WORKING PAPER ON POLICY DRIVERS OF ENFORCED RETURN

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The working paper on the policy drivers of enforced return is divided into two separate studies.

The first: "'Nothing Works'? A Quantitative Assessment of the Effects of Different Types of Return and Readmission Frameworks on EU Member States' Enforced Return Rates" examines return and readmission frameworks as a key policy instrument used by both European states and the European Union to manage return cooperation with non-EU+ countries. It analyzes whether different types of frameworks have distinct effects on enforced return rates.

The second: "Determinants of Enforced Return: A Quantitative Analysis of the Spectrum of (In)voluntariness Among Rejected Asylum Seekers in the Netherlands," explores additional policy factors beyond return and readmission frameworks, such as the allure of EU membership, the requirement of Schengen visas, the involvement of native counsellors in assisted returns, and the duration of asylum procedures. These policy factors are assessed alongside non-policy factors in the Dutch context. The Netherlands provides an interesting case study due to its particularly thick enforcement regime with a well-institutionalized return system and a high enforcement capacity.

Together, these two studies provide a comprehensive assessment of the determinants of enforced return.

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Authors	"'Nothing Works'? A Quantitative Assessment of the Effects of Different Types of Return and Readmission Frameworks on EU Member States' Enforced Return Rates" Ana Maria Torres Chedraui, Erasmus University Rotterdam (EUR) Arjen Leerkes, Erasmus University Rotterdam (EUR) Mieke Maliepaard, Wetenschappelijk Onderzoek- en Documentatiecentrum (WODC) Manon van der Meer, Inspectie Justitie en Veiligheid "'Determinants of Enforced Return: A Quantitative Analysis of the Spectrum of (In)voluntariness Among Rejected Asylum Seekers in the Netherlands" Michael Sinnige, Erasmus University Rotterdam (EUR) Laura Cleton, Erasmus University Rotterdam (EU) Arjen Leerkes, Erasmus University Rotterdam (EUR)
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‘Nothing Works’? A Quantitative Assessment of the Effects of Different Types of Return and Readmission Frameworks on EU Member States’ Enforced Return Rates

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Table of contents

Acknowledgement 7

Executive Summary 7

Introduction 8

Typology of RRFs: Level, Bindingness, Issue Linkage and Implementation 10

From Bilateral to EU-wide level 10

Binding and Non-binding 10

The Linkage of Frameworks with Incentives 11

Bilateral Implementation Protocols 11

Hypothesized Effects of RRFs on Enforced Return Based on Interstate Compliance Theories 12

The existence of frameworks 13

Bilateral and EU-wide levels 13

Binding and Non-binding frameworks 14

The linkage of frameworks with incentives 15

Bilateral Implementation 15

Data 16

Analytical Method 19

Models 20

Results 20

Robustness Analysis 25

Conclusion 26

References 28

Suplementary Material 34

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Executive Summary

Recent decades have seen a significant rise in return and readmission frameworks. Scholars note a trend towards informalization, incentivization and Europeanization. Yet, no study has thoroughly evaluated with advanced regression techniques how the resulting frameworks impact migrant return and whether different types of frameworks affect migrant return differentially. In this study, we use Cassarino's inventory of return and readmission frameworks, data from the European Migration Network and Eurostat return data. We employ fixed-effects Poisson regression techniques to examine how various types of return and readmission frameworks influence the enforced return rates (2008–2021). Our findings hold significant implications for academic research and policy-making. Whilst bilateral return and readmission frameworks and EU Return and Readmission Agreements (EURAs) linked to visa facilitation arrangements show limited positive effects on enforced migrant return rates, non-binding EU-wide frameworks appear to reduce such rates. These findings are interpreted from the perspectives of rational choice and sociological institutionalism.

Introduction

What determines whether a migrant returns depends on a multitude of factors, both policy and non-policy related, that interact at the micro (individual or household), meso (family, network or community) and macro (state) levels (Torres Chedraui et al. 2024). The present working paper will focus on the policy determinants of enforced return, paying particular attention to the different types of return and readmission frameworks (hereafter: RRFs). An RRF is a written agreement between at least two states that aims to streamline irregular migrants' return process and outlines how states will co-operate on readmitting their nationals or third country nationals without legal residence in the host state. Assessing the effect of RRFs is important because these are the direct instruments that states use to operationalize intergovernmental return policies. These policies potentially influence cooperation with non-EU+ countries on return, and may also, more indirectly, influence individuals' decisions to return (e.g. when migrants return 'voluntarily' because they anticipate that they will be deported otherwise, given the existence of the RRF).

Irregular migrants receiving a return decision are legally obligated to leave the country and return to their country of origin or another country where they can legally stay. If migrants fail to comply, the issuing state can deport them. To achieve its return policy objectives, the EU relies on the co-operation of third countries (Commission, 2002; Council, 2005), which are asked to identify their own nationals, issue travel documents and facilitate the return and readmission of nationals from other countries who transited through their territory before arriving in Europe. Without such co-operation, returns cannot be executed, especially for irregular migrants lacking valid travel documents (Carrera, 2016).

Against this background, the EU and its member states (MS) have agreed on RRFs with third countries in the last decades. RRFs can facilitate the co-operation of third states with the return and readmission of irregular migrants. However, the impact of RRFs on actual cooperation is limited due to legal and practical barriers, as well as public opposition in both MS and third countries (Leerkes et al., 2017, Stutz and Trauner, 2022).

Whilst the obligation of readmission applies to both contracting states, RRFs are mainly oriented to promote migrant returns from MS to third countries. To decrease interest asymmetry and encourage collaboration, the EU and its MS may offer incentives such as linking visa facilitation, development aid and trade agreements to co-operation on migrant return (Cassarino, 2010; Hoffmeyer-Zlotnik et al., 2023; Lavenex and Kunz, 2008). To achieve collaboration, there has also been a shift towards non-binding frameworks (Carrera et al., 2019; Cassarino, 2010; Santos, 2019; Slominski and Trauner, 2021) and EU-wide arrangements (Lavenex, 2006).

RRFs come in different varieties, and the present analysis considers variation along four dimensions:

- The level of the framework: *bilateral* (between an EU and a third country) or *pooled* (between various EU countries or the EU, and a third country);
- The legal bindingness: *binding* [i.e., EU Return and Readmission Agreements (EURAs)] or *non-binding* [i.e., memoranda of understanding (MoU)];
- The issue linkage: with *explicit issue-linked incentives* (e.g., visa facilitation) or a lack thereof; and
- Implementation mechanisms: with *implementation protocols* to facilitate return processes or a lack thereof.

Despite their widespread use, the effects of RRFs on enforced returns remain unclear. Stutz and Trauner (2022) assessed the effectiveness of EU-wide RRFs between 2008 and 2018 using descriptive statistics. Their analysis suggests that these frameworks did not cause significantly higher enforced

return rates. Similarly, Slagter (2019) found through descriptive statistics that minimal progress was made in enforced return despite the presence of RRFs and interregional dialogues with sub-Saharan Africa. Using descriptive statistics, document analysis and interviews, Janmyr (2016) assessed the effectiveness of the readmission agreement between Norway and Iraq (2009) and the MoU between Norway and Ethiopia (2012). Her findings similarly indicate that none of those frameworks notably increased the enforced return rate.

The main limitation of using descriptive statistics to conduct this type of analysis is its inability to control for other factors that may influence the enforced return rate. These factors could include (1) EU country characteristics, such as its prioritization of return enforcement, (2) third country characteristics, such as societal conditions that may be favourable for migrant return, and (3) dyadic characteristics, such as the strength of historical ties between an EU and a third country. Controlling for these factors is important as international state relations are driven by an interplay of economic, political and historical factors that influence states' willingness to cooperate with the return and readmission of migrants.

Existing research also offers limited insights into whether the impact of RRFs *differs by type*. To our knowledge, only Leerkes et al. (2022) have made initial strides in this direction. Employing a methodology akin to ours but over a shorter timeframe (2008– 2019), the study found that binding bilateral frameworks increase enforced returns by roughly 5%–10%, whilst other frameworks did not show statistically significant effects. They argued that the lack of effects of EU-wide frameworks could be due to the relatively few observations available. It is interesting, therefore, to investigate if significant effects emerge with a longer timeframe. Additionally, they used fixed-effects linear regression, although Poisson regression can better address the skewness of the dependent variable: the enforced return rate. Assessing the effect of the different types of RRFs is important as it helps to determine which types of policy factors affect return rates. Although European policy-makers in the field are aware that RRFs produce limited results (European Court of Auditors, 2021), it is still unclear what types of frameworks are associated with what outcomes.

