this makes all the economic covariates redundant and may lead to bias.

6.3.4. Donor pool

Choosing an optimal donor pool is crucial in a SCM and SDID, as these countries are used to construct the synthetic control group. This may be difficult as the Muslim countries may differ in terms of culture and export flows. Middle Eastern countries are constructed using potentially many countries within the European Union (EU) that face different export and import circumstances when trading with Sweden. EU is a customs union which favours trading with other EU countries, potentially leading to some mismatching when constructing the synthetic control group. We note that countries like Qatar have an ill-matched synthetic control group that hinders the ability to draw any broader conclusion from that particular result.

6.4 Synthetic difference-in-difference

Figure 2 below shows results from the synthetic difference-in-difference that have been in place to check the robustness of the previous results from the synthetic control method. When executing this method, we get contradicting results as the synthetic difference-in-difference indicates a decrease in export flow. The Figure demonstrates less volatility in the synthetic control group than in the treatment group both before and after the treatment. Furthermore, post-treatment seems to influence the actual export flow as it experienced a drop in reaction to the treatment before it almost rebounded to its pre-treatment level.

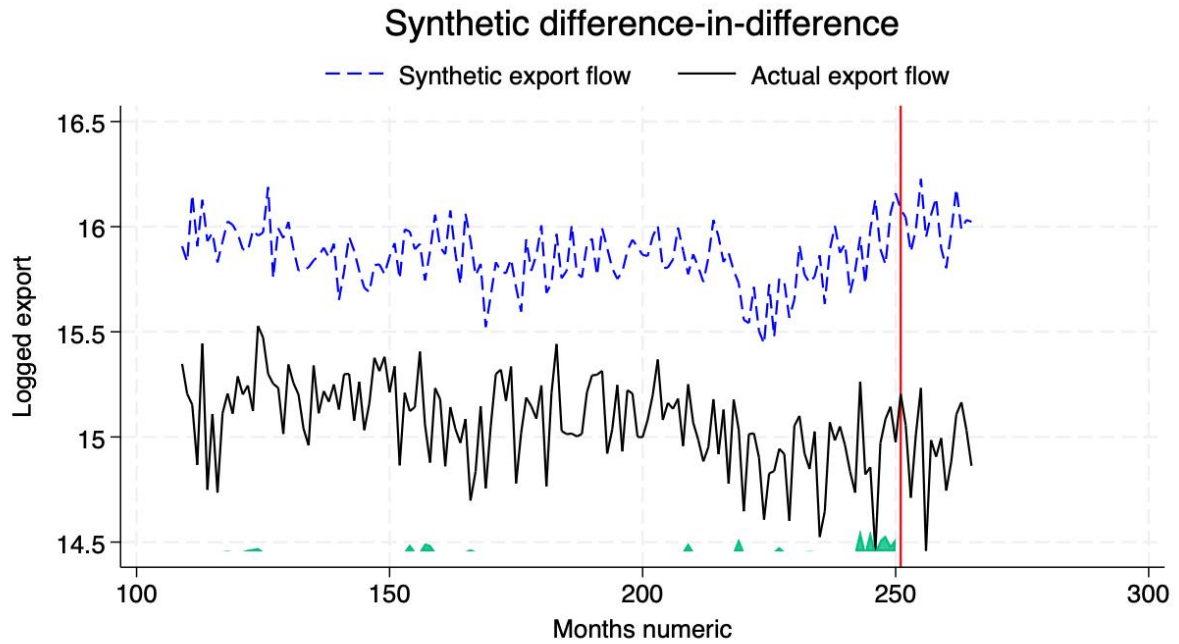


Figure 7. Synthetic difference-in-difference for logged export

The following results from the synthetic difference-in-difference are shown in Table 3 below. With a P-value of 0,011, this estimation is significant and suggests that there has been diminishing trade following the treatment. The results are contrary to the main method of use in this report, with an estimated ATT of -0,212% on Swedish exports to Muslim countries after the Quran burnings and LVU disinformation campaign. Although there has been a statistically significant decrease of 0,212% according to the SDID, the results indicate a low effect on export flow, negligible in terms of overall export.

Table 3. Synthetic Difference-in-Differences Estimator

Lexport	ATT	Std.Err.	t	P>t	[95%Conf.	Interval]
post2	-0.212	0.083	-2.540	0.011	-0.376	-0.049

95% CIs and p-values are based on Large-Sample approximations.

