



How interstate soft conflicts affect bilateral migration: Results from a structural gravity model

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ABSTRACT

This study aims to empirically examine the impact of interstate soft conflicts on bilateral migration. Interstate soft conflicts that arise when diplomacy fails and a military operation seems too extreme may act as a policy tool and have a negative effect on bilateral relations. The empirical approach uses balanced panel data with annual observations and a theory-consistent structural gravity model of migration, augmented by a new measure of interstate soft conflict. The findings suggest that interstate soft conflicts have a lasting adverse effect on migration, regardless of the control for omitted variables (presence of regional trade agreements, various types of sanctions, the state acts, and militarized interstate disputes) and different model specifications. More specifically, these conflicts result in an average reduction of about 23.35% in bilateral migration. After accounting for the time delay in the effect and addressing reverse causality, the findings suggest that interstate soft conflicts may exert a prolonged (the effect disappears after three years) adverse impact on bilateral migration flows, causing a reduction of approximately 34.22%. Therefore, the study's findings not only illuminate the complex relationship between soft conflicts and migration but also underscore their significant implications. These insights are valuable for policymakers and researchers, providing a solid foundation for informed decision-making and further exploring this complex issue.

1. Introduction

Migration is an essential driver of the interconnected global economy, influencing various aspects of societies, economies, and cultures worldwide. Therefore, it is necessary to comprehend the factors that may affect bilateral migration, including different types and levels of cross-border conflicts that create barriers and increase the cost of establishing successful relationships across national borders.

While there is ample research about the interrelationship between trade and conflicts in political science and economics, less attention has been given to how interstate conflicts impact bilateral migration. Moreover, to the best of my knowledge, no research has been conducted on the impact of softer interstate conflicts.¹ This study endeavours to offer empirical evidence based on data imperfections and measurement challenges, asserting that the topic of “soft conflict” (*i.e.*, how it is measured and what its effect size is on migration) merits inclusion among the primary research focuses within our field's literature.

When we think of interstate conflict, our minds often go to large-scale disagreements between nations that may lead to violent disputes and wars. However, the definition of interstate conflict may encompass a broader range of forms and levels of hostility. Mansfield and Pollins (2001, p. 852) wrote: “Conflicts have different levels of intensity. Lower-intensity conflict (trade

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¹ A recent study on the impact of interstate soft conflicts on bilateral trade flows (Taralashvili, 2023) reveals a sustained negative impact of such conflicts on bilateral trade.

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dispute, sanctions, and threats of force); higher-intensity conflict (mobilization, use of armed force and full-blown war) and the escalatory and de-escalatory processes that move conflicts from one level to another". Countries tend to interact and cooperate but may also experience disagreements. In certain instances, these disagreements can escalate into violent interstate conflicts that result in full-scale wars. Alternatively, countries may compete for influence by employing various economic or diplomatic tools. Although these forms of conflict may be less violent than conventional warfare, they may still pose considerable risks.

Driven by the notion that minor disturbances at lower levels may carry equivalent adverse effects as major militarized disputes and act as a policy tool, this study aims to examine the shift from normal relations to tense, defined herein as "interstate soft conflict".²

Interstate soft conflict is a flare-up of tension that precedes a "lower-intensity" type of conflict and may be driven by different reasons (political, economic, historical, social, etc.) with the idea of changing the perpetrator's actions for the better (e.g., "Stop Esso campaign" initiated by Greenpeace aimed to boycott the oil corporation Esso (known as ExxonMobil in the U.S.) due to its environmental damage (Greenpeace, 2001); Similarly, Irish society boycotted Japanese products to stop Japanese whaling expeditions for consumption (Irish Examiner, 2007)). Interstate soft conflict may trigger, but it does not necessarily result in the imposition of tariffs or other severe restrictions. Furthermore, such conflict does not intend to escalate into lower/higher-intensity conflict.

The assertion that economic integration and strong relationships between countries reduce the likelihood of conflict while armed conflicts, violent acts, and other indicators of instability disrupt cooperation is largely based on the effects of international trade,³ but a similar principle may be applied to economic interdependence in the form of international migration.

The connection between conflicts and migration is not straightforward since neither of these phenomena is uniform, and their relationship is complex. The interactions between countries, including diplomatic efforts, economic ties, security considerations, and regional cooperation, all contribute to how migration is facilitated, regulated, or influenced. Wars of various types (invasions, civil wars, third-party interventions) and conflicts of different intensity levels may lead to diverse migration patterns, which later, in some instances, may generate other wars and violent conflicts (Lubkemann, 2008). Brzoska and Fröhlich (2016) examine the argument that environmental and ecological issues can result in migration, which in turn can lead to conflicts.

This study seeks to contribute to the literature examining the effects of low- and high-intensity conflicts and political conflicts manifested through consumer boycotts on international migration. While previous research predominantly focuses on the consequences of higher-intensity interstate conflicts, this study focuses on soft conflicts that do not necessarily result in violence. When interstate soft conflicts arise, parties may express their anger through public statements or other nonviolent means to address unacceptable behavior. Although the underlying causes of soft conflicts may mirror those of higher-intensity conflicts and potentially escalate tensions, they are distinct phenomena. Moreover, this study focuses on examining the impact of a flare-up of tensions rather than their consequences, which may be, for example, higher-intensity conflicts.

Moreover, this research may align with literature exploring the effects of lower-intensity political conflicts. In addition to political tensions, this analysis encompasses conflicts arising from various factors, including race, social status, religion, and environmental concerns. Rather than focusing on isolated incidents, the study aggregates all cases of interstate soft conflicts (see Table 1 and Online Appendix B1 for details of cases), fitting the defined criteria into a single indicator variable to assess their overall impact on migration. Importantly, this study does not exclusively analyze the effects of interstate soft conflicts on migration patterns between specific countries; instead, it measures the overall impact of such conflicts on migration in general.

Finally, considering that consumer behavior may respond to interstate soft conflicts, such as through consumer boycotts, via channels beyond the control of policymakers or state actors but still influenced by them, this empirical work may also extend the literature on political conflicts from the perspective of consumer boycotts triggered by either a country or a company's misconduct.

In essence, this study complements existing literature on the impact of interstate conflicts by underscoring that interstate soft conflicts, emerging when diplomatic efforts falter, and military action appears excessive, may serve as a policy tool with negative ramifications for migration. Since, to the best of my knowledge, no previous research⁴ has examined the effects of such conflicts on

² See detailed information on the definition of interstate soft conflict in Section 3.

³ There is a large body of literature that attempts to assess whether trade fosters peace (liberal school, e.g., Polachek, 1980; Martin et al. 2008) or if growing imbalances in established relationships result in conflict between trading partners and impact their economic ties (neo-Marxist school, realists). Pollins (1989) empirically asserts that in the long run, there is a two-way causality: trade relations influence the level of conflict and cooperation between countries, while political relations affect trade flows. Even though both theories agree that conflicts harm trade (Barbieri and Levy, 1999). See Mansfield and Pollins (2009) for a review of the literature.

⁴ There is literature that examines how softer conflicts, political tensions, and diplomatic disagreements affect trade. For example, Fuchs and Klann (2013) use the reception of Dalai Lama as a measure of political tensions with China, and show that countries hosting the Dalai Lama (the spiritual leader of Tibet who advocates for Tibet's independence) at the highest political level are experiencing a decline in export flows to China. According to Mityakov et al. (2013), a deterioration in the relationship between the United States and its partner nation, as indicated by changes in their voting behavior in the United Nations General Assembly, leads to a reduction in imports from that country by the United States. Heilmann (2016) examines the impact of four different political tensions, measured as politically motivated boycotts on trade, and finds the negative effect of boycotts on trade flows. Heilmann (2019) focuses on the same four politically motivated boycotts and finds that they have a negative effect on bilateral trade in both goods and services. Studies on the U.S.-France disagreement regarding the Iraq War, which examine the sales of French wine in the United States, demonstrate negative effects on sales (Vannerson, 2003, Ashenfelter et al. 2007, Chavis and Leslie, 2006). According to a study by Clerides et al. (2015), the increase in anti-American feelings caused by the Iraq war had a significant negative impact on the sales of American products like soft drinks and detergents in 22 Arab countries collectively known as the Arab world or the Arab League. Fouka and Voth (2022) find that Greek consumers reduced their acquisition of German vehicles because of the strained political relations between the two nations that occurred during the 2010 debt crisis.

migration, this study aims to fill this gap by quantitatively analyzing the relationship between interstate soft conflicts and bilateral migration flows to provide an initial understanding of the extent to which they affect migration.