This working paper thus aims to assess the policy drivers of enforced return, with a particular focus on the different types of RRFs. It examines the shift in return cooperation policies, including the transition from bilateral to EU-wide approaches, the move from formal to informal frameworks and the increased use of incentives, such as visa facilitation, along with implementation protocols to further the co-operation between the parties.

The present working paper enhances our understanding of how states co-determine international migration patterns through return policies that either facilitate or hinder migrant return, addressing a crucial gap in the literature (Massey, 2015). RRFs are an important policy tool used by states to enhance third states cooperation with returns and therefore to increase enforced returns (both forced and incentivized returns) as individuals might opt for incentivized return when they see that the probability of forced return is higher (Brekke, 2015; van Houte et al., 2021; Kalir, 2017). Policy factors can therefore determine not only states cooperation with returns, but also individual's willingness to return. Furthermore, this working paper provides valuable insights for policy-makers in both EU and third countries to evaluate existing RRFs and reconsider policy approaches.

This working paper is organized as follows. The next section presents the typology of RRFs that will guide our analysis. We then employ rational choice and sociological institutionalism to theorize interstate co-operation and elaborate our hypotheses. Next, we present our data, method and empirical results, followed by a discussion of our findings and the course for further research.

Typology of RRFs: Level, Bindingness, Issue Linkage and Implementation

The RRF typology presented below is based on key shifts in the EU return policy: whilst RRFs could be classified using other criteria, the selected parameters – level, legal bindingness, issue linkage and bilateral implementation – are central to the EU's return policy.

From Bilateral to EU-wide level

To streamline enforced return processes, EU countries initially established bilateral RRFs with third countries (Billet, 2010; Cassarino, 2007). However, over time, they shifted towards negotiating *en bloc* with third states, pooling political and economic resources to enhance collaboration with third countries. This transition occurred during the 'golden age' of EURAs from 2000 to 2014. With the Treaty of Amsterdam (1999), the European Commission gained authority to conclude EU-wide RRFs (Billet, 2010; Molinari, 2021), leading to a shared competence between the EU and MS. Under this shared competence, MS are restricted from negotiating separately with third countries already under consideration of the Council or with whom the Commission is negotiating or has concluded agreements (Molinari, 2021). Otherwise, MS remain free to negotiate independently. In EU-wide frameworks, third states contract with the EU for the readmission of their nationals and other third-country nationals who transited through their territories before reaching Europe. The EU established its first EU readmission agreement with Hong Kong in 2004 and has since concluded 18 EURAs and about 26 non-binding frameworks (Commission, 2024).

Binding and Non-binding

Collaborating on enforced return imposes both financial and non-financial costs for receiving states, including loss of remittances and difficulties in reintegrating returnees into domestic labour markets (Ellermann, 2008; Roig and Huddleston, 2007). These costs do not go unnoticed in third countries and are the reason for not committing to these agreements. Additionally, third countries may be hesitant to agree on and comply with RRFs due to the belief that they should not bear the costs of EU border control failures (Reslow, 2013). These costs generate internal opposition within receiving states, making it difficult to reach agreements on RRFs. To address the reluctance of third states to commit to these frameworks, the EU has increasingly relied on non-binding frameworks. These offer more flexibility for both MS and third countries as they allow governments to avoid parliamentary scrutiny, including the scrutiny of the European Parliament, raising serious concerns about transparency, human rights and legitimacy (Carrera et al., 2019; Cassarino, 2018; Frasca and Roman, 2023; Molinari, 2019; Santos, 2019; Slominski and Trauner, 2021).

Individual MS have similarly used non-binding agreements with third countries; these include non-binding instruments with a long history in international law (such as MoUs, see Shelton, 2003) and newer instruments such as Bilateral migration partnerships, 'Exchanges of Letters' and police co-operation agreements, amongst others. MoUs are known for their precision and detail, particularly in outlining procedures for readmission (Cassarino, 2024), resembling the implementation protocols in that respect. This increased level of detail sets MoUs apart, possibly making them more effective in guiding co-operation compared to other non-binding agreements, which tend to be more general and less structured.

The Linkage of Frameworks with Incentives

The EU has increasingly aimed to employ conditionality to secure third states' cooperation. Conditionality can take positive and negative forms: positive when incentives are offered upfront, negative when sanctions are applied in case of non-co-operation or incentives are withheld or suspended until co-operation is demonstrated (Kipp et al., 2020). In practice, to maintain good relations with third states, the EU has largely avoided negative incentives, focusing instead on gradually expanding positive incentives based on the level of co-operation (Trauner and Kruse, 2008). In this spirit, the EU launched the Partnership Framework on Migration in 2016, aiming to improve migration management with selected third countries (Senegal, Mali, Niger, Nigeria and Ethiopia) by incentivizing co-operation on return and readmission through various positive incentives (De Bruycker et al., 2019).

Negotiations for RRFs often stall when incentives are lacking due to the expenses incurred by the receiving state (Reslow, 2015). Whilst the Council has extended visa facilitation frameworks to Eastern European neighbours, it has hesitated to offer them to African partners (Billet, 2010; Reslow, 2013; Trauner and Kruse, 2008). Instead, African countries have been given economic development and institutional capacity-building opportunities that primarily benefit EU states but are presented to third countries as mutually beneficial (Jurje and Lavenex, 2014).

Mobility partnerships, which stand out for their structured co-operation and adaptability (Cardwell and Dickson, 2023), have been proposed to encourage co-operation with third states in combating irregular migration and facilitating the readmission of irregular migrants. These partnerships are negotiated between interested MS and selected third states, with the Commission in a co-ordinating role (Reslow, 2013). MS participation in these partnerships is voluntary, and the Commission thus pre-selects MS to engage with specific third countries. Despite their name suggesting a focus on mobility, legal mobility is seldom included as migration policies remain a prerogative of individual MS (Farcy, 2020). Instead, mobility partnerships primarily focus on capacity building or development aid (Reslow and Vink, 2015), earning criticism and the sarcastic label of *immobility partnerships* (Poli and Cinelli, 2017). Tittel-Mosser (2018) offers a more optimistic perspective, portraying mobility partnerships as a tool for third states to request support from MS to advance the partnerships' goals, an approach known as reversed conditionality. However, this perspective fails to demonstrate how these partnerships genuinely benefit third states. Instead, they primarily serve the interests of MS by strengthening control over irregular migration.

Despite the trend towards incentivizing co-operation, many frameworks still lack concrete incentives. For instance, agreements like the Common Agenda on Migration and Mobility (CAMM) between the EU and Ethiopia (2015) outline priority areas for ongoing dialogue but do not specify concrete steps or promises for co-operation. Similarly, initiatives like the Joint Way Forward on migration issues (2016) and the Joint Declaration on Migration Cooperation (2021) between the EU and Afghanistan provide points for co-operation on Afghans' return but lack explicit incentives beyond the mentioning of regular reintegration assistance for returnees.

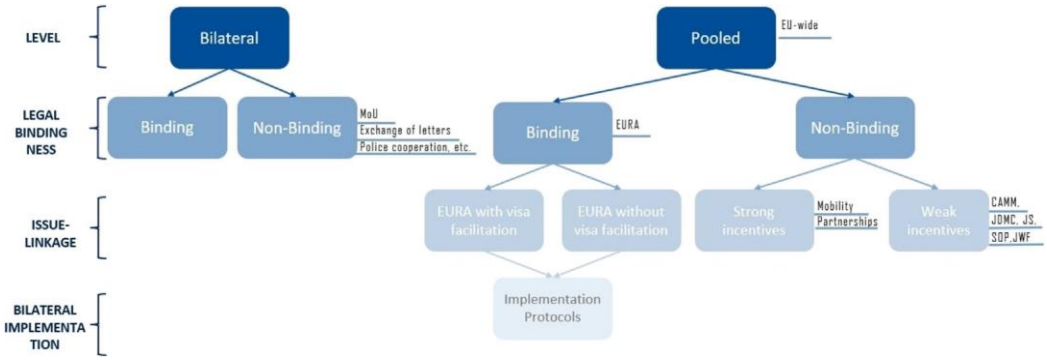
Bilateral Implementation Protocols

Once the EU and a third state have agreed on an EU-wide legally binding RRF (e.g., EURA), its implementation still requires co-ordination between MS and the third state. Individual MS may thus

establish bilateral implementation protocols with selected third countries. These protocols streamline logistics, foster direct relationships and prevent dilution of interests in implementing frameworks.