See Arkhangelsky et al., (2021) for theoretical derivations.

7. Summary and conclusion

This paper aims to assess the damages from a reputational crisis and provide guidance for Swedish policymakers. Specifically, this report intends to investigate whether the LVU-disinformation campaign and how Quran burnings can lead to diminishing Swedish exports to Muslim countries. Utilizing the synthetic control method, the findings indicate that there is no significant effect on Swedish exports. These findings may be attributed to the structure of Swedish exports, the high proportion of non-consumer exports to Muslim countries, and the insufficiently large drop in the Nation Brand Index.

Despite the synthetic control method's overall lack of significant conclusions, the synthetic difference-in-difference estimator suggests significant effects on export flow. Specifically, the results show that Quran burnings and the LVU disinformation campaign led to diminishing trade with Muslim countries, albeit a decrease of -0.212% in export flow to Muslim countries, which is relatively small in the context of overall export volume.

Our preferred method of use, the synthetic control method, indicates that there is no significant effect on Swedish exports. However, we note that the synthetic difference-in-difference estimator shows signs of a significant effect, where the Quran burnings and LVU disinformation campaign led to a slightly diminishing export to Muslim countries. Given these contradicting results, our cautious conclusion is that further studies are needed to fully determine what the true trade effects, if any, have actually been.

8. Reference

Abadie, A. and Gardeazabal, J. (2003), *The economic costs of conflict: A case study of the basque country*, *American economic review* 93(1), 113–132.

<https://www.aeaweb.org/articles?id=10.1257/000282803321455188>

Abadie, A., Diamond, A. and Hainmueller, J. (2010). Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California’s Tobacco Control Program. *Journal of the American Statistical Association*, 105(490), pp.493–505.

Abadie, A., Diamond, A. and Hainmueller, J. (2014). Comparative Politics and the Synthetic Control Method. *American Journal of Political Science*, 59(2), pp.495–510. doi:

<https://doi.org/10.1111/ajps.12116>.

Ahlerup, L. and Ranstorp, M. (2023). *LVU-kampanjen Desinformation, konspirationsteorier, och kopplingarna mellan det inhemska och det internationella i relation till informationspåverkan från icke-statliga aktörer.*

<https://www.fhs.se/download/18.32d29dd2187bd01d5e455265/1682576119173/LVU-kampanjen.pdf>.

Anderson, J.E. and van Wincoop, E. (2003). *Gravity with Gravitas: A Solution to the Border Puzzle*. *American Economic Review*, 93(1), pp.170–192

<https://www.aeaweb.org/articles?id=10.1257/000282803321455214>

Anholt, S., *Competitive Identity - The New Brand Management for Nations, Cities and Regions*, Palgrave Macmillan, London 2007.

Arkhangelsky, D., Athey, S., Hirshberg, D. A., Imbens, G. W. and Wager, S. (2021), ‘Synthetic difference-in-differences’, *American Economic Review* 111(12), 4088–4118.

<https://doi.org/10.1257/aer.20190159>

Chang, P.L., Fujii, T., Jin, W. (2022). *Good Names Beget Favors: The Impact of Country Image on Trade Flows and Welfare*. *Management Science* **68**:10, 7555-7596.

<https://pubsonline.informs.org/doi/10.1287/mnsc.2021.4250>

Chen, D.L. (2023). *Do markets overcome repugnance? Muslim trade response to anti-Muhammad cartoons*. *European Economic Review*, [online] 156(C)
https://econpapers.repec.org/article/eeeeecrev/v_3a156_3ay_3a2023_3ai_3ac_3as0014292123001125.htm

Clarke, D., Pailańir, D., Carleton Athey, S. and Imbens, G.W. (2023). *Synthetic Difference-in-Differences Estimation*. SSRN Electronic Journal.
<https://doi.org/10.2139/ssrn.4346540>

Conte, M., P. Cotterlaz and T. Mayer (2022), "The CEPII Gravity database". CEPII Working Paper N°2022-05, July 2022.