The empirical approach uses balanced panel data with annual observations and a theory-consistent structural gravity model augmented with a new measure of interstate soft conflict.

Using a partial equilibrium model that explains bilateral migration flows and empirical analysis, I determine the sign and magnitude of interstate soft conflicts' effect on migration. First, I quantify the impact of interstate soft conflicts on bilateral migration flows.⁵ using the PPML estimator with the full set of FEs. Then, since migration may influence the level of conflict and cooperation between countries, while political relations may affect migration flows, to reduce the problem of reverse causality between bilateral migration and interstate soft conflicts and to account for the time delay of the effect, I use lag of the interstate soft conflict variables in the analysis.⁶

The results suggest that interstate soft conflicts have a sustained and economically significant negative effect on bilateral migration regardless of the control for omitted variables (presence of regional trade agreements, different types of sanctions, the state acts, and militarized interstate disputes) and different model specifications. More specifically, these conflicts result in an average reduction of about 23.35% in bilateral migration. After accounting for the time delay in the effect and addressing reverse causality, the findings suggest that interstate soft conflicts may exert a prolonged (the effect disappears after three years) adverse impact on bilateral migration flows, causing a reduction of approximately 34.22%. The findings also show a negative relationship between interstate soft conflicts and bilateral migration stocks. Specifically, interstate soft conflicts in the following year have the potential to reduce bilateral migration stocks by about 21.72%. This suggests that soft conflicts exert a more pronounced influence on migration flows than migration stocks, likely due to the relatively low volatility of migration stocks.

This study proceeds as follows: Section 2 briefly overviews the literature. Section 3 provides a definition, data selection procedure, list of interstate soft conflicts, and their classification. Section 4 discusses empirical model and estimation issues. Section 5 reviews data used in the analysis. Section 6 presents the baseline estimation results. Section 7 discusses robustness checks. Section 8 concludes.

2. Review of literature

The existing literature on the impact of conflict on migration offers insights into the complex relationship between these two phenomena. Scholars have examined different aspects of this relationship, including the drivers of migration during conflicts, the consequences of displacement on individuals, and the broader implications for host and origin countries. The increasing amount of theoretical and empirical literature on international migration reveal that individuals have diverse and often overlapping reasons for relocating from their home countries.

Empirical studies can be categorized into two strands. The first group includes studies focusing on how conflict affects migration, and the second group consists of studies exploring the influence of migration patterns on conflicts.

Studies on international migration and conflict primarily focus on how conflicts of different intensities, violence, and political instability affect migration, shedding light on various underlying factors and dynamics. Gimenez-Gomez et al. (2019) contribute to this body of research by conducting a comprehensive empirical analysis of the role of human security factors in shaping trends in African migration to Europe from 1990 to 2014. They utilize the pseudo gravity model of bilateral migration flows and the PPML estimator and reveal that apart from economic factors, an increase in political oppression, human rights violations, ethnic tensions, political instability, and civil conflicts in African countries are all strongly linked to the rise in migration to European countries. While (Adhikari, 2013) studying the reasons behind individuals' decisions to leave their homes during civilian conflicts discovers that beyond conflict, there are a number of significant economic, social, physical, and political factors that influence individuals' choice to flee.

In their study, Foubert and Ruysen (2024) use data on annual bilateral migration rates and terrorist activities across 154 countries of origin and destination between 1975 and 2017. Authors employ a gravity model approach and reveal that terrorism operates both as a catalyst for migration and as a deterrent for destination choice, with the latter effect demonstrating greater strength and robustness. Furthermore, they find that while extreme levels of terrorism prompt international emigration, even modest levels are sufficient to diminish a country's attractiveness to potential migrants.

Dreher et al. (2011) provide further insights by empirically assessing the impact of terrorism on migration for 152 countries from 1976 to 2000 using feasible generalized least squares (FGLS) regressions and system-GMM estimations to account for potential endogeneity. Findings demonstrate robust evidence that terrorism increases skilled emigration, suggesting that it influences the migration decisions of highly educated individuals. By contrast, terrorism does not show a robust association with average migration, indicating that its effect on migration depends on individual levels of education.

The study by Escamilla-Guerrero et al. (2023) utilize high-frequency data to assess the impact of conflict events on migration to the United States during the Mexican Revolution. Their analysis reveals an increase in migration rates, peaking at approximately 60% above baseline levels and persisting for a few months before returning to pre-conflict norms. The research underscores violence as the primary driver of migration, with variations in its intensity and nature shaping the extent and longevity of migratory

⁵ Main estimations employ the bilateral migration flows data. Nonetheless, I also use bilateral migration stocks to assess the robustness of my results (See Section 6 and Table A.6 of Appendix A for details).

⁶ I use lags as a first attempt, but future work may need to consider more elaborate econometric approaches.

responses. [Alvarado and Massey \(2010\)](#) delve into the nuanced impact of violence on international migration, emphasizing its variability across different social and political contexts. Their analysis of structural adjustment and violence in selected Latin American countries reveals complex patterns where violence influences emigration differently: while violence leads to increased emigration from Nicaragua, it results in decreased emigration from Mexico, Costa Rica, and Guatemala. While [Moore and Shellman \(2004\)](#) shed light on the differential impact of violent behavior, highlighting its disproportionate effect on forced migration compared to other political and economic factors. Authors demonstrate that violent behavior, whether from the government or dissident groups, has a much greater impact on forced migration than factors such as the type of political institution or economic size. Similarly, [Maggio and Caporali \(2024\)](#) unveils the direct impact of state-driven violence on individuals' propensity to migrate by analyzing the migration behaviors of Venezuelans amid the political and economic turmoil of 2017–2018. Leveraging regional-level data on civilian casualties caused by security forces and insights gleaned from the ENCOVI-2018 survey, which tracks migration movements, the results strongly indicate that state-driven violence acts as a significant non-economic factor propelling international migration.

[Melander and Öberg \(2007\)](#) point out that the number of migrants is not significantly impacted by the level of intensity of armed conflict but by the threat of conflict. While [Bohra-Mishra and Massey \(2011\)](#) introduce the concept of a non-linear relationship between violence and migration, suggesting that while low to moderate levels of violence may deter migration, high levels of violence increase the likelihood of people moving.

Another area of research delves into the reciprocal relationship between migration patterns and conflicts, exploring how migration dynamics can influence the prevalence and occurrence of conflicts. [Docquier et al. \(2018\)](#) explore the mechanisms through which bilateral migration may shape the prevalence of interstate military conflict. Analyzing the impact of migration on conflict using bilateral panel data spanning from 1960 to 2000 reveals a consistent and positive effect of migration on conflict occurrence, even after accounting for potential endogeneity through a GMM approach. These findings suggest that migration may play a significant role in exacerbating tensions and contributing to the escalation of conflicts at an international level.

Through a theory-driven instrumental variable approach and comprehensive panel data spanning 117 developing countries from 1985 to 2010, [Preotu \(2016\)](#) discovers that emigration to developed nations reduces the incidence of civil conflict in the countries of origin. These findings highlight that by embracing open borders, developed nations can not only save the lives of migrants but also contribute to peace and stability in the home countries left behind. Similarly, [Collier and Hoeffler \(2004\)](#) uncover a positive correlation between the number of migrants in the U.S. and the likelihood of conflict in their home country. Their research indicates that diasporas may inadvertently contribute to the re-emergence of wars in their countries of origin, emphasizing the transnational impact of migration on conflict dynamics.

Overall, this literature underscores the complexity of the interplay between conflict and migration, emphasizing the need for multifaceted approaches to understanding and addressing these intertwined phenomena.

3. Measuring interstate soft conflicts

Definition

Motivated by the idea that lower-level disruptions may have the same negative impact as higher-level militarized disputes and act as a policy tool, the main interest of this study is to analyze the transition from normal relations to tense, defined here as “interstate soft conflict”.

Interstate soft conflict refers to a situation where tension flares up between two or more parties due to various reasons such as political disagreements, mutual distrust, historical tensions, human or animal rights violations, racial or religious hatred, and more. Unlike conventional wars or conflicts, this type of conflict does not involve physical violence but rather manifests through diplomatic restraints, renegotiation of relationships, protests, or boycotts.