Based on the accounts above, Figure 1 illustrates the various dimensions on which RRFs differ.

Figure 1: A Taxonomy of RRFs Elaborated Based on Cassarino's Inventory (Cassarino, 2022).



Hypothesized Effects of RRFs on Enforced Return Based on Interstate Compliance Theories

Two theoretical perspectives, rational choice institutionalism and sociological institutionalism, help explain states' (non-)compliance with international obligations. Rational choice institutionalism argues that states comply when the benefits of adherence outweigh the costs of non-compliance (Schimmelfennig and Sedelmeier, 2004; Schimmelfennig and Sedelmeier, 2020). Conversely, when the costs are higher than the benefits, non-compliance would be the rational course of action. Sociological institutionalism emphasizes the role of norms and values in shaping state behaviour (Finnemore, 1996). According to this perspective, third states' compliance with a return framework depends on whether they perceive the agreement as appropriate, legitimate and consistent with their values and norms. The perceived appropriateness and legitimacy of an agreement will depend on its content and intended outcomes but also on whether the procedures that were used to reach the agreement are considered appropriate. In this view, third states will choose to comply or not based on how well the agreement aligns with their prevailing norms.

In this section, we formulate seven hypotheses flowing from rational choice and sociological institutionalism. Though in some cases both theoretical perspectives lead to similar hypotheses, they rely on distinct dynamics and mechanisms. These mechanisms cannot be directly tested in this study, using the data currently available, but the following analysis gives some indirect information about the explanatory power of the two perspectives in this field. This means that, even without proving the underlying mechanisms of both theories, we can still suggest which theoretical perspective offers a more plausible explanation for the observed patterns and trends (cf. Hedström and Ylikoski, 2010). Since our quantitative analysis cannot delve into the motivations or considerations of third countries regarding compliance, we cannot definitively test whether states act based on cost–benefit calculations (as posited by rational choice institutionalism) or normative alignment (as suggested by sociological institutionalism). These questions require qualitative approaches, such as interviews or case studies, which future research could pursue.

The existence of frameworks

From the perspective of both rational choice and sociological institutionalism, the existence of an RRF should increase interstate collaboration on migrant return.

In terms of rational choice institutionalism, these frameworks can establish a structure for co-ordinating the return process. As noted by Roberts et al. (2004), treaties are effective solutions for addressing efficiency concerns. RRFs can bring clarity on the rules governing the relationship between the parties, which will reduce transaction costs. Whilst this rule clarity primarily benefits the EU and its MS, third states may also stand to gain by enhancing their reputation as a reliable partner in the international community (Lipson, 1991; Roberts et al., 2004).

From the perspective of sociological institutionalism, the agreement should increase on the part of third states a perceived obligation to comply with returns to the extent that the agreement is not merely forced upon it but is perceived as being in line with salient values and norms. This stems from the fact that RRFs will establish certain norms about the return of irregular migrants, whilst the institutionalization of such norms in an RRF indicates a shared understanding about the appropriateness of collaborating with enforced returns. As noted by Finnemore (1996), states are socialized into values and norms by the international community. The existence of treaties plays an important role in this process of socialization because they set the standards for the expected behaviour of states. Consequently, the perceived obligation to comply is closely connected with the state's aspiration to maintain legitimacy and credibility.

Based on the accounts of rational choice and sociological institutionalism, we formulate the following hypothesis:

Hypothesis 1: The existence of an RRF will have a positive effect on the enforced return rate.

Bilateral and EU-wide levels

Rational choice institutionalism would predict that EU-wide frameworks are more effective in promoting migrant return than bilateral frameworks. MS can pool their political and economic resources to make the agreement more attractive for third states and non-compliance more costly. Similar arguments were indeed entertained in the proposal prepared by the EU to combat irregular migration back in 2002: 'The EU should also use its political weight to encourage third countries which show a certain reluctance to fulfil their readmission obligations' (Council, 2002, p. 31). Whilst individual MS have a limited bargaining power vis-à-vis large and unco-operative third states, the presence of the EU can help to level the playing field (Coleman, 2009; Schieffer, 2003). Following this same reasoning, for third states, the EU's collective weight increases the benefits of compliance, whilst the costs of non-compliance, such as loss of economic or political partnerships, are also magnified.

From the perspective of sociological institutionalism, third states' compliance is driven by how well the framework aligns with salient norms and values. For various reasons, bilateral frameworks can be expected to exert a stronger normative influence than EU-wide frameworks. First, bilateral treaties are more conventional, historical interstate instruments, which have a longer history in the field of return co-operation than EU-wide frameworks (Billet, 2010; Cassarino, 2007). Second, states may find bilateral agreements more appropriate because they involve fewer parties and less power disparity, allowing for greater flexibility in shaping norms that are mutually acceptable. This contrasts with EU-wide frameworks, which, as observed by Billet (2010), Cassarino (2011), Reslow (2013) and Zanker

(2023), are typically not negotiated but presented as a package to third states, making it challenging to agree on shared norms. Studies indeed show a consistent preference amongst third countries for bilateral frameworks over EU-wide ones, as highlighted by Olakpe's (2022) research in Nigeria.

Drawing from rational choice institutionalism, we propose Hypothesis 2, whilst sociological institutionalism leads us to Hypothesis 3, presenting two opposing views:

Hypothesis 2: EU-wide frameworks have a stronger effect on the enforced return rate than bilateral frameworks.

Hypothesis 3: Bilateral frameworks have a stronger effect on the enforced return rate than EU-wide frameworks.

Binding and Non-binding frameworks

Rational choice institutionalism is more ambivalent about the effects of legal bindingness. On one hand, it would argue that non-binding agreements can lead to higher compliance because third states can co-operate without attracting public attention. This reduces the risk of domestic opposition and makes it easier for states to comply with these frameworks. On the other hand, binding frameworks are also likely to ensure compliance with returns as they may signal a higher degree of credibility on the intent of states to commit to their obligations (Long et al., 2007; Morrow, 2007). This occurs because the decision to comply with a binding agreement involves a careful calculation of the costs of non-compliance, which may include the potential damage to the state's reputation (Guzman, 2008; Lipson, 1991). Binding agreements usually require parliamentary ratification to come into force that costs time and requires political alliances to succeed. Binding agreements come therefore with sunk costs: a state that has incurred ratification costs may be less willing to defect to the agreement particularly if it has made political alliances that support stronger ties with Europe. Defecting the agreement would not only undermine these internal alliances but also damage the state's reputation in its relationships with Europe. Because of the ambivalent position of rational choice with regard to bindingness, we will not formulate a hypothesis linked to this theory in relation to binding and non-binding agreements.

From a sociological institutionalist perspective, binding frameworks exert stronger normative pressure on states by providing clearer rules and signalling credibility and alignment with legal norms and institutions, concepts referred to as determinacy, coherence and adherence (Franck, 1990). In international law, binding agreements indicate a higher level of state commitment than non-binding ones. Their formal legal authority enhances legitimacy, which in turn encourages compliance. In contrast, non-binding agreements lack this normative force, making it easier for states to disregard their commitments. However, some bilateral frameworks, such as MoU, whilst not legally binding, can still be expected to be associated with a perceived obligation to comply, since they also have a long history in international law and are widely used in intergovernmental relations beyond the field of migrant return.

Based on sociological institutionalism, we therefore propose Hypotheses 4 and 5:

Hypothesis 4: Binding frameworks have a stronger effect on the enforced return rate than non-binding ones.

Hypothesis 5: MoU has a stronger effect on the enforced return rate than other non-binding frameworks.

The linkage of frameworks with incentives

Following rational choice institutionalism, issue-linked frameworks should offset the domestic costs of compliance. This is especially true for RRFs that are characterized by imbalanced commitments, where only the EU benefits (Lavenex and Wichmann, 2009). Those issue-linked frameworks employ positive conditionality by coupling returns with promises of visa facilitation, development aid, capacity building or the expectation to enter the EU (especially for Eastern European countries) (Commission, 2011). Those incentives have the potential to rectify asymmetries in RRFs and mitigate compliance costs associated with returns (Carrera et al., 2016).

From a rational choice perspective, the effectiveness of issue-linked frameworks depends on the size, clarity and credibility of the incentives (Schimmelfennig and Sedelmeier, 2004). Based on these premises, we can expect that issue-linked frameworks such as visa facilitation agreements and Mobility Partnerships, which have rewards attached to them, will impact returns more strongly than non-issue-linked frameworks.