Cunningham, S. (2021). *Causal inference: The mixtape*. Yale university press
<https://doi.org/10.2307/j.ctv1c29t27>

Dimitrova, B.V., Korschun, D. and Yotov, Y.V. (2017). When and how country reputation stimulates export volume. *International Marketing Review*, 34(3), pp.377–402.
<https://doi.org/10.1108/imr-10-2015-0211>

Eurostat. (2024). *Easy Comext*. [online] Available at:
<https://ec.europa.eu/eurostat/comext/newxtweb/>.

Fogde/TT, S. (2024). Exportlyft i Mellanöstern trots koranbrńningar. *Svenska Dagbladet*. [online] 4 Mar. Available at: <https://www.svd.se/a/BWA6yw/exportlyft-i-mellanostern-trots-koranbranningar> [Accessed 19 May 2024].

Fuchs, A., Klann, N. K. (2013). *Paying a visit: The Dalai Lama effect on international trade*. *Journal of International Economics*, Elsevier, vol. 91(1), pages 164-177.
<https://www.sciencedirect.com/science/article/pii/S0022199613000482>

Heilmann, K. (2016). *Does political conflict hurt trade? Evidence from consumer boycotts*. *J. Int. Econ.* 99, 179–191.
<https://www.sciencedirect.com/science/article/pii/S0022199615001725>

Human Rights Watch (2006). *Question and answers Danish cartoons and freedom expression*
Available at: <https://www.hrw.org/report/2006/02/15/questions-and-answers-danish-cartoons-and-freedom-expression/when-speech-offends> [Accessed 12 May 2024].

Iacus, S.M., King, G. and Porro, G. (2012). *Causal Inference without Balance Checking: Coarsened Exact Matching*. *Political Analysis*, 20(1), pp.1–24.
<https://doi.org/10.1093/pan/mpr013>.

Kaul, A., Klößner, S., Pfeifer, G. and Schieler, M. (2021). Standard Synthetic Control Methods: The Case Of Using All Preintervention Outcomes Together With Covariates. *Journal of Business & Economic Statistics*, pp.1–15.
<https://doi.org/10.1080/07350015.2021.1930012>

Koenig, P. and Poncet, S. (2022). *The effects of the Rana Plaza collapse on the sourcing choices of French importers*. *Journal of International Economics*, p.103576.
<https://doi.org/10.1016/j.jinteco.2022.103576>

Michaels, G., Zhi, X. (2010). *Freedom fries*. *American Economic Journal: Applied Economics*. 2 (3), 256–281.
<https://www.aeaweb.org/articles?id=10.1257/app.2.3.256>

NCT. (2024). *NCT:s Helårsbedömning 2024*. Säkerhetspolisen
Available at:
<https://www.sakerhetspolisen.se/download/18.5cb30b118d1e95affe641/1707750097566/NCT%20Helarsbedomning%202024.pdf> [Accessed 12 May 2024].

OECD. (2022). *Sweden (SWE) Exports, Imports, and Trade Partners*. [online] Available at:
<https://oec.world/en/profile/country/swe?tradeScaleSelector1=tradeScale0>
[Accessed 23 May 2024].

Pew Research Center (2017). *Interactive Data Table: World Muslim Population by Country*
<https://www.pewresearch.org/religion/chart/interactive-data-Table-world-muslim-population-by-country/>

Riksdagen (2022) *Vapenexport till Turkiet* Available at:

https://www.riksdagen.se/sv/dokument-och-lagar/dokument/interpellation/vapenexport-till-turkiet_ha1065/ [Accessed 18 May 2024].

Saia, A. (2017). *Choosing the open sea: The cost to the uk of staying out of the euro*. Journal of International Economics 108, 82–98.

<https://doi.org/10.1016/j.jinteco.2017.06.001>

Svenska institutet (2023a) *Bilden av Sverige utomlands 2022*.

<https://si.se/app/uploads/2023/03/bilden-av-sverige-2022-tillganglighetsanpassad.pdf>

Svenska institutet. (2023). Sweden and the 2023 Nation Brands Index: Time for a rethink?.

Svenska institutet. <https://si.se/en/sweden-and-the-2023-nation-brands-index-time-for-a-rethink/>.

Svenska institutet (2024) *Bilden av Sverige utomlands 2023*.

<https://si.se/app/uploads/2024/02/bilden-av-sverige-utomlands-2023-arsrapport.pdf>

Trading Economics (2024). *Iron Ore* [online] Tradingeconomics.com. Available at:

<https://tradingeconomics.com/commodity/iron-ore>.