These soft conflicts can have a significant impact on migration, affecting countries, companies, and individuals in various ways:

At the country level, states may restrict the movement of people for various reasons, such as seeking domination, revenge, punishment, a change of policies, or differences in beliefs. This is more common in countries where the government has direct control over the economy and can use migration as a political tool. China, for instance, uses its economic power to punish other states through trade. [Fuchs and Klann \(2013\)](#) find that countries that host the Dalai Lama, the spiritual leader of Tibet who supports Tibet's sovereignty, at the highest political level experience a decline in exports to China. Moreover, governments can also use their power to punish businesses with which they have tension. An instance of this was seen in 2018 when Dolce & Gabbana's advertising campaign for a fashion show in China was widely regarded as racist, ignorant, and provocative, leading to the Chinese Ministry of Culture and Tourism cancelling the show and boycotting the brand by its customers ([Bloomberg News, 2018](#)).

At the company level, organizations, whether they are companies or government/non-governmental organizations, may influence the distortion of relationships if they disagree with the activities of a particular company or country. A notable instance occurred in 2008 when Nokia announced its decision to shut down its factory in Germany due to high production costs and move to Romania for cheaper production. This decision sparked opposition from German unions, who organized demonstrations against the Finnish company ([Westall, 2008](#)). Similarly, in 1995, following a series of nuclear tests conducted by the French military in the South Pacific, many Danish retailers refused to do business with French companies ([Bentzen et al. 2001](#)).

At an individual level, interstate soft conflict can manifest in subtle ways. For instance, people may refuse to engage with a disputed country or company because of their political leanings or to express their discontent with military, political, economic, or social events occurring in a particular nation. A study by [Chavis and Leslie \(2006\)](#) reveal that strained relations between the United

States and France over the 2003 invasion of Iraq had a far-reaching negative impact on the sales of French wine. This highlights how deteriorating political relations between countries can permeate into the choices people make, influence their preferences, and increase the likelihood of a boycott. Similarly, civil society groups in Cambodia called for a boycott of Tate & Lyle Sugars back in 2010, citing the illegal and often violent land confiscation from hundreds of Cambodians (Le Coz, 2013).

Interstate soft conflicts are a form of non-military coercion that may target a country in general or a specific company. The primary objective of these conflicts is to exert economic pressure on the target, to force them to change their practices or assume political responsibility. When targeted at a country, interstate soft conflicts can have far-reaching consequences, including economic losses, changes in government, or shifts in political positions. For companies, the impact of these conflicts can be significant on their performance, particularly concerning sales, brand image, and reputation.

Despite the potential for significant disruption, interstate soft conflicts are not intended to cause violent conflicts or official institutional acts. Instead, they may act as policy instruments and negatively impact migration, similar to tariffs, embargoes, or sanctions, making them a powerful tool for achieving policy objectives without resorting to military force.

In summary, interstate soft conflicts may:

- involve multiple parties and may be expressed through various means, such as diplomatic restraints, renegotiation of relations, protests or boycotts, etc.
- arise due to a range of reasons, including political disagreements, mutual distrust, historical tensions, human or animal rights violations, racial or religious hatred, and more
- impact migration through three primary channels: at the level of country, company, or individual. The state can use its power and migration policies as tools to punish those countries and companies with which it has some kind of tension. Organizational units such as companies, foundations, or unions may disagree about the policies or activities of a particular company or country. Individuals, both individually and collectively, may prefer to avoid disputed countries or companies due to soft conflicts
- lead to pressure on the target entity, which may be a country in general or a particular company, to punish, dominate, retaliate, or try to change certain practices
- act as a policy tool and have no intent to yield violent conflicts, the imposition of sanctions, or other official institutional acts

Methodology

In the case selection process, the first step is data collection. This involves performing keyword searches using various top search engines like Google, Bing, Yahoo, and Baidu (Avila, 2017). Media reports, online journals, scholarly articles, and working papers that contain the words “boycott”, “tension”, “dispute”, and “conflict” in their text or headlines are important resources for identifying interstate soft conflicts.

The search focuses on the 2000–2020 time frame, coinciding with the most recent data on bilateral migration. However, there is no reason to believe this period is not typical of others.⁷

After collecting the data, I carefully analyze all search results by using logic and reasoning to identify suitable cases and determine the underlying motivation and timing of the event. I then narrow down the sample to cases at the interstate level, excluding those at the state level.⁸ As a result, a total of 20 cases were identified that met the criteria, resulting in 190 dyadic country-pairs, which form the interstate soft conflict measure, available for further analysis. Table 1 provides an overview of all 20 cases, and Online Appendix B1 offers a brief description of each case. However, since it is challenging to be abreast of all the worldwide interstate soft conflicts, there may be cases that were missed, leading to an underestimation of the overall effect of such conflicts. To address this issue, I perform a control group analysis in Section 6, by restricting the sample to a specific time frame and a group of countries. This approach reduces the probability of overlooking potentially relevant interstate soft conflicts. The findings are confirmed in Table 6.

Based on the case descriptions, it appears that an interstate soft conflict can target either a country as a whole or a particular company. To simplify matters, I will refer to these two types of interstate soft conflicts as indirect and direct.

Out of 20 cases, 7 have been recognized as instances of tension directed towards specific companies (known as direct interstate soft conflicts). These types of conflicts arise when a particular company’s policies or actions are deemed unacceptable by senior government officials, various associations or trade unions that advocate for human/animal/minority rights, and even individual or collective consumers. The result of these conflicts can be a growing wave of protests against the company.

For example, Dolce & Gabbana’s advertising campaign for a fashion event in China was criticized for being racist and provocative, resulting in the Chinese Ministry of Culture cancelling the show (Bloomberg News, 2018). Also, Greenpeace initiated the “Stop Esso campaign” to boycott the oil corporation Esso (known as ExxonMobil in the U.S.) due to its environmental damage

⁷ After estimating the impact of interstate soft conflicts in half the sample, the coefficients of interstate soft conflict variables remain negative, on average, reducing bilateral migration flows by about 18.86% in the 2000–2010 period and by about 10.14% in 2010–2020.

⁸ Conflicts may occur both between different states (interstate) and within a single state (intrastate). For the purposes of this study, cases involving state-level conflicts have been excluded. Examples of such cases include Shannon Coulter’s boycott of Ivanka Trump’s fashion line through the hashtag GrabYourWallet, which ultimately led to the closure of the company (Hyland, 2016); The organization Freedom for Animals initiated a campaign named ‘Sea Lies,’ which urged people to boycott all Merlin Entertainment brands. This was due to their mistreatment of captive animals, especially whales, in their aquariums (Freedom for Animals, 2014); The U.S. Campaign for Safe Cosmetics (CSC) called for a boycott of Johnson & Johnson due to the company’s use of harmful chemicals in their baby shampoo (NBC News Digital, 2011).

Table 1

List of interstate soft conflicts and classification.

N	From	Towards	Year	Title	Reason
1 ^a	UK	France	2000	L'Oreal still tests on animals	Animal Rights
2	UK	U.S.	2001	Stop Esso campaign	Environmental
3	U.S.	France	2002	Tension over Iraq War	Political
4	Arab world ^b	U.S.	2002	Tension over Iraq War	Political
5	Columbia	U.S.	2003	killer Coke	Human rights
6	Spain	China	2004	The Spaniards against 'Made in China'	Unfair competition / racism / immigration
7	Muslim Countries ^c	Denmark	2006	Muhammad Cartoon Crisis	Religious
8	Ireland	Japan	2007	Save the Whales	Environmental /Animal Rights
9	Canada	Saudi Arabia	2007	Canada - Saudi Arabia diplomatic spat	Political
10	Germany	Finland	2008	Germans boycott Nokia	Human rights
11	China	Norway	2010	Dispute over Nobel Peace Prize	Mutual trust
12	Greece	Germany	2010	Greek debt crisis and exposed memories	Political/Memories
13	China	Philippines	2010	Manila hostage crisis	Human rights
14	Cambodia	UK	2010	Cambodian blood sugar!	Human rights
15	Philippines	China	2011	Boycott 'Made in China' products	Territorial
16	China	Japan	2012	Senkaku / Diaoyu Island Conflict	Territorial
17	China	Maldives	2013	Cup noodles crisis	Cultural discrimination
18	China	Japan	2017	Opposition over Japanese official's visit to Taiwan	Political
19	Mexico	U.S.	2017	Water or beer?	Human rights
20	China	Italy	2018	Dolce & Gabbana under fire	Racism

^a Cases highlighted in yellow are related to direct interstate soft conflicts.