From the sociological institutionalism perspective, the extent of third states' co-operation with returns hinges on the perceived appropriateness and fairness of the issues linked to the return framework. If third states perceive that the incentive falls short of their expectations based on their internal values and norms, its impact will likely be minimal. Equally, if the incentive is tied to a policy area deemed inappropriate by third states or their constituents, the effect could be negligible or even negative. When third countries reluctantly agree on a RRF, they might resist actual co-operation (cf. Scott, 1990). In terms of the acceptability of specific types of incentives, Bolkvadze's (2016) study revealed that visa facilitation agreements resonated well with the Georgian population. Conversely, Cham and Adam (2023) found that linking development aid to co-operation with returns faced significant resistance amongst the Gambian population. Drawing from these cases, we could anticipate that offering pathways for migration in exchange for co-operation with returns would align better with the norms and values of third states than other forms of issue linkage. Visa facilitation keeps matters within the migration system and coincides with the interests of third states in reaching development through human mobility in the global economy.

Based on the findings referred to above, we elaborate the following hypothesis:

Hypothesis 6: Frameworks that incorporate positive conditionality, especially if they are linked to visa facilitation, have a stronger effect on the enforced return rate than those lacking incentives.

Bilateral Implementation

From the perspective of both rational choice institutionalism and sociological institutionalism, bilateral implementations can facilitate compliance. Bilateral implementation protocols are developed after a RRF has been signed between the EU and a third state. Their purpose is linking the interested MS and the third state to address managerial issues that could hamper return operations. Solving these issues could be crucial for states compliance, as states may be willing but not capable of performing specific obligations in the treaty (Chayes et al., 1998). For example, the implementation protocol between Austria and Georgia (2013) outlines procedures when Georgia cannot issue identification documents for returnees. Likewise, the protocol between Estonia and Ukraine (2016) designates authorities in each country responsible for the implementation and processing of return applications, along with specifying acceptable identity and nationality verification documents to streamline the process.

From a rational choice perspective, bilateral implementation protocols bring the parties closer by establishing specific return procedures and facilitating information exchange about the authorities responsible for executing the return.

From the perspective of sociological institutionalism, having protocols in place could indicate a commitment of the parties to achieve return and could therefore reflect their belief in the legitimacy of the framework. Bilateral implementations can therefore be expected to impact the enforced return rate on the assumption that states are socialized to comply with treaties in the first place but are not able to do this due to technical and bureaucratic difficulties which the protocols help to overcome.

Based on rational choice and sociological institutionalism, we formulate the following hypothesis:

> *Hypothesis* 7: Bilateral implementation protocols have a stronger effect on the enforced return rate than those without those protocols.

Data

To test our hypotheses, we constructed a panel dataset with dyad-years as observations. Each observation represents a unique combination of a dyad (pair of countries) and specific year (for example, France-Afghanistan-2010 or Netherlands-Georgia-2015). We gathered data on our main independent variable – the presence of an RRF for each dyad, classified by framework type – using Cassarino's dataset on RRFs (Cassarino, 2022) and European Migration Network's (EMN's) inventory (2022b). A list of all RRFs included can be found in Table S1. A qualification is needed regarding 'EU-wide frameworks': not all MS participate in every agreement. Denmark, the United Kingdom (before Brexit) and Ireland have opt-out arrangements concerning certain aspects of the EU's Justice and Home Affairs policies. As a result, they are only part of these agreements if they have explicitly opted in. According to our records, the United Kingdom joined 14 EURAs before Brexit, whilst Ireland participated in 12.[1] A detailed list of the agreements they opted in is given in Table S1. Additionally, mobility partnerships, which are non-binding EU-wide frameworks, are only in place with selected MS. A list of these countries is also provided in Table S1.

Next, using Eurostat (2024a, 2024b) data, we calculated our dependent variable, the enforced return rate, for each dyad-year. This rate is a macro-level indicator on the level of collaboration of the third state with enforced return in the specific dyad-year. Whilst there is a standard method for calculating it (total returns divided by total orders to leave), we believe this approach does not accurately account for the population at risk, as some third-country nationals receiving a return decision are returned to another EU MS. We therefore subtracted from both the numerator and the denominator the number of individuals from a third country who, upon receiving an order to leave, were returned to an EU country. This adjustment allows us to focus on the 'population at risk': third-country nationals being returned to a third country. Finally, for clarity, we multiplied the resulting fraction by 100 to get the percentage of persons that demonstrably returned after receiving a return decision.

In principle, the dataset covers information for 27 EU countries (plus the United Kingdom before Brexit) and 168 third countries over the time span from 2008 to 2021, but we excluded many cases from the analysis as no orders to leave had been recorded in the dyad-year (59% of the total

[1] The UK and Ireland's participation in EURA frameworks was sourced from the House of Lords International Agreement Committee (2021) and Quinn and Gusciute (2015), respectively.

observations). Since the research question focuses on the level of compliance with return orders, the exclusion of these cases does not bias our estimates.

Several points should be addressed regarding the validity and reliability of the Eurostat (2024a, 2024b) data used in this study, as highlighted in previous research (Belmonte et al., 2021; Siruno et al., 2024; Stutz and Trauner, 2022). First, the observations are aggregated administrative counts by year and do not represent cohort data. This means that enforced returns and return orders may not necessarily correspond to the same individuals. For instance, a return order issued in year 1 (t) could lead to a return in the subsequent year (t + 1), resulting in instances where the return rate exceeds 100%. Although this introduces noise in the observations, it does not pose a significant issue for our analysis since our focus is on examining how RRFs influence dyadic variations in enforced return rates. We nonetheless excluded outliers (>3 standard deviations away from the mean), which accounted for 0.41% of the observations. For example, some dyad-years exhibited exceptionally high return rates, such as the Netherlands–Honduras dyad in 2012 with a rate of 6800% and the United Kingdom– Saudi Arabia dyad in 2014 with a rate of 4900%. These anomalies may stem from registration errors or the absence of orders to leave in the count. Descriptive statistics of the outcome variable before excluding these observations can be found in Table S2.

Furthermore, in some cases, the enforced return rate fell below zero after subtracting the number of individuals moved to another EU state. This can happen because the number of return orders is sometimes below the number of such intra-EU movements (Table S3). This discrepancy arises because certain states do not issue return orders when individuals are required to relocate to another EU state (Maliepaard et al., 2022) or because the data are not cohort-based. We excluded dyad-years with negative enforced return rates, which accounted for 1.59% of the complete set of observations. The dataset includes 22,367 dyad-year observations.

Our enforced return rate variable cannot distinguish between movements to individuals' country of nationality and movements to other third countries (e.g., an Afghan national returned to Turkey from Germany). Moreover, it cannot distinguish between so-called 'voluntary returns', such as via International Organization for Migration (IOM), and forced return, such as deportation. Data on the precise country of enforced return and its administrative mode (voluntary vs. forced) are only available for certain countries since 2014 (Eurostat, 2024c, 2024d). Since few new bilateral frameworks have been signed since 2014 (28 compared to 90 between 2009 and 2021) (Table 1), using such data would compromise the statistical power of our analysis. Furthermore, the data for these countries and years indicate that the lion's share of the returns is in fact to the country of nationality.[2] Therefore, we utilize Eurostat (2024b) data on the total number of enforced returns to a third country, irrespective of the administrative mode of return and precise country destination.

[2] Based on Eurostat (2024c) data, between 2014 and 2021, around 89.85% of total returnees went back to their country of nationality, with 4.83% returning to a transit country and 5.28% to another destination.

Table 1 Number of new frameworks per type and year (2009-2021).

Treaty-Year	BILATERAL FRAMEWORKS					EU-WIDE FRAMEWORKS							
	Bilateral	**Binding**	**Non-binding**	**MoU**	**Other non-binding**	**EU-wide**	**Binding (EURAs)**	**Non-binding**	**Other non-binding**	**EURA w/ visa facilitation**	**EURA w/o visa facilitation**	**Mobility Partnerships**	**IP**
2009	17	14	6	2	4	1	0	1	0	0	0	1	45
2010	8	2	6	3	3	1	1	0	0	0	1	0	33
2011	26	18	8	4	5	1	1	1	0	1	1	1	0
2012	7	5	3	2	1	0	0	0	0	0	0	0	11
2013	4	3	1	1	0	2	0	2	0	0	0	2	0
2014	6	4	2	2	1	3	4	2	0	3	1	2	8
2015	4	3	1	2	0	2	0	2	2	0	0	0	0
2016	6	5	1	1	0	6	0	7	6	0	0	1	0
2017	4	4	1	1	0	2	0	2	2	0	0	0	0
2018	5	0	5	4	1	0	0	0	0	0	0	0	7
2019	3	3	1	2	1	0	0	0	0	0	0	0	0
2020	0	0	0	1	0	0	1	0	0	1	0	0	0
2021	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**90**	**61**	**35**	**25**	**16**	**18**	**7**	**17**	**10**	**5**	**3**	**7**	**104**

Note: As Eurostat (2024a, 2024b) data on returns is available from 2008 onwards, any framework predating that year has been recorded under the year 2008. Our analysis, starting in 2009, focuses on newly established frameworks and does not account for modifications or expired agreements, as these details are not explicitly provided in the Cassarino or EMN inventories.