9. Appendix

Table A1. Muslim countries

Summary of Muslim country		Iso3	Muslim share
Iso3	Muslim share	ALB	0.80
AZE	0.99	BGD	0.90
+BHR	0.81	DJI	0.97
DZA	0.98	EGY	0.95
GIN	0.84	GMB	0.95
IRN	0.99	IRQ	0.99
JOR	0.98	LBY	0.97
MAR	0.99	MDV	0.98
MLI	0.92	MRT	0.99
OMN	0.88	PAK	0.96
QAT	0.78	SAU	0.97
SEN	0.96	SYR	0.92
TUN	0.99	TUR	0.98
UZB	0.96	YEM	0.99
IDN	0.88	Observation = 4,239 N = 28	

Table A2. Donor pool countries

Summary of donor pool	Iso3 Muslim share	Iso3 Muslim share
AGO 0.01	AND 0.01	ARG 0.02
ARM 0.00	ATG 0.01	AUS 0.02
AUT 0.04	BEL 0.03	BHS 0.00
BLR 0.01	BOL 0.00	BRA 0.00
BRB 0.01	BWA 0.00	CAN 0.02
CHE 0.04	CHL 0.00	CHN 0.02
COD 0.01	COG 0.02	COL 0.01
CRI 0.01	CZE 0.00	DNK 0.02
DOM 0.00	ECU 0.00	ESP 0.01
EST 0.00	FIN 0.01	FRA 0.06
GAB 0.10	GBR 0.03	GEO 0.10
GRC 0.03	GTM 0.00	GUY 0.07
HKG 0.01	HND 0.00	HRV 0.01
HUN 0.00	IRL 0.05	ISL 0.00
ITA 0.01	JAM 0.00	JPN 0.00
KEN 0.07	KHM 0.02	KOR 0.00
LAO 0.00	LKA 0.09	LTU 0.01
LUX 0.	LVA 0.01	MAC 0.00
MDA 0.01	MDG 0.01	MEX 0.01
MLT 0.00	MNG 0.05	NAM 0.00
NIC 0.00	NLD 0.06	NOR 0.01
NPL 0.04	NZL 0.01	PAN 0.01
PER 0.00	PHL 0.05	PNG 0.00
POL 0.01	PRT 0.00	PRY 0.00
ROU 0.00	SLV 0.00	SVK 0.00
SVN 0.02	SYC 0.01	THA 0.06
TTO 0.06	UKR 0.01	URY 0.00
USA 0.01	VNM 0.00	ZAF 0.01
ZMB 0.00	ZWE 0.01	AGO 0.01
Observations = 13,502	N = 86	

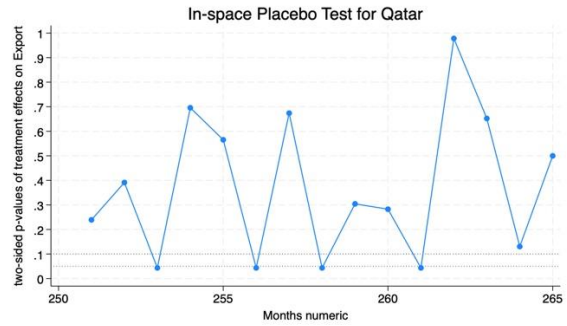
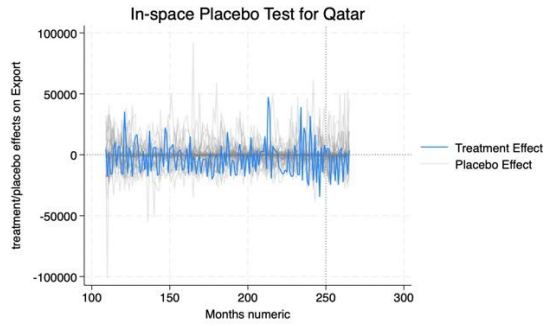