^b Officially there are 22 countries in the Arab world: Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates, Yemen <http://worldpopulationreview.com/countries/arab-countries/>.

^c See Online Appendix B2 for the list of Muslim-dominated countries.

(Greenpeace, 2001). Moreover, residents of Mexicali called for a boycott of Constellation Brands after the company gained access to the region's drinking-water supply through questionable deals (Carlile, 2018).

All these examples of direct interstate soft conflicts have targeted particular companies like Dolce & Gabbana, Esso, and Constellation Brands, due to their objectionable policies or actions. As a result, they have been opposed by the Chinese Ministry of Culture, Greenpeace advocacy group, and Mexicali consumers, resulting in the rejection to deal with them.

The remaining 14 cases have been recognized as instances of tension directed towards a country in general (known as indirect interstate soft conflicts). These types of conflicts arise due to political, military, economic, or diplomatic events and decisions made by governments that are deemed unacceptable by other countries, ethnic and racial minority organizations, animal and environmental protection groups, as well as consumers. Such conflicts may lead to widespread protests against the country in question, resulting in the refusal to deal with it.

For example, "China has canceled a meeting with the Norwegian fisheries minister days after Beijing warned that Norway's decision to award the Nobel peace prize to a jailed Chinese dissident would harm relations between the countries" (Watts and Weaver, 2010). Another example involves Japan's active hunting of whales for consumption, which led to public protests by Irish environmental and animal rights groups (Irish Examiner, 2007). Lastly, a boycott against the Maldives arose due to the controversy of removing kettles from Chinese tourists' hotel rooms to prevent them from cooking instant noodles. This practice was seen as discriminatory and sparked social and cultural animosity among Chinese tourists, leading to calls for a boycott of the Maldives (Global Times, 2013).

All these examples of indirect interstate soft conflicts have targeted certain countries like Norway, Japan, and Maldives for their policies or actions that are deemed unacceptable. As a result, these countries have been opposed by China, as well as environmental and animal rights groups and consumers, resulting in the refusal to deal with them.

To examine how interstate soft conflicts affect bilateral migration, I use a dataset that includes details on the partner countries affected or unaffected by each conflict and the year that the conflict occurred. Since it can be challenging to determine the precise start or end date of an interstate soft conflict, this study is of interest for studying the flare-up of tension. For the purpose of this study, I define the flare-up of an interstate soft conflict as the year when it was initially reported in primary sources (e.g., press and social media reports).

To construct a new measure of interstate soft conflict, I list each case of interstate soft conflict twice: once with country i and j at time t , and once with the countries reversed.

First, I create the main variable of interest as a single indicator variable that equals one if there is a flare-up of interstate soft conflict between partner countries at time t and zero otherwise. Then, given that the target of an interstate soft conflict may be a country in general or a specific company, I also zoom in on the impact of two different types of interstate soft conflicts by distinguishing between indirect and direct types of interstate soft conflict. However, the main focus of this study is to analyze the impact of all 20 cases collectively, without differentiation based on the target involved.

Thus a new measure of interstate soft conflict, the main variable of interest, is the indicator variable, which is equal to one if there is a flare-up of tension between country i and j at time t and is equal to zero in all other years.

Whereas I constructed the main variable of interest as an indicator variable, initially, I deemed using a non-linear treatment to be a good proxy as it is often done to detect policy changes. However, since interstate soft conflicts differ from policy adoption, I use an alternative strategy to avoid inaccurate event measurement. I estimate an interstate soft conflict propensity score from logistic regression as a function of the observable variables. The logistic regression results are then exploited to build propensity score, the predicted probability of being in a soft conflict between country i and j at time t . As Figure B3.1 in the Online Appendix B3 shows, that this predicted probability smoothly increases around the time of the event (the focus in the Figure B3.1 of the Online Appendix B3 is from two years before to two years after the event) for the treated pair of countries. To account for the possible limitations of the binary classification, I substitute the baseline interstate soft conflict indicator variable with this predicted probability in a robustness check. The results are consistent with those in the baseline specification (see Table B3.1 of the Online Appendix B3 for details).

Interested in how each interstate soft conflict case affects migration flows, I plotted the corresponding graphs. Fig. 1 displays twelve graphs that present the net migration flows from soft conflict-origin countries to target countries. Data covers three years before and after each interstate soft conflict. In each graph, the vertical line at time t represents a flare-up time of a given case of interstate soft conflict, and the solid blue line depicts the net flows of people from one country to another.

The graphs suggest that net flows mostly tend to decrease after comparing flows in the conflict year with the previous year. It is not surprising that the desire of Muslim nations to migrate to Denmark decreased after the Danish newspaper Jyllands-Posten published cartoons of the Islamic prophet Muhammad, which sparked mass demonstrations and boycotts of Denmark in many Muslim nations in the Middle East. While after the shock, we see a sharp recovery or a continuation of a downward trend.

Looking further on a case-by-case basis, it is easy to see that migration levels decline in varying degrees compared to the previous or following year. The interrelationship between interstate soft conflicts and net migration flows is ambiguous, emphasizing the importance of studying interstate soft conflicts that affect migration between countries.

4. Empirical model and estimation issues

To estimate the impact of interstate soft conflicts on bilateral migration flows and to obtain partial equilibrium estimates, this study employs a theoretically grounded structural gravity model for migration by Anderson (2011)⁹ and considers all recommended suggestions to ensure accurate estimation.¹⁰ Following this theory-consistent framework, the econometric gravity model for the baseline analysis used in this study is:

$$X_{ij,t} = \exp[\beta_1 SOFTconflict_{ij,t} + \beta_2 GRAV_{ij} + N_{i,t} + N_{j,t} + y_{i,t} + e_{j,t} + \mu_{ij}] + \epsilon_{ij} \quad (1)$$

To capture bilateral relationships between countries, both time-invariant and time-varying factors are used. i and j denotes countries, and t denotes time. $X_{ij,t}$ is net flows of migrants born in the origin country i moving to the destination country j at time t . $SOFTconflict_{ij,t}$ is an indicator variable that takes the main place in the analysis, which equals one if there is a flare-up of interstate soft conflict between partner countries at time t and zero otherwise. $GRAV_{ij}$ is a set of observable variables used to represent unobservable bilateral costs, along with a measure of interstate soft conflicts. It encompasses all standard time-invariant country-specific dyadic gravity covariates such as the logarithm of weighted bilateral distance and indicator variables that account for the presence of contiguous borders, common language, and colonial ties. Size variables $N_{i,t}$ and $N_{j,t}$ represent population size in the origin and destination country, respectively.

As additional control variables of the bilateral relationship, other time-varying indicator variables are used: $RTA_{ij,t}$ for the presence of regional trade agreements (RTAs); $SANCT_{ij,t}$ for different types of economic sanctions: arms, military assistance, trade, financial, travel, and other sanctions; $MID_{ij,t}$ for militarized interstate disputes (MIDs) coded into the display of force, use of force and war; $StateActs_{ij,t}$ for export and import policy instruments, trade defense instruments, non-tariff barriers, and other state acts.

Please refer to Online Appendix B5 for a detailed list of all variables utilized in the analysis, including their definitions and sources.

Following the Baldwin and Taglioni (2006) guidelines a full set of fixed effects are introduced, commonly used in the economic literature to ensure reliable outcomes. $y_{i,t}$ denotes the vector of origin_country-time fixed effect, which controls for the unobservable outward multilateral resistance terms (MRTs). $e_{j,t}$ denotes the vector of destination_country-time fixed effect, which controls for the unobservable inward MRTs. Moreover, both sets of the time-varying origin and destination_country dummies absorb any other observable and unobservable origin and destination_country-specific time-varying factors that may affect bilateral migration. μ_{ij} is a vector of country-pair fixed effects which absorbs all time-invariant observable and unobservable determinants of migration frictions and as demonstrated by Baier and Bergstrand (2007) absorbs linkages between the potentially endogenous variables and the error term ϵ_{ij} , clustered at the country-pair level.

Considering the multiplicative form of the structural gravity equation of Anderson and van Wincoop, the baseline model used in the analysis could be represented in a log-linear form with an additive error term, however following Silva and Tenreyro (2006), all

⁹ See Online Appendix B4 for details on the structural gravity model for migration.