The independent variables are the different types of RRFs existing in the dyad-years. For every type of return framework, we created a dummy variable that was coded as 1 when a framework, regardless of type, was in place. Dyads may have more than one RRF in place in a given year. For instance, a dyad can have both binding and non-binding, as well as EU-wide and bilateral types of frameworks at the same time.

Table 2 includes the descriptive statistics of all the variables used, after removing the outliers and negative values as specified above. The mean enforced return rate (41.8%) for dyad-years with return orders is indicative of the unweighted average in the period 2008–2021 (e.g., each dyad-year has the same weight regardless of the number of return decisions issued in it).

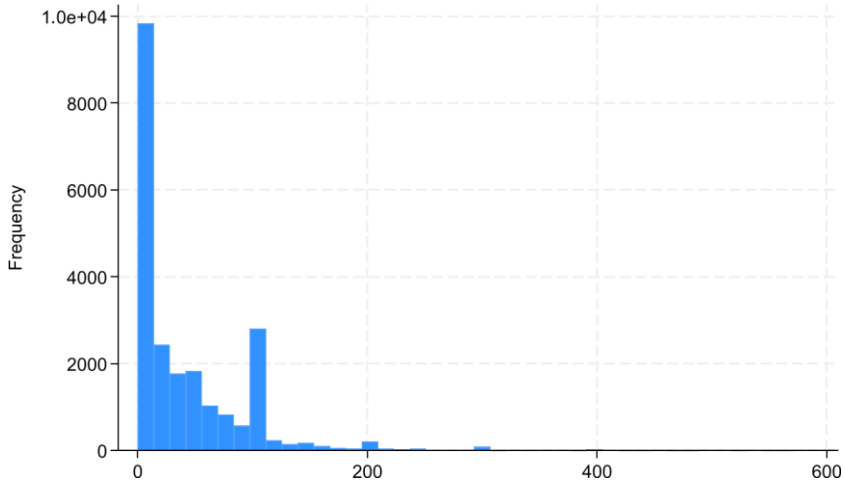
Table 2 Descriptive Statistics.

Variables	Range	Mean	Std. Dev	Q1	Median	Q3
Enforced Return Rate	0-600	41.8	56.5	0	21.1	66.7
Any framework	Binary	0.3	.5	0	0	1
Bilateral framework	Binary	0.1	.3	0	0	0
EU-wide framework	Binary	0.2	.4	0	0	0
Bilateral binding framework	Binary	0.1	.3	0	0	0
Bilateral non-binding framework	Binary	0.0	.2	0	0	0
EU-binding framework (EURAs)	Binary	0.2	.4	0	0	0
EU-non-binding framework	Binary	0.1	.3	0	0	0
Memorandum of Understanding	Binary	0.0	.1	0	0	0
Other bilateral non-binding frameworks	Binary	0.0	.2	0	0	0
EURA (no Eura, with, w/o visa facilitation)	Categories 0-2	0.3	.7	0	0	0
Other EU-non-binding framework	Binary	0.0	.2	0	0	0
Mobility Partnership	Binary	0.1	.3	0	0	0
Implementation Protocols of EURAs	Binary	0.0	.2	0	0	0
Years	2008-2021	2014.4	3.9	2011	2014	2018
Dyads	1-5,375	2,576.4	1,618.6	1,376	2,372	4,046
Dyad-Year	1-22,367	11,184.0	6,456.9	5,592	11,184	16,776

Analytical Method

The dependent variable, the enforced return rate, is a non-negative continuous variable that is highly skewed to the right (Figure 2), which led us to use the Poisson generalized linear model with fixed effects. Although the Poisson regression is typically used for count variables, it gives reliable estimators for continuous non-negative values (Wooldridge, 2010). We use fixed effects and include robust standard errors clustered at the dyad level. Because the models are complex and take time to run due to the number of fixed effects, we have used a user-created command in Stata for the estimation of (pseudo-)Poisson regression models with multiple high-dimensional fixed effects (Correia et al., 2020).

Figure 2: Enforced Return Rate After Deleting Outliers (>3 Standard Deviations Away From the Mean).



Models

For each hypothesis, we ran two regression models (*a* and *b*). The a models include dyad (country-pair) and year dummies (Models *1a* to *5a*). With the dyad dummies, we are controlling stable differences between dyads that could affect the return rates. Trade relations, remittances and aid flows within dyads, for example, may have a positive effect on return rates. Likewise, the size of the diasporic presence in the host country may influence compliance with an RRF, especially if the diaspora has a strong political presence in the country of origin (Mouthaan, 2019). With the inclusion of host country dummies, we also control for stable differences between MS in their measured enforced return rates that result from differences in how MS issue return decisions and/or register enforced returns [see Maliepaard et al. (2022) for a methodological exploration of such differences]. With year dummies, we control for time differences affecting all dyads, such as the COVID pandemic, global recessions and the 2015 European migration crisis. By adding these dummies, we control relevant factors other than RRFs that could affect the rate of enforced returns.

The *b* models (Models *1b* to *5b*) are gravity models that include, besides the country-pair dummies, origin-country-year and destination-country-year dummies (cf. Yang and Martinez-Zarzoso, 2014). The latter origin and destination country dummies can account for factors that could produce changes in return flows from or to a country, such as a change in government or civil wars.

The *b* models are stricter than a models. However, the inclusion of country-year dummies in Models *1b* to *5b* serves as a strong control, reducing the likelihood of identifying incorrect causation (false positives), but potentially increasing the odds of overlooking actual effects (false negatives). Finding a significant effect in the b models is stronger evidence that RRFs affect the enforced return rates, but significant effects in the a models still amount to substantial evidence that such effects exist.

Results

Table 3 reports the incidence rate ratios for our models. Values above 1 indicate that a variable has a positive effect on the enforced return rate; values below 1 indicate a negative effect. The effect size (understood as a percent rate change in the enforced return rate for a one-unit change in the independent variable) is calculated as 1 *i*, where *i* is the incidence ratio. For example, Model *2a* shows that dyads with bilateral frameworks are expected to experience a 37.9% higher enforced return rate

compared to dyads lacking such frameworks (calculated as 1.379 1), which is significant at the $p < 0.05$ level. Dyads with an EU-wide framework are estimated to experience a 7.9% lower enforced return rate compared to dyads lacking such frameworks (calculated as 0.921 1), a difference that could well be coincidental as it is only significant at the $p < 0.1$ level.

Table 3. Fixed Effects Poisson on the Enforced Return Rate.

	Any Framework		Level		Bindingness				Issue linkage		Implementation	
	Model 1a	**Model 1b**	**Model 2a**	**Model 2b**	**Model 3a (I)**	**Model 3b (I)**	**Model 3a (II)**	**Model 3b (II)**	**Model 4a**	**Model 4b**	**Model 5a**	**Model 5b**
Any framework	0.982	1.089										
	(0.048)	(0.077)										
Bilateral			1.379*	1.199								
			(0.191)	(0.160)								
Binding					1.129	1.038	1.124	1.038	1.121	1.038	1.122	1.040
					(0.113)	(0.129)	(0.113)	(0.129)	(0.113)	(0.129)	(0.113)	(0.129)
Non-binding					2.161*	1.494						
					(0.647)	(0.428)						
Memo of Understanding							2.122*	1.573	2.111*	1.573	2.112*	1.572
							(0.653)	(0.462)	(0.650)	(0.461)	(0.650)	(0.461)
Other non-binding							1.403	1.089	1.407	1.089	1.406	1.091
							(0.305)	(0.326)	(0.306)	(0.326)	(0.305)	(0.323)
EU-wide			0.921+	0.943								
			(0.041)	(0.070)								
Binding (EURAs)					1.095	0.986	1.087	0.986				
					(0.077)	(0.127)	(0.075)	(0.128)				
Without visa facilitation									(omitted)	(omitted)	(omitted)	(omitted)
Non-EURA									1.091	1.143	1.090	1.132
									(0.090)	(0.185)	(0.090)	(0.184)