Figure A1. In space placebo test for Qatar in 1000 Euros

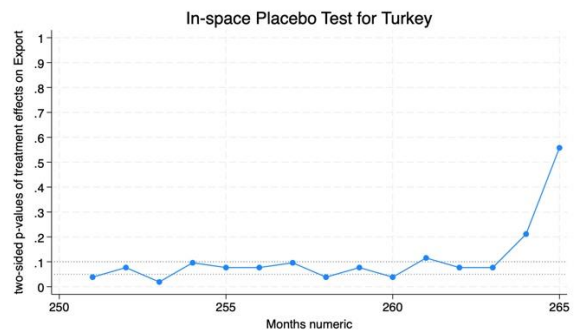
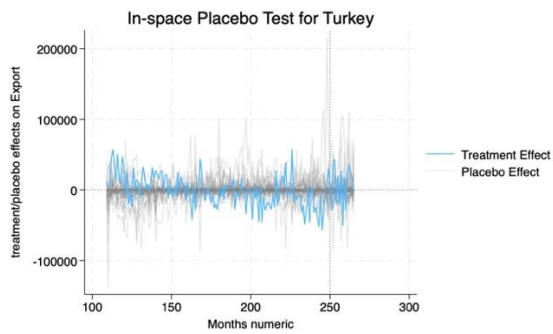


Figure A2. In space placebo test Turkey in 1000 Euros

Table A3. Synthetic control method for Turkey

Time	Actual	export	Synthetic	export	Treatment	effect
251		1.52e+05	1.81e+05		-2.89e+04	
252		2.04e+05	1.62e+05		41778.516	
253		2.13e+05	1.70e+05		42650.312	
254		1.53e+05	1.73e+05		-2.01e+04	
255		2.22e+05	2.02e+05		20149.719	
256		1.49e+05	1.71e+05		-2.24e+04	
257		2.02e+05	1.75e+05		26581.688	
258		1.21e+05	1.72e+05		-5.07e+04	
259		1.61e+05	1.44e+05		17485.641	
260		1.19e+05	1.49e+05		-2.94e+04	
261		1.83e+05	1.61e+05		22487.672	
262		2.08e+05	1.73e+05		35458.359	
263		1.88e+05	1.64e+05		23310.516	
264		1.56e+05	1.44e+05		11725.219	
265		1.72e+05	1.74e+05		-2529.219	
Mean		1.73e+05	1.68e+05		5834.308	