¹⁰ For studies of the empirical gravity literature offering information on data, econometric challenges, and solutions with gravity estimations, see Baldwin and Taglioni, 2006; Silva and Tenreyro, 2006; Head and Mayer, 2014 Piermartini and Yotov, 2016.

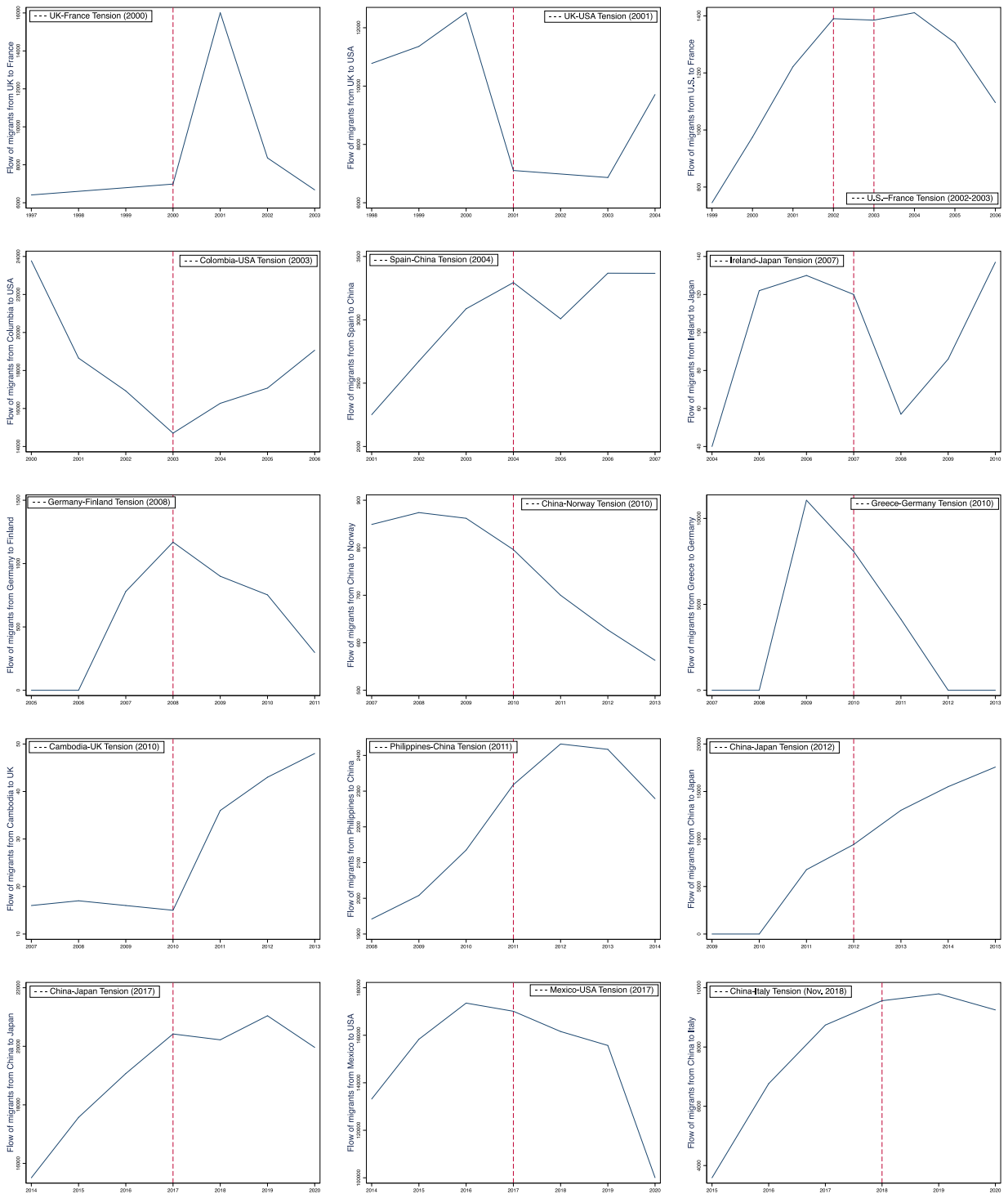


Fig. 1. The effect of interstate soft conflicts on net flows from soft conflict-origin to target countries case-by-case.

the regressors enter exponentially to avoid inconsistency. Based on the fact that migration mainly demonstrate a correlation between covariates and the error term (heteroscedasticity), their study recommends to utilize the Poisson pseudo-maximum likelihood (PPML) estimator rather than using the typical log-linear Ordinary least squares (OLS) approach, under assumption that variance of the error term is constant across observations (homoskedasticity). Moreover, the PPML estimator treats missing data as statistical zeroes,

assuming that they occur randomly (Head and Mayer, 2014). This approach enables the inclusion of information on zero migration flows that would be excluded from estimation with the OLS estimator, thereby creating a selection bias problem.¹¹ In addition according to Weidner and Zylkin (2019) PPML is the only estimator that can give consistent estimates to a three-way gravity specification with the full set of FEs without imposing strict assumptions on the variance of the error term.

Following the above recommendations, to get accurate estimates for all Equation (1) specifications, I use panel data and the PPML estimator with the full set of FEs. However, to ensure the estimates are robust, I also test for PPML estimates with standard gravity variables instead of pair fixed effects and OLS estimates with and without the full set of FEs (see Online Appendix B6 for details).¹²

5. Data

The sample used for the empirical analysis combines data from different sources for the 2000–2020 period. A balanced database aggregates all information by country-pair and year. Online Appendix B7 provides a complete list of countries used in the analysis.

Global bilateral migration data is from United Nations University UNI-CRIS Institute on Comparative Regional Integration Studies gathered by Standaert et al. (2022). It provides yearly bilateral data on net flows of migrants born in the origin country, moving to the destination country, and on the stock of migrants born in the origin country, living in the destination country.

Data for the variable of interest is based on media reports and online journals, scholarly articles, and working papers that mention the words: “boycott”, “tension”, “dispute”, and “conflict” in their texts and/or in their headlines. See Section 3 for details on a new measure of interstate soft conflict.

The baseline dataset includes time-varying and time-invariant variables, as trade costs can be separated into components that vary over time and those that do not.

All standard time-invariant dyadic gravity variables such as bilateral distance, contiguity, common language, and colonial ties are from the Centre d’Études Prospectives et d’Informations Internationales (CEPII) dyadic GeoDist data (Mayer and Zignago, 2011). While time-varying country-specific data on GDP per capita (current US\$) and population size is from the World Bank World Development Indicators (WDI).

In addition to standard gravity variables, time-varying control variables like RTAs, sanctions, MIDs, and state acts are utilized.

Data on RTAs is from Mario Larch’s Regional Trade Agreements Database from (Egger and Larch, 2008).

The information on bilateral sanctions covering trade, financial activity, arms, military assistance, travel and other sanctions is from The Global Sanctions Database (GSDB) (Syropoulos et al. 2022; Felbermayr et al. 2020; Kirilakha et al. 2021).

Data on militarized interstate conflicts stem from MIDs dyadic database, compiled by the Correlates of War Project (Maoz et al. 2019). MIDs sample covers interstate armed conflicts coded into the display of force, use of force, and war.

Lastly, the data on export and import policy instruments, trade defense instruments, non-tariff barriers, and other types of restrictions is from the Global Trade Alert initiative (Evenett and Fritz, 2020), which includes more than 33,000 records of state acts.

6. Baseline estimation results

Through the use of various panel data estimation techniques (see Online Appendix B6 for details), it was determined that PPML was the only estimator capable of producing reliable estimates for the specifications utilized in this study. Thus, the PPML estimator with origin_country-time, destination_country-time, and country-pair FEs is used in further analysis. Assessed in Stata using the “ppmlhdfc” command (Correia et al. 2019).

The baseline estimates of the impact of interstate soft conflicts on bilateral migration flows across various targets are presented in Table 2. The complex nature of FEs means I can only determine the impact of time-varying bilateral factors, which in this case includes the interstate soft conflict variable, as the main object of the analysis, as well as two other variables to see if the effect of interstate soft conflicts is driven more by indirect or direct interstate soft conflicts. Column (1) displays the estimated result for the main variable of interest, illustrating the effect of flare-ups of both indirect and direct interstate soft conflicts among partner nations. The result implies that, on average, interstate soft conflicts reduce bilateral migration flows by about 23.35% (that is $[e^{-0.266} - 1] * 100$). Separation of indirect and direct cases of interstate soft conflicts shows that tensions against the country as a whole due to its unacceptable actions have an effect on migration. The estimated results presented in Column (2) show that the indirect interstate soft conflicts reduce bilateral migration flows by about 25.84% on average.