With visa facilitation									1.322*	1.232	1.321*	1.220
									(0.167)	(0.244)	(0.167)	(0.241)
Non-binding					0.845**	0.978						
					(0.047)	(0.073)						
Mobility Partnership							0.928	0.934				
							(0.100)	(0.088)				
Other non-binding							0.810**	1.068	0.836**	1.084	0.836**	1.084
							(0.053)	(0.123)	(0.055)	(0.127)	(0.055)	(0.127)
Implementation Protocols of EU binding frameworks											1.016	1.044
											(0.067)	(0.071)
Constant	67.882***	67.711***	65.875***	69.034***	64.081***	68.611***	64.487***	68.869***	58.363***	59.501***	58.346***	59.886***
	(1.125)	(1.694)	(1.485)	(2.009)	(1.419)	(2.355)	(1.301)	(2.285)	(4.817)	(9.166)	(4.816)	(9.244)
Observations	19,641	19,305	19,641	19,305	19,641	19,305	19,641	19,305	19,641	19,305	19,641	19,305
Akaike's information criterion (AIC)	573,700	425,542.7	572,969.1	425,472.8	572,173.5	425,404.2	572,119.9	425,369.2	571,829.7	425,343.5	571,828.6	425,332
Bayesian information criterion (BIC)	573,715.8	425,558.4	572,992.7	425,496.4	572,213	425,443.5	572,175.1	425,424.3	571,892.8	425,406.5	571,899.6	425,402.8
Fixed effects												
Country-pair	X	X	X	X	X	X	X	X	X	X	X	X
Time	X		X		X		X		X		X	
Origin-country-year		X		X		X		X		X		X
Destination-country-year		X		X		X		X		X		X

Note: Estimates reported in incidence rate ratio. Standard errors clustered by dyad in parentheses. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, $^{+}p < 0.1$.

Models *1a* and *1b* investigate if the existence of an RRF, regardless of the type, affects enforced return. In Model *1a*, we control country-pair characteristics and time factors, as explained in the previous section. We then observe that the existence of an RRF, on average, is not significantly associated with higher rates of enforced return when these factors are controlled. Model *1b* expands upon this by introducing controls for time-varying policy factors within origin and destination countries (such as political and economic advancements, reintegration policies, etc.). The findings remain consistent: the presence of an RRF as such, regardless of type, does not notably boost third state's collaboration with enforced returns. Hypothesis 1 on the positive effect of RRFs lacks empirical support, at least when the type of RRF is not considered.

The remaining models explore if the effects on enforced return differ by type of RRF. Models *2a* and *2b* assess whether the RRF level (EU-wide or bilateral) is differentially associated with enforced return. After controlling for dyad and time differences, Model *2a* shows that bilateral frameworks have a positive effect ($p < 0.05$), whilst EU-wide frameworks have a negative effect that falls short at the conventional level of statistical significance ($p < 0.1$). A chi-square test confirms a difference in the effects of bilateral versus EU-wide frameworks: χ^2 : 0065. However, in the *b* model (Model *2b*), the effect of bilateral frameworks disappears. There is thus some evidence on the effect of bilateral agreements (Hypothesis 3) to the extent that country-year factors are not controlled. Since we observe no effect for EU-wide agreements on enforced return, we reject Hypothesis 2.

Model 3 assesses whether bindingness is associated with higher rates of enforced return. Model 3 is further subdivided into *3(I)* and *3(II)*. In Model *3(I)*, we classify frameworks based on bindingness and non-bindingness. In Model *3(II)*, we analyse specific examples of binding and non-binding frameworks. We break down non-binding frameworks at the bilateral level into MoU and other non-binding bilateral frameworks and, at the EU-wide level, into Mobility Partnerships and other non-binding EU-wide frameworks. In Model *3a (I)*, we found that bindingness makes a difference for both bilateral and EU-wide frameworks, but not in the way predicted in the hypotheses. Non-binding bilateral frameworks have a positive effect on enforced return rates ($p < 0.05$), which is statistically different from binding bilateral ones $(\overline{\chi}^2 = 0.0396)$. Furthermore, non-binding EU-wide frameworks have a negative effect ($p < 0.01$), which is also significantly different from binding EU-wide ones $(\overline{\chi}^2 = 0.0072)$. Based on these findings, we reject Hypothesis 4, which posited that binding frameworks would have a stronger impact on enforced returns than non-binding ones.

In Model *3a (II)*, we find that MoUs, a form of non-binding bilateral agreements, have a positive effect on the enforced return rate ($p < 0.05$). However, a chi-squared test shows that this is not statistically different from binding bilateral agreements (although it is in the borderline of statistical significance, with a $\overline{\chi}^2$ =0.0500) and from other non-binding bilateral frameworks ($\overline{\chi}^2 = 0.2893$). Based on these results, we cannot substantiate Hypothesis 5 that predicted a stronger effect of MoU compared to other non-binding bilateral frameworks. Additionally, Model *3a (II)* shows that other non-binding EU-wide frameworks have a *negative* effect on returns ($p < 0.01$), which is statistically different from binding EU-wide frameworks ($\overline{\chi}^2 = 0.0041$). However, this effect disappears when adding the additional controls in Model *3b (II)*.

Models *4a* and *4b* explore the effects of issue linkage. In Model *4a*, EURAs linked with visa facilitation agreements show a positive effect ($p = 0.027$) compared to EURAs without those arrangements. The difference between the effect of both EURAs with and without visa facilitation is statistically significant $(\overline{\chi}^2 = 0.0274)$. However, this effect disappears in the stricter model. In addition, we observe no effect of Mobility Partnerships on enforced return rates in both Models *4a* and *4b*. If country-year factors are not controlled, we find some evidence supporting Hypothesis 6, which suggests that visa facilitation agreements increase enforced returns.

Models *5a* and *5b* examine if bilateral implementation protocols influence the enforced return rate. We find no evidence of such influence and reject Hypothesis 7.

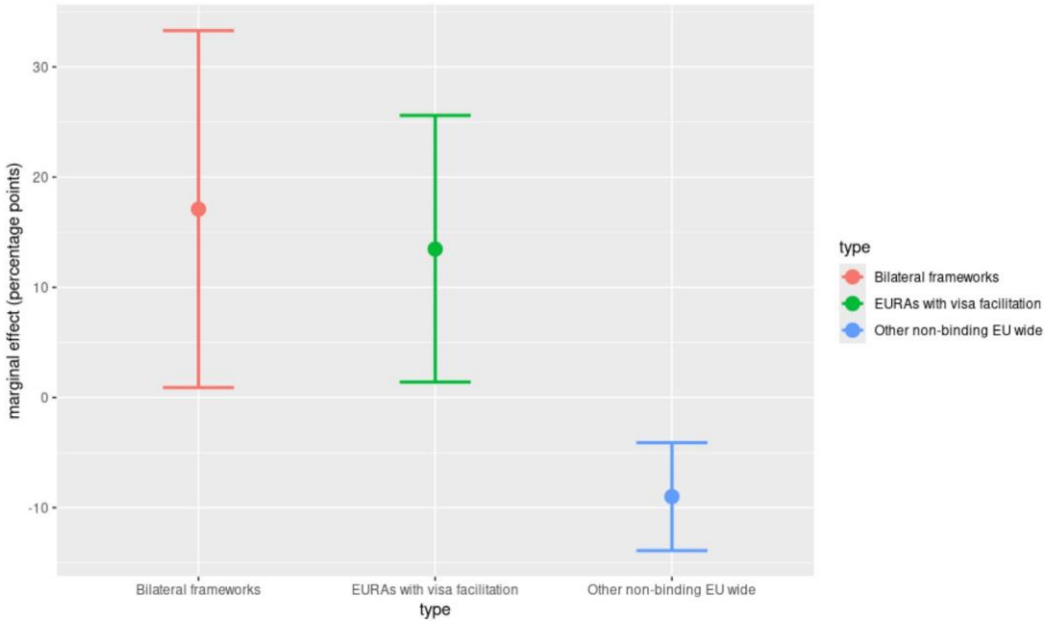
Based on Models *2a*, *3a (II)* and *4a*, Figure 3 illustrates the average effect of bilateral agreements, other non-binding EU-wide frameworks and EURAs linked with visa facilitation on the enforced return rate. The data indicate that a bilateral framework is associated with an increase in the enforced return rate by 17.1 percentage points compared to dyads without such a framework. However, it is important to note the uncertainty surrounding this estimate. With a 95% confidence interval, the effect of bilateral frameworks ranges between 0.9 and 33.3 percentage points. A non-binding EU-wide framework is found to be associated with a decrease in the enforced return rate by 9 percentage points compared to dyads without such frameworks. Employing a 95% confidence interval, the effect spans from 13.9 to 4.1 percentage points. EURAs linked with visa facilitation agreements are associated with an increase of 13.47 percentage points compared to dyads without those agreements. With a 95% confidence interval, this difference ranges from 1.4 to 25.6 percentage points.