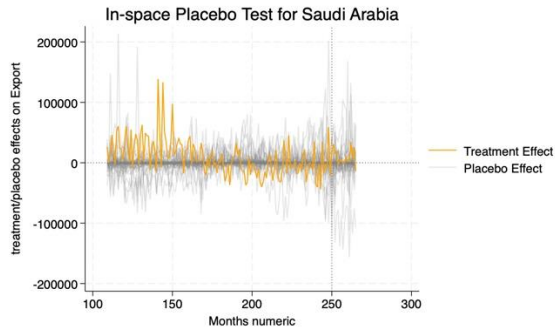


Figure A3. In space placebo test for Saudi in 1000 Euros

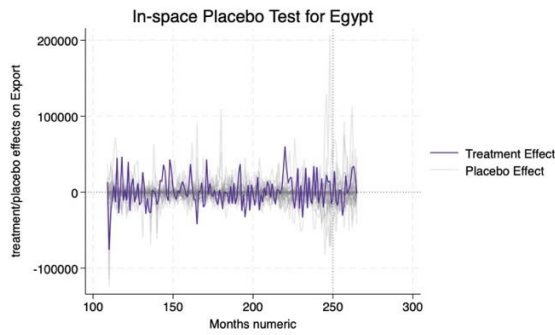


Figure A4. In space placebo test Egypt in 1000 Euros

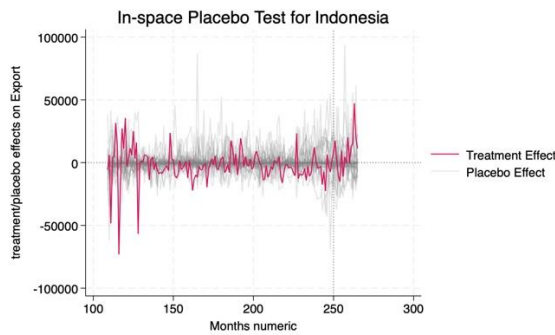


Figure A5. In space placebo test Indonesia in 1000 Euros

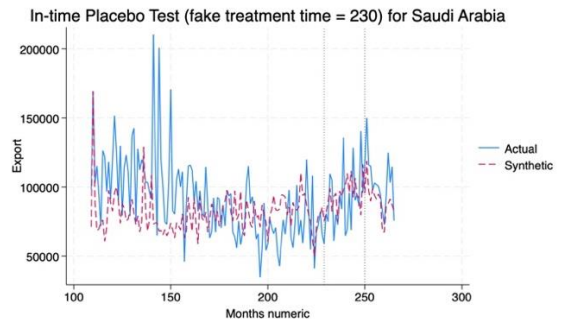
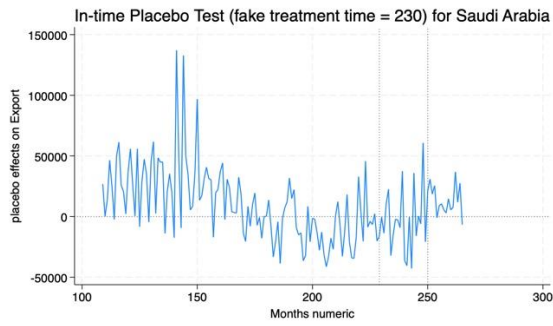
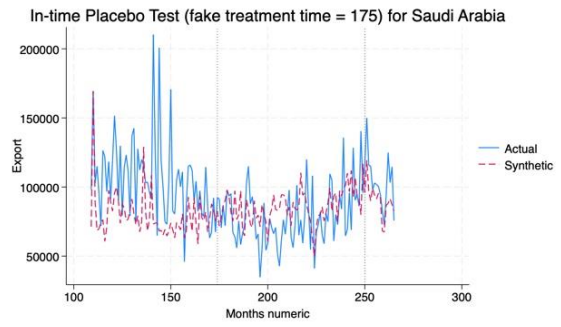
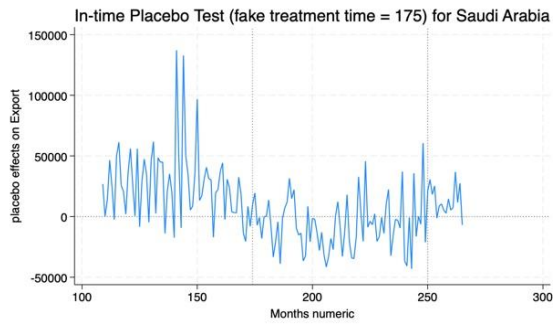


Figure A6. In-time placebo test for Saudi Arabia in 1000 Euros

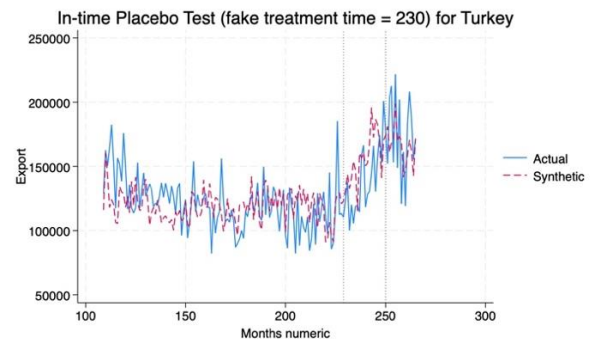
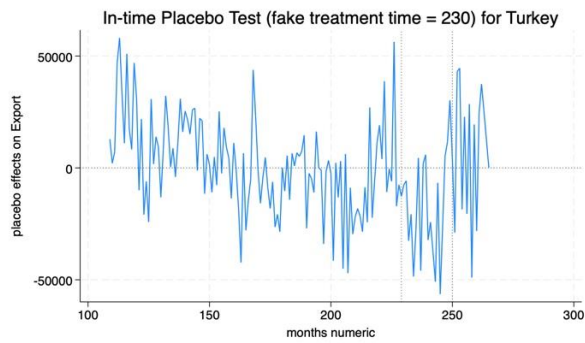
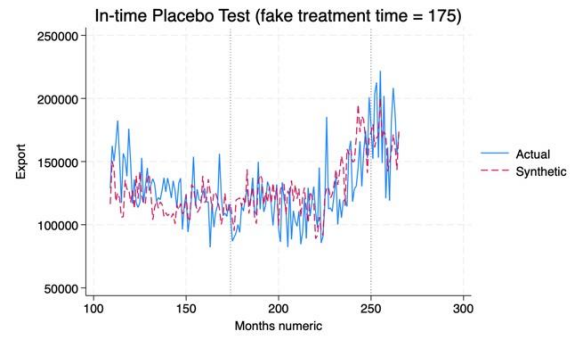
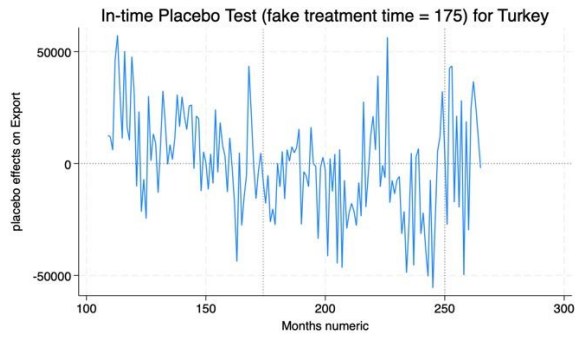