Based on the results, it appears that interstate soft conflicts have an immediate and negative impact on the migration between two countries. However, it is important to note that these tensions may impact the migration flows both immediately and over an extended period. Moreover, it is argued that conflicts may react to changes in migration flows, meaning that countries with close relations with their partners are less likely to enter into conflict.

To reduce the problem of reverse causality between bilateral migration and interstate soft conflicts and to consider the time delay of the effect, lag of the interstate soft conflict variables is introduced into the analysis. By testing the impact of interstate soft

¹¹ When analyzing migration data, it is possible to encounter situations where the data is missing or nonexistent. This could happen because two countries have no interactions or due to incorrect reporting, leading to data gaps.

¹² According to Head and Mayer (2014, p. 17) “rather than selecting the Poisson PML as the single “workhorse” estimator of gravity equations, it should be used as part of a robustness-exploring ensemble that also includes OLS and Gamma PML”.

Table 2
Baseline estimation results.

	(1)	(2)	(3)	(4)
SOFTconflict	-0.266 (0.133)**			
INDIRECT		-0.299 (0.161)*		
DIRECT		-0.213 (0.228)		
L.SOFTconflict			-0.419 (0.148)***	
L.INDIRECT				-0.412 (0.158)***
L.DIRECT				-0.431 (0.293)
N	289 354	289 354	262 453	262 453
Pseudo r2	0.961	0.961	0.962	0.962
Origin-time FEs	Yes	Yes	Yes	Yes
Destination-time FEs	Yes	Yes	Yes	Yes
Country-pair FEs	Yes	Yes	Yes	Yes

This table presents estimates of the impact of interstate soft conflicts on bilateral migration flows across various targets using the PPML estimator and origin_country-time, destination_country-time, and country-pair FEs. All estimates are obtained with balanced panel data for the period 2000–2020. The dependent variable is migration in levels. Column (1) covers all interstate soft conflict cases. Column (2) includes indirect and direct cases. Column (3) covers all interstate soft conflict cases over the next year. Column (4) includes indirect and direct cases for the next year. All Standard errors are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$.

conflicts using a lag approach, it is more feasible to demonstrate the impact of these conflicts on migration flows rather than the other way around.

The results shown in [Table 2](#), Columns (3–4) suggest that interstate soft conflicts may negatively affect bilateral migration flows over an extended period. The interstate soft conflict of the next year could reduce bilateral migration flows by about 34.22%, as shown in Column (3), while the indirect interstate soft conflicts reduce bilateral migration flows by about 33.76% on average, Column (4). Since it is rather challenging to achieve an immediate downturn in migration after the emergence of interstate soft conflict, and it generally takes time to get an effect, a lagged version of the interstate soft conflict variable will henceforth be used.

Interested in how long it takes for interstate soft conflicts to have an impact, I also assess the baseline model with the lagged effects of the interstate soft conflict variable for up to 5 years. This allowed me to determine the impact of interstate soft conflicts over time. The results reveal that the effect of interstate soft conflicts disappears after a 3-year period (see [Table A.1](#) of [Appendix A](#)).

7. Robustness checks

Robustness of baseline specification and sample composition

Due to the complex structure of the FEs, results can only be obtained for two-tailed variables that vary over time. Therefore, various bilateral time-varying control variables such as RTAs, different types of sanctions, MIDs, and State acts are utilized to ensure the reliability of the estimates.

To perform robustness checks, I include control variables one at a time, as there is limited data available for these variables. When examining RTAs and sanctions, I conduct a full sample assessment. However, to account for militarized interstate disputes and state acts, I limit the sample to the periods of 2000–2014 and 2008–2020. In order to maintain consistency, I repeat the baseline estimation for each sub-sample, including the RTAs indicator variable.

In [Table 3](#), the estimated results for the main variable of interest are shown. Even with the inclusion of control variables and a restricted sample size, the coefficient for the interstate soft conflict variable consistently appears negative.

It is worth noting that interstate soft conflicts have a comparable effect on bilateral migration flows, as do softer types of sanctions and policy instruments, leading to a decrease in the net flows of people from one country to another. But migration flows tend to increase when it comes to militarized disputes, arms, and military sanctions.

The results show that interstate soft conflicts do not manifest themselves in increased sanctions, militarized disputes, or state acts. The findings are robust, and interstate soft conflicts have a negative effect on bilateral migration even when accounting for data limitations during sampling. However, I conduct further robustness checks to make sure that the estimates of interstate soft conflict in Columns (2–4–6) of [Table 3](#) are not affected by the impact of sanctions, MIDs, or state acts. First, in the baseline specification, I include all the sanctions imposed between pair countries in a year. Then, I exclude all pairs of countries that were subject to any type of sanctions over the entire period. The results, after including and excluding all sanctions, MIDs, and state acts, suggest that the effect of interstate soft conflicts is not due to any of them (see [Table A.2](#) in [Appendix A](#) for details).

In addition, to ensure that any potential effects from China do not influence the estimation results, I exclude China as an origin_country, a destination_country, and both from the baseline specification. The results, which can be found in [Table A.3](#) of [Appendix A](#), suggest that the estimates for the interstate soft conflict variable are independent of the China effect.

Table 3
Accounting for competing explanations.

	(1)	(2)	(3)	(4)	(5)	(6)
	RTAs	Sanctions	RTAs	MIDs	RTAs	State acts
	2000–2020		2000–2014		2008–2020	
L.SOFTconflict	-0.402 (0.144)***	-0.389 (0.140)***	-0.334 (0.170)**	-0.312 (0.162)*	-0.108 (0.193)*	-0.177 (0.191)*
RTA	0.211 (0.093)**	0.226 (0.088)**	0.045 (0.102)*	0.030 (0.095)*	0.419 (0.107)***	0.430 (0.096)***
ARMS_sanction		-0.012 (0.117)		0.229 (0.119)*		0.053 (0.176)
MILITARY_sanction		0.218 (0.096)**		0.472 (0.109)***		0.106 (0.119)
TRADE_sanction		-0.330 (0.108)***		-0.125 (0.100)		-0.503 (0.132)***
FINANCIAL_sanction		0.113 (0.100)		-0.025 (0.106)		0.148 (0.112)
TRAVEL_sanction		-0.634 (0.117)***		-0.551 (0.244)**		-0.511 (0.102)***
OTHER_sanction		-0.087 (0.115)		-0.010 (0.137)		-0.085 (0.105)
DISPLAY_of_force				0.004 (0.071)		0.082 (0.124)
USE_of_force				0.387 (0.071)***		0.536 (0.115)***
Interstate_War				0.673 (0.462)		0.000 (.)
Capital_controls						0.225 (0.217)
Exp_imp_instruments						0.007 (0.019)
Foreign_investment_policy						0.073 (0.057)
Labor_migration_policy						0.023 (0.029)
Public_procurement_policy						0.017 (0.042)
Subsidies_and_state_aid						-0.003 (0.023)
Trade_defense_instruments						0.057 (0.046)
Non_tariff_barriers						-1.502 (0.620)**
N	262 453	262 453	179 540	179 540	146 035	146 035
Pseudo r2	0.962	0.962	0.966	0.967	0.966	0.967
Origin-time FEs	Yes	Yes	Yes	Yes	Yes	Yes
Destination-time FEs	Yes	Yes	Yes	Yes	Yes	Yes
Country-pair FEs	Yes	Yes	Yes	Yes	Yes	Yes

This table presents estimates of the impact of interstate soft conflicts on bilateral migration flows and robustness checks by including control variables in the baseline model. All estimates are obtained with balanced panel data for different periods due to data unavailability using the PPML estimator and origin_country-time, destination_country-time, and country-pair FEs. The dependent variable is migration in levels. Columns (1–3–5) control for the RTAs in different periods. Column (2) controls the different types of sanctions. Column (4) additionally controls MIDs. Column (6) controls the state acts. All Standard errors are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$.