Robustness Analysis

Finally, to enhance the reliability of our findings, we conducted some supplementary analyses. First, we used a 3-year average of the enforced return rate as our dependent variable (refer to Table S4). As previously noted, Eurostat (2024a, 2024b) data lack cohort information as it is based on yearly count data, leading to instances where returns are recorded in a year different from the issuance of the order to leave. Consequently, certain enforced return rates exceed 100% or are even registered as negative values. To address this, we calculated the average enforced return rate for every 3 years by excluding negative values and those exceeding 3 standard deviations away from the mean. Second, we also ran the same models, excluding EU-border countries (refer to Table S5). EU-border countries often face unique migration management challenges, pressures and opportunities due to their geographical location (e.g., states with external land borders can simply 'return' certain categories of irregular migrants to a third country by stopping them at the border). Third, we recalculated our dependent variable by setting a minimum threshold of 25 orders to leave per dyad-year (Table S6). This was done to address the issue that very high enforced return rates can sometimes occur when countries do not issue orders to leave.

The results of the robustness analyses reinforce some of our conclusions and nuance others. Specifically, robustness checks succeed fully in showing that (1) bilateral frameworks have a greater effect than EU-wide frameworks and (2) non-bindingness makes a difference for EU-wide frameworks; in particular, other non-binding EU-wide frameworks are associated with a negative effect on the rate of enforced return. However, in relation to the effect that EURAs with visa facilitation arrangements have a stronger effect than those without those arrangements is only confirmed by the third robustness check.

Figure 3: Average Effect of Bilateral, EURAs With Visa Facilitation and Other Non-Binding EU-Wide Frameworks After Running Models *2a*, *3a (II)* and *4a*.



Conclusion

EU countries have invested heavily in RRFs to facilitate the enforced return of irregular migrants to third countries. However, few empirical studies have evaluated whether these initiatives lead to higher return rates or if their effects differ based on framework characteristics like level, bindingness, issue linkage and implementation protocols.

To address these gaps, we applied fixed-effects models to examine the impact of RRFs on enforced return rates, controlling for other potential influences. The less strict models (controlling for dyad and year differences) show that bilateral frameworks and EU visa facilitation agreements increase return rates by about 17 and 13.5 percentage points, respectively, and non-binding EU-wide frameworks (e.g., CAMM) decrease return rates by about 9 percentage points. These findings should be interpreted cautiously due to Eurostat data limitations (Siruno et al., 2024; Stutz and Trauner, 2022) and because they are non-significant in stricter models. Although the results generally align with previous studies suggesting that RRFs have limited impact on return rates (Janmyr, 2016; Slagter, 2019; Stutz and Trauner, 2022), they also advance existing research by showing that (1) bilateral RRFs increase the enforced return rate to some extent, whilst certain EU-wide frameworks may hinder the process; (2) legal bindingness appears more significant for EU-wide frameworks than for bilateral ones; (3) agreements linked to visa facilitation can promote returns, whilst those linked to capacity building and development aid (e.g., mobility partnerships) do not show similar effects.

Whilst our findings provide new insights into the effectiveness of RRFs, they also highlight limitations in the explanatory power of rational choice institutionalism, which has been dominant in this field (Schimmelfennig and Sedelmeier, 2004). Specifically, rational choice institutionalism cannot explain the stronger impact of bilateral frameworks over EU-wide ones, the negative effects of non-binding EU-wide frameworks or why visa facilitation is more effective than other linkages.

Rational choice institutionalism appears to struggle in explaining the stronger effect of bilateral frameworks. According to this theory, states are expected to co-operate based on incentives. However, whilst bilateral frameworks appear to have a stronger effect, it remains unclear to what extent explicit issue linkage such as visa facilitation, development aid, or capacity-building plays a role. EMN (2022a) notes that about half of the EU MS did not provide information on issue linkage.[1] Given these uncertainties, sociological institutionalism offers an alternative explanation for the stronger

effect of bilateral frameworks. Sociological institutionalism emphasizes the importance of norms, legitimacy and how frameworks are embedded in international practices. Bilateral agreements, being more traditional, may enjoy greater legitimacy (Billet, 2010; Cassarino, 2007) as they often allow third states more room for negotiation, whilst EU-wide frameworks may be seen as externally imposed (Billet, 2010; Cassarino, 2011; Reslow, 2013).

Rational choice institutionalism also struggles to explain the negative effects of nonbinding EU-wide frameworks. Whilst it can justify why frameworks lacking strong incentives fail to promote returns, it does not address why they might have adverse effects. According to rational choice logic, a lack of incentives should lead to indifference, not negative outcomes. In contrast, sociological institutionalism suggests that informal agreements can foster distrust and resistance, particularly in third-country communities (Zanker et al., 2019). The fact that these agreements are not made public and are seen as imposed undermines their legitimacy. The finding that non-binding EU-wide frameworks can have significant negative effects warrants closer examination. These frameworks are relatively new instruments, and their variability and implementation challenges make them difficult to compare systematically. However, their adverse outcomes suggest a potential unintended consequence of the EU's strategy to rely on unconventional non-binding arrangements in the sensitive area of return policies. Future research should delve deeper into how these frameworks are perceived by third countries and affected communities, as well as the specific mechanisms that generate negative effects.

Our findings on issue linkage also challenge rational choice institutionalism. Whilst visa facilitation appears to have a limited positive effect on returns, similar effects are absent for capacity building (e.g. mobility partnerships). This may indicate that visa facilitation has greater monetary or practical value for third countries, as rational choice would suggest, but it could also reflect a legitimacy issue. Third countries may view the link between migration control and legal mobility as more legitimate than the EU's attempts to buy off co-operation through aid and capacity-building initiatives.

One limitation of our study is the unavailability of data, which restricted us to testing only visa facilitation and mobility partnerships as forms of issue linkage. Using the recent data collected in the FAiR project (Conte et al., 2025), future research can explore the role of issue linkage in more detail, particularly in bilateral RRFs, and examine the negotiation processes used to reach agreements on return. Whilst rational choice theory does not emphasize the importance of negotiation processes, sociological institutionalism highlights how perceived procedural fairness can influence compliance. Another limitation of our study is that many of the RRFs might lack implementation, be provisional or touch upon the topic of return mostly semantically, which makes them less likely to have a measurable effect. Further studies could examine cases where European states choose not to enforce return policies and how these decisions influence the rate of enforced returns. In addition, future research could analyse other quantitative data on returns, such as micro-level cohort data (e.g., Leerkes et al., 2017; Peitz, 2023), and data on laissez-passer requests, which may provide a more direct measure of intergovernmental co-operation than return rates.

As the EU continues to favour EU-wide RRFs, often linking them with issues like visa facilitation and development aid, our findings raise questions about their effectiveness, particularly when legal mobility is not facilitated. Re-evaluating the strategy to prioritize bilateral negotiations or incorporating mechanisms that promote compliance in bilateral RRFs into EU-wide frameworks may be necessary. Flexible negotiation processes and a more balanced playing field between EU MS and third countries could enhance these frameworks' effectiveness.

Finally, whilst our study suggests that RRFs do influence return rates, their effects remain moderate at best, considering that those effects are not observed in any of the stricter models. Given the

challenges of fully enforcing return decisions, European governments must also consider policies to address the long-term presence of irregular migrants whose return is unlikely.