Figure A7. In time placebo test for Turkey in 1000 Euros

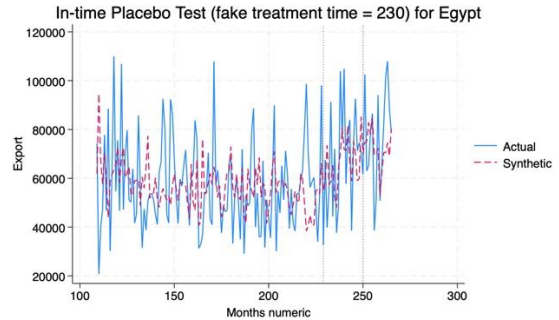
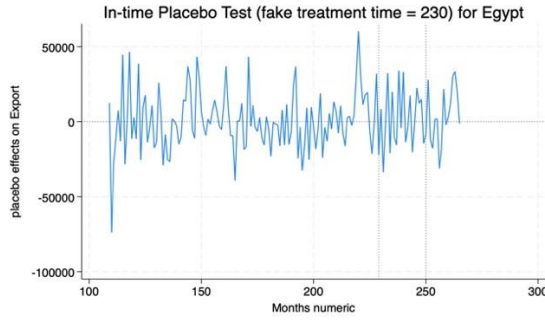
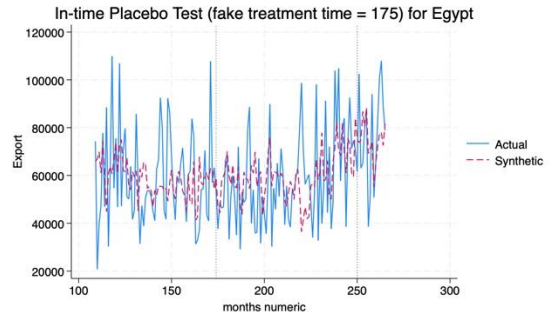
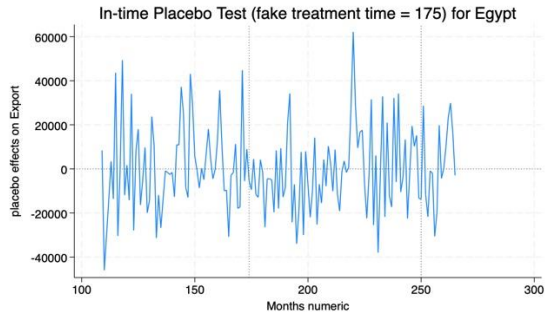