Since the dataset includes the global financial crisis, I restrict the sample in three ways to exclude the possibility of capturing the impact of the financial crisis. First, I restrict the sample to the 2000–2008 period, including the crisis's starting year in the estimation. Second, I restrict the sample to the 2009–2020 period to control for the subsequent years of the crisis. Lastly, I drop 2008, 2009, and 2010 years from the sample. The results in Columns (1) and (2) of [Table A.4](#) of [Appendix A](#) are not significantly different, indicating that the crisis did not affect interstate soft conflicts. This is further confirmed in Column (3), where the 2008, 2009, and 2010 years are not taken into account in the estimation.

To further test the robustness of the results, I include the lag of the bilateral migration variable in the baseline specification to account for the initial migration. Then, I interact this lag with the interstate soft conflict variable. The estimated results in [Table A.5](#) of [Appendix A](#) in Columns (1–2) imply that interstate soft conflicts continue to have a sustained negative impact on bilateral migration flows in both scenarios.

And lastly, I control for distance in preferences. To do this, I incorporate the Linder variable into the baseline specification. This variable measures the disparity in GDP per capita between the two countries.¹³ In Column (3) of Table A.5 of Appendix A, the Linder variable coefficient aligns with Linder's hypothesis as it is negative. However, the coefficient size is zero, suggesting that countries tend to avoid migration to those with similar economic development and preferences. Additionally, I include the logarithm of the Linder variable in Column (4). Although the coefficient becomes positive, it is not significant, and thus this study cannot confirm the validity of Linder's hypothesis.

Overall, the results suggest that interstate soft conflicts have a robust negative effect on bilateral migration flows, regardless of the control for omitted variables and across different model specifications.

Since the dataset by Standaert et al. (2022) on bilateral migration also provides data on migration stocks, I use it in the baseline specification to assess the robustness of the estimates. The estimated results in Table A.6 of Appendix A in Columns (1–2) suggest that interstate soft conflicts can also negatively affect bilateral migration stocks. Interstate soft conflicts of the next year have the potential to reduce bilateral migration stocks by about 21.72%, as shown in Column (1), while the indirect interstate soft conflicts reduce bilateral migration stocks by about 10.77% on average, Column (2). However, when it comes to bilateral migration flows, soft conflicts have a greater impact compared to their effect on migration stocks. This might be explained by the fact that migration stocks have a relatively low level of volatility.

Measurement issues and identification

It is challenging to be abreast of all the worldwide interstate soft conflicts. If relevant cases are not identified, the control group may include countries that are actually affected by soft conflicts. This may lead to an underestimation of the overall effect and bias the baseline results towards zero. To check for this possibility, the following steps are taken:

First, I choose two events from the list of cases: indirect and direct interstate soft conflict (see Table 1). An example of indirect interstate soft conflict occurred in 2010 when China canceled a meeting with the Norwegian fisheries minister a few days after Beijing warned that Norway's decision to award the Nobel Peace Prize to a jailed Chinese dissident would harm relations between the two countries (Watts and Weaver, 2010). While direct interstate soft conflict arose in 2018 over an advertising campaign for "The Great Show", a Dolce & Gabbana event in China, which was considered racist, ignorant, provocative, and sexually offensive in China, leading to the Chinese Ministry of Culture and Tourism cancelling the show and spreading backlash against the Italian brand (Bloomberg News, 2018).

Second, I test the impact of selected cases in the full sample by restricting the interstate soft conflict indicator variable to equal one only for one selected case at time t and zero otherwise. This means that any cases that were previously marked as one in the interstate soft conflict variable are now marked as zero. The results, which can be found in Table 4, show no significant impact. This suggests that when cases are only partially observable, the baseline results may be underestimated.

Table 4
Impact of one case of interstate soft conflict in the full sample.

	(1)	(2)
	Indirect case China-Norway (2010)	Direct case China-Italy (2018)
SOFTconflict	-0.104 (0.104)	0.873 (0.242)
N	281 107	281 107
Pseudo r^2	0.961	0.993
Origin-time FEs	Yes	Yes
Destination-time FEs	Yes	Yes
Country-pair FEs	Yes	Yes

This table presents estimates of the impact of two interstate soft conflicts on bilateral migration flows for a full sample using the PPML estimator and origin_country-time, destination_country-time, and country-pair FEs. All estimates are obtained with balanced panel data. The dependent variable is migration in levels. Columns (1–2) present the results for two different cases of interstate soft conflict. * $p < .10$, ** $p < .05$, *** $p < .01$.

Third, I test the impact of the same two cases on a restricted sample where the control group comprises the immigrant and emigrant populations by country of origin and destination for the case of China, Norway, and Italy (Migration Policy Institute, 2020). Lastly, I restrict the time frame to a shorter pre/post-event period by keeping the event year, the year before and after (see Table 5).

In this case, the smaller size of the control group and the narrower time frame reduces the probability of neglecting potentially relevant interstate soft conflicts. The findings are confirmed in Table 6, implying that the baseline estimates in this study identify a lower bound (in absolute terms) of the true effect.

¹³ Linder = $|GDP_{pc}^j - GDP_{pc}^i|$. Linder's hypothesis suggests that the distance in GDP per capita can be used to measure the similarity of tastes. When countries have similar economic structures (smaller Linder variables), there is a higher chance of a mutual relationship between them (Linder, 1961).

Table 5
Interstate soft conflicts based on control group classification.

From	Towards	Year	Type	N	Control group countries	Years
China	Norway	2010	Indirect interstate soft conflict	1	Sweden-Denmark-Japan-UK	2009-2010-2011
				2	Sweden-Denmark-Korea-UK	
				3	Sweden-Lithuania-Japan-UK	
				4	Sweden-Lithuania-Korea-UK	
				5	Denmark-Lithuania-Korea-UK	
				6	UK-Lithuania-Japan-Korea	
China	Italy	2018	Direct interstate soft conflict	1	Romania-France-Japan-UK	2017-2018-2019
				2	Romania-Switzerland-Korea-UK	
				3	Romania-Switzerland-Japan-UK	
				4	Albania-France-Korea-UK	
				5	Albania-France-Japan-UK	
				6	Albania-Switzerland-Japan-UK	

Table 6
Control group refinement.

	(1) Control group N1	(2) Control group N2	(3) Control group N3	(4) Control group N4	(5) Control group N5	(6) Control group N6
INDIRECT	-0.614 (0.354)*	-0.685 (0.292)**	-1.598 (0.771)**	-1.593 (0.699)**	-1.675 (0.663)**	-1.789 (0.972)*
<i>N</i>	78	78	78	72	69	75
Pseudo r2	0.922	0.993	0.951	0.989	0.989	0.983
DIRECT	-0.592 (0.344)*	-0.835 (0.424)**	-0.831 (0.399)**	-0.050 (0.220)	-0.125 (0.214)*	-0.342 (0.297)*
<i>N</i>	81	84	75	70	67	57
Pseudo r2	0.965	0.981	0.984	0.971	0.985	0.986
Origin-time FEs	Yes	Yes	Yes	Yes	Yes	Yes
Destination-time FEs	Yes	Yes	Yes	Yes	Yes	Yes
Country-pair FEs	Yes	Yes	Yes	Yes	Yes	Yes

This table presents estimates of the impact of two cases of interstate soft conflicts on bilateral migration flows for the restricted sample using the PPML estimator and origin_country-time, destination_country-time, and country-pair FEs. All estimates are obtained with balanced panel data. The dependent variable is migration in levels. Columns (1–6) present the results for the different control groups according to classification in Table 5. All Standard errors are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$.

8. Conclusion

This study examines the cost of interstate soft conflicts that occur due to migration disruptions. It argues that such conflicts may act as a policy tool to punish or try to change particular behavior of countries or companies instead of resorting to military force, sanctions, or other official institutional acts.

Limited attention has been given to researching how interstate conflicts affect bilateral migration, as the focus has primarily been on international trade. Furthermore, there has been even less examination of the impact of non-violent disputes on migration. To address this gap, this study expands the analysis of the conflict-trade relationship by including migration and supports the argument that interstate soft conflicts have a negative effect on bilateral migration flows.

The empirical approach uses balanced panel data with annual observations and a theory-consistent structural gravity model augmented with a new measure of interstate soft conflict. Using the PPML estimator with the full set of FEs, the results suggest that interstate soft conflicts lead to an average decrease of about 23.35% in bilateral migration flows. After introducing a lag of the interstate soft conflict variable to reduce the problem of reverse causality between bilateral migration and interstate soft conflicts and to account for the time delay of the effect, the results reveal that interstate soft conflicts may have a prolonged negative impact on bilateral migration flows (the effect disappears after three years), causing a reduction of about 34.22% in bilateral trade flows.