Figure A8. In time placebo test for Egypt in 1000 Euros

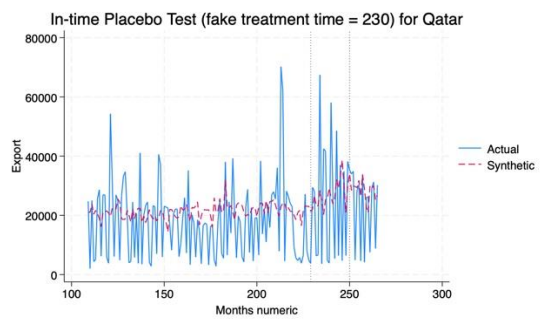
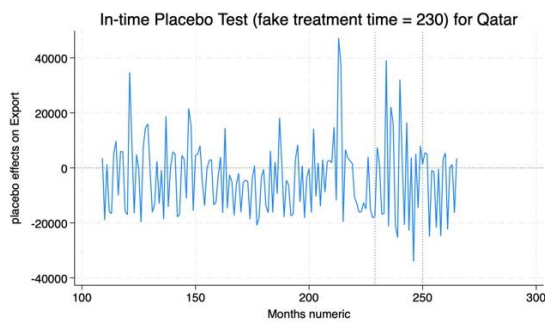
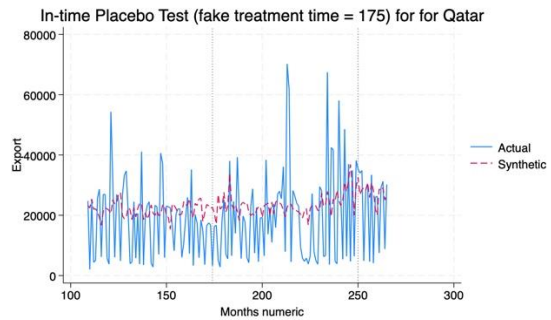
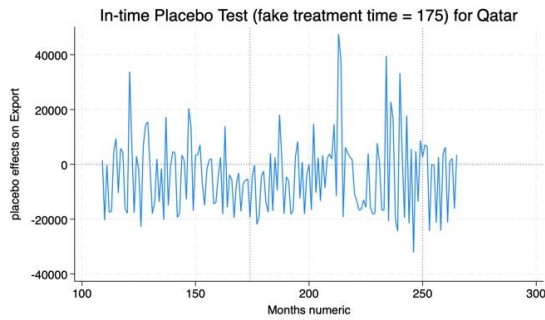


Figure A9. In time placebo test for Qatar in 1000 Euros

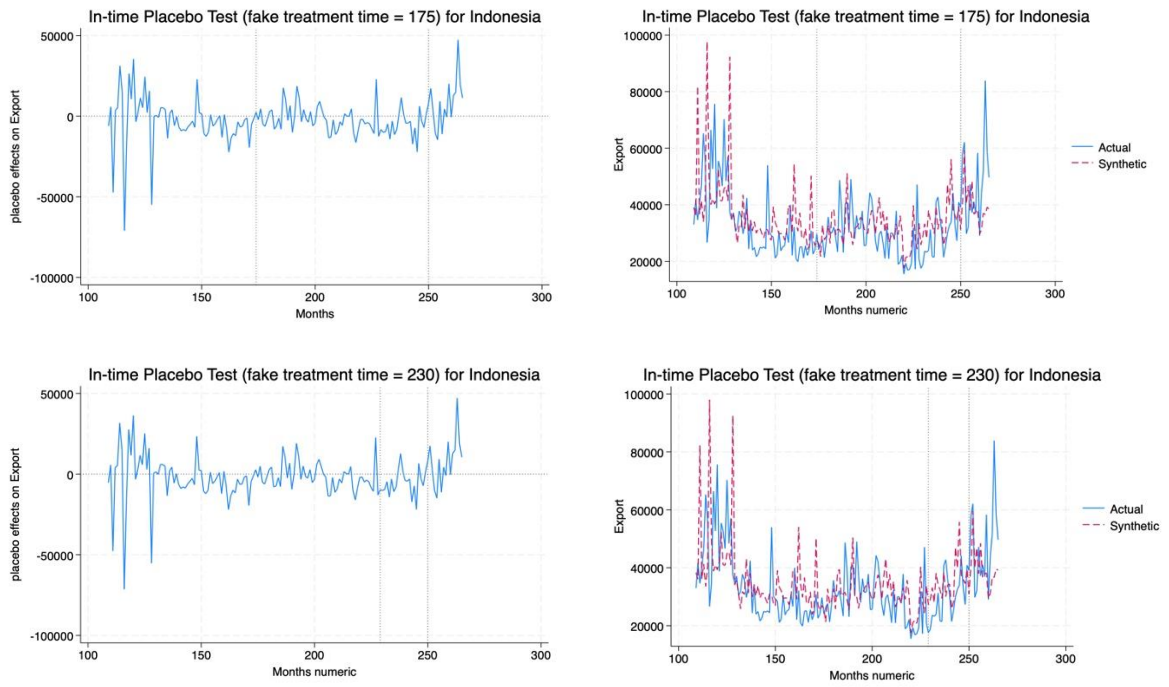


Figure A10. In time placebo test for Indonesia in 1000 Euros



Figure A11. Price changes (in US dollars) in Iron Ore during the treatment period (Tradingeconomics,2024)