According to the results, interstate soft conflicts have a sustained and economically significant negative effect on bilateral migration regardless of the control for omitted variables (presence of regional trade agreements, different types of sanctions, state acts, and militarized interstate disputes) and different model specifications. The findings also show a negative relationship between interstate soft conflicts and bilateral migration stocks.

This study argues that interstate soft conflicts, which arise when diplomacy fails, and a military operation seems too radical, may act as a policy tool and negatively affect migration. Since, to the best of my knowledge, no previous research has examined the effects of such conflicts on migration, this study aims to fill this gap by quantitatively analyzing the relationship between interstate soft conflicts and bilateral migration flows to provide an initial understanding of the extent to which they affect migration.

This study offers several contributions. First, it empirically explores the relationship between interstate soft conflicts and bilateral migration flows using a new measure of interstate soft conflict. Second, since deteriorating relations may be detrimental to bilateral migration, and other social welfare proxies, the results may help policymakers and governments facing these types of conflicts to

address their root causes and mitigate their negative impacts through appropriate policies; by strengthening dialogue and diplomatic relations; by promoting cooperation between partners, etc. Lastly, the results may have broader implications as they may be applied to a wider range of countries worldwide. Therefore, demonstrating consistent results is crucial, as interstate soft conflicts may have far-reaching economic consequences.

I believe that this analysis marks a noteworthy advancement in the assessment of migration costs. However, there are several limitations, that remain areas for further research. We may need to improve how we measure and code interstate soft conflicts, expand the analysis to include more cases, and examine the impact of these conflicts on migration on a case-by-case basis. It would also be useful to understand the threshold at which these conflicts start to harm economic relations. These areas of study could be valuable from both an applied and policy perspective.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Additional robustness checks

See Tables A.1–A.6

Table A.1
Lagged variables.

	(1)	(2)	(3)	(4)	(5)
L.SOFTconflict	−0.419 (0.148)**				
L2.Conflict		−0.360 (0.130)***			
L3.SOFTconflict			−0.405 (0.134)***		
L4.SOFTconflict				−0.122 (0.142)	
L5.SOFTconflict					−0.118 (0.150)
N	262 453	241 483	220 695	202 914	189 422
r2	0.962	0.962	0.962	0.963	0.963
Origin-time FEs	Yes	Yes	Yes	Yes	Yes
Destination-time FEs	Yes	Yes	Yes	Yes	Yes
Country-pair FEs	Yes	Yes	Yes	Yes	Yes

This table presents estimates of the impact of interstate soft conflicts on bilateral migration flows using the PPML estimator and origin_country-time, destination_country-time, and country-pair FEs. All estimates are obtained with balanced panel data. The dependent variable is migration flows in levels. Columns (1–5) allow to gradually implement the effects of interstate soft conflicts using various lags (up to 5 years). All Standard errors are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$.

Table A.2
Accounting for competing explanations.

	(1)		(2)		(3)		(4)		(5)		(6)	
	includes	excludes	includes	excludes	includes	excludes	includes	excludes	includes	excludes	includes	excludes
	All sanctions		All MIDs		All state acts							
L.SOFTconflict	−0.427 (0.148)***	−0.344 (0.184)**	−0.424 (0.147)***	−0.343 (0.162)**	−0.420 (0.148)***	−0.465 (0.269)*						
ALL_sanctions	−0.171 (0.062)***											
ALL_MIDs			0.282 (0.059)***									
ALL_state acts					0.024 (0.034)							
N	262 453	202 259	262 453	255 981	262 453	70 445						
Pseudo r2	0.962	0.968	0.962	0.962	0.962	0.988						
Origin-time FEs	Yes	Yes	Yes	Yes	Yes	Yes						
Destination-time FEs	Yes	Yes	Yes	Yes	Yes	Yes						
Country-pair FEs	Yes	Yes	Yes	Yes	Yes	Yes						

This table presents estimates of the impact of interstate soft conflicts on bilateral migration flows using the PPML estimator and origin_country-time, destination_country-time, and country-pair FEs. All estimates are obtained with balanced panel data for the 2000–2020 period. The dependent variable is migration in levels. Columns (1–3–5) include all sanctions, MIDs, and state acts between the two countries to control their impact throughout the entire sample period. Columns (2–4–6) exclude a pair of countries that were subject to any types of sanctions, MIDs, and state acts to control their impact throughout the entire sample period. All Standard errors are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$.

Table A.3
China effect.

	(1)	(2)	(3)
	origin	excludes China as: destination	origin & destination
L.SOFTconflict	-0.480 (0.190)**	-0.465 (0.156)***	-0.561 (0.211)***
N	259 908	259 873	257 328
Pseudo r2	0.962	0.962	0.962
Origin-time FEs	Yes	Yes	Yes
Destination-time FEs	Yes	Yes	Yes
Country-pair FEs	Yes	Yes	Yes

This table presents estimates of the impact of interstate soft conflicts on bilateral migration flows using the PPML estimator and origin_country-time, destination_country-time, and country-pair FEs. All estimates are obtained with balanced panel data for the 2000–2020 period. The dependent variable is migration in levels. Column (1) excludes China as an origin. Column (2) excludes China as a destination. Column (3) excludes China as an origin and a destination. All Standard errors are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$.

Table A.4
Financial crisis.

	(1)	(2)	(3)
	2000–2008	2009–2020	excludes 2008-9-10 years
L.SOFTconflict	-0.207 (0.129)*	-0.106 (0.172)*	-0.418 (0.156)***
N	92 824	131 519	219 510
Pseudo r2	0.980	0.968	0.961
Origin-time FEs	Yes	Yes	Yes
Destination-time FEs	Yes	Yes	Yes
Country-pair FEs	Yes	Yes	Yes

This table presents estimates of the impact of interstate soft conflicts on bilateral migration flows using the PPML estimator and origin_country-time, destination_country-time, and country-pair FEs. All estimates are obtained with balanced panel data. The dependent variable is migration in levels. Column (1) covers the 2000–2008 sub-sample. Column (2) Column covers the 2009–2020 sub-sample. (3) excludes 2008, 2009 and 2010 years from the full sample. All Standard errors are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$.

Table A.5
Initial trade/distance in preferences.

	(1)	(2)	(3)	(4)
	Initial trade		Distance in preferences	
L.SOFTconflict	-0.308 (0.125)**	-0.683 (0.292)**	-0.409 (0.149)***	-0.421 (0.147)***
L.trade	0.000 (0.000)***			
SOFTconflict*L.trade		0.000 (0.000)		
Linder			-0.000 (0.000)**	
(Log) Linder				0.014 (0.026)
N	262 453	262 453	262 453	262 448
Pseudo r2	0.964	0.962	0.962	0.962
Origin-time FEs	Yes	Yes	Yes	Yes
Destination-time FEs	Yes	Yes	Yes	Yes
Country-pair FEs	Yes	Yes	Yes	Yes

This table presents estimates of the impact of interstate soft conflicts on bilateral migration flows using the PPML estimator and origin_country-time, destination_country-time, and country-pair FEs. All estimates are obtained with balanced panel data. The dependent variable is migration in levels. Column (1) introduces the lag of the bilateral migration variable as a control. Column (2) presents the interaction between the lag of migration and interstate soft conflicts as a control variable. Column (3) introduces Linder variable as a control for distance in preferences. Column (4) presents the logarithm of Linder variable. All Standard errors are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$.

Table A.6
Baseline estimation results (Stock)

	(1)	(2)
L.SOFTconflict	-0.245 (0.120)**	
L.INDIRECT		-0.114 (0.114)*
L.DIRECT		-0.462 (0.243)
<i>N</i>	340 812	340 812
Pseudo <i>r</i> ²	0.962	0.962
Origin-time FEs	Yes	Yes
Destination-time FEs	Yes	Yes
Country-pair FEs	Yes	Yes

This table presents estimates of the impact of interstate soft conflicts on bilateral migration stocks across various targets using the PPML estimator and origin_country-time, destination_country-time, and country-pair FEs. All estimates are obtained with balanced panel data for the period 2000–2020. The dependent variable is migration in levels. Column (1) covers all interstate soft conflict cases over the next year. Column (2) includes indirect and direct cases for the next year. All Standard errors are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$.

Appendix B. Supplementary data

Supplementary material related to this article can be found online at <https://doi.org/10.1016/j.inteco.2024.100522>.

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