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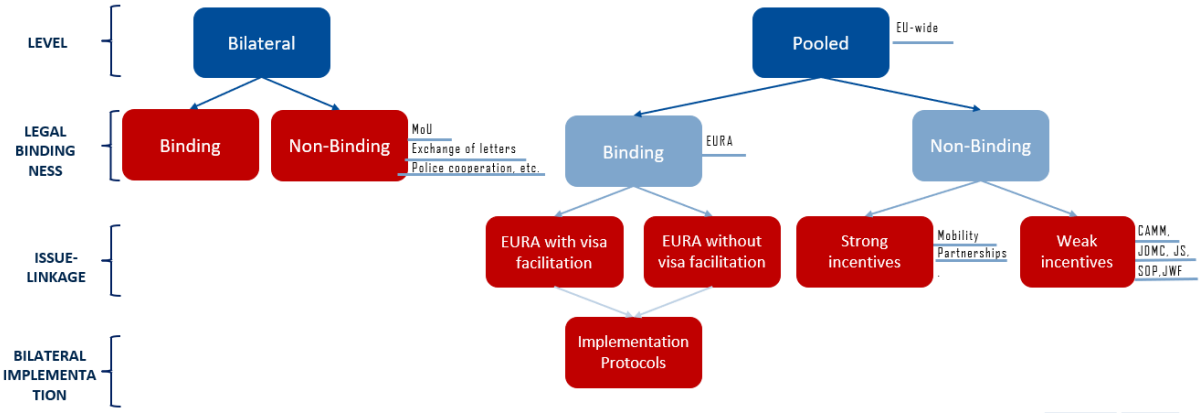
Suplementary Material

Table S1. List of all the frameworks included in the dataset

The categories of RRF included in this research appear in the graph below. To avoid repetition we only list the sub-categories, as shown in red. In the case of non-binding-bilateral agreements we further break down the listing in MoU and others.



The tables have been elaborated based on Cassarino (2022) and EMN (2022b) inventories on RRFs.

BINDING BILATERAL AGREEMENTS		
Dyad	**Year of the Agreement**	**ID**
Austria Bosnia and Herzegovina	2007	V 01/09/2007
Austria Croatia	1998	V 01/11/1998
Austria Kosovo	2011	V 01/03/2011
Austria Nigeria	2012	V 18/08/2012
Austria North Macedonia	2007	V 01/02/2007
Austria Russia	2005	V 09/10/2005
Austria Serbia	2004	V 29/04/2004
Austria Tunisia	1965	V 01/08/1965
Belgium Croatia	2005	AB, V 01/02/2005
Belgium Armenia	2009	AB, V 03/06/2009
Belgium Kazakhstan	2017	AB, V 01/06/2017
Belgium Kosovo	2014	1-4-2014
Belgium North Macedonia	2008	AB, V 01/12/2008
Belgium Bosnia and Herzegovina	2007	AB, V 01/11/2007
Belgium Montenegro	2004	AB, V 29/05/2004
Belgium Serbia	2004	AB, V 29/05/2004
Bulgaria Albania	2003	V 02/01/2003
Bulgaria Croatia	2003	V 03/08/2003
Bulgaria North Macedonia	2002	V 19/06/2002
Bulgaria Ukraine	2002	V 07/03/2002
Croatia Albania	2005	V 15/06/2005
Croatia North Macedonia	2003	V 01/02/2003

Croatia Serbia	2004	V 17/06/2004
Cyprus Lebanon	2003	V 20/10/2003
Czechia Armenia	2011	V 01/04/2011
Czechia Canada	1996	V 07/10/1996
Czechia Croatia	2004	V 01/05/2004
Czechia Kazakhstan	2016	V 01/07/2016
Czechia Kosovo	2011	V 11/07/2011
Czechia Moldova	2004	V 09/09/2004
Czechia Vietnam	2008	V 21/03/2008
Denmark Armenia	2004	V 01/04/2004
Denmark Bosnia and Herzegovina	2004	V 01/11/2004
Denmark Georgia	2016	V 01/08/2016
Denmark Moldova	2011	V 01/09/2011
Denmark Montenegro	2003	V 08/03/2003
Denmark North Macedonia	2007	V 08/10/2007
Denmark Russia	2011	V 24/07/2011
Denmark Serbia	2003	V 08/03/2003
Denmark Sri Lanka	1998	V 18/08/1998
Denmark Ukraine	2009	V 01/03/2009
Estonia Belarus	2016	20-4-2016
Estonia Croatia	2001	V 28/04/2001
Finland Kosovo	2012	V 20/12/2012
Finland Afghanistan	2014	Partnership agreement V 01/07/2014
France Afghanistan	2019	V 18/09/2019 (part of the 2017 EU-Afghanistan Cooperation and Partnership Development Agreement)
France Argentina	2002	V 08/02/2002
France Brazil	2001	V 24/08/2001
France Chile	1998	V 08/04/1998
France Costa Rica	2001	V 18/02/2001
France Croatia	1996	V 18/02/1996
France Benin	2010	Pact on joint migration management V 01/03/2010
France Senegal	2009	Pact on joint migration management V 01/08/2009 (amendment to the pact: S 25/02/2008)
France Afghanistan	2019	V 18/09/2019 (part of the 2017 EU-Afghanistan Cooperation and Partnership Development Agreement)
France Tunisia	2009	Pact on joint migration management V 01/07/2009
France Dominica	2007	V 01/03/2007
France Ecuador	2000	V 26/05/2000
France El Salvador	1999	V 01/05/1999
France Guatemala	1999	V 02/12/1999
France Honduras	2000	V 21/09/2000
France Kosovo	2011	V 19/09/2011

France Mauritius	2007; 2010	V 01/12/2007; circular migration agreement V 01/09/2010
France Mexico	1998	V 16/07/1998
France Montenegro	2006	V 25/04/2006
France North Macedonia	1999	V 17/06/1999
France Panama	1999	V 30/05/1999
France Paraguay	1997	V 13/12/1997
France Uruguay	1997	V 24/07/1997
France Venezuela	2001	V 30/12/2001
France Burkina Faso	2011	Pact on joint migration management V 01/06/2011
France Cabo Verde	2011	Pact on joint migration management V 01/04/2011
France Congo	2009	Pact on joint migration management V 01/08/2009
France Haiti	2007	Framework agreement, V 31/12/2007
France Libya	2007	Framework agreement V 25/07/2007
France Gabon	2008	Pact on joint migration management V 01/09/2008
Germany Albania	2003	V 01/08/2003
Germany Algeria	2006	V 12/05/2006 (applied since 01/11/1999)
Germany Armenia	2008	V 20/04/2008
Germany Bosnia and Herzegovina	1997	V 14/01/1997
Germany Croatia	2012	V 14/11/2012
Germany Georgia	2008	V 01/01/2008
Germany Guinea	2019	V 06/02/2019
Germany Kazakhstan	2016	V 01/06/2016
Germany Kosovo	2010	V 01/09/2010
Germany Morocco	1998	V 01/06/1998
Germany North Macedonia	2004	V 01/05/2004
Germany Serbia	2003	V 01/04/2003
Germany South Korea	2005	V 22/03/2005
Germany Syria	2009	V 03/01/2009
Germany Vietnam	1995	V 21/09/1995
Greece Croatia	1996	V 15/03/1996
Greece Turkey	2001	V 08/11/2001
Hungary Croatia	2001	V 15/11/2001
Hungary Kazakhstan	2015	V 18/02/2015
Hungary North Macedonia	2004	V 13/08/2004
Hungary Ukraine	1994; 1998	V 06/04/1994, V 28/05/1998
Italy Nigeria	2011	V 12/06/2011 (migration agreement)
Italy Bosnia and Herzegovina	2004	V 12/05/2004
Italy Croatia	1998	V 01/06/1998
Italy Egypt	2008	V 25/04/2008
Italy Kosovo	2015	V 10/02/2015
Italy Moldova	2004	V 01/05/2004
Italy North Macedonia	1997	V 23/10/1997

Italy Philippines	2004	V 28/02/2004
Latvia Armenia	2003	V 17/05/2003
Latvia Kazakhstan	2016	V 04/02/2016
Latvia Uzbekistan	2004	V 17/06/2004
Lithuania Armenia	2004	V 22/05/2004
Lithuania Croatia	2000	V 01/01/2000
Lithuania Kazakhstan	2015	V 24/09/2015
Lithuania Moldova	2004	V 14/02/2004
Lithuania Russia	2003	V 21/08/2003
Lithuania Ukraine	1997	V 29/03/1997
Lithuania Vietnam	2019	15-11-2019
Luxembourg Bosnia and Herzegovina	2007	AB, V 01/11/2007
Luxembourg Croatia	2005	AB, V 01/02/2005
Luxembourg Kazakhstan	2017	AB, V 01/06/2017
Luxembourg Kosovo	2014	1-4-2014
Luxembourg Montenegro	2004	AB, V 29/05/2004
Luxembourg Serbia	2007	AB, V 01/11/2007
Luxembourg Armenia	2009	AB, V 03/06/2009
Luxembourg North Macedonia	2008	AB, V 01/12/2008
Netherlands Indonesia	1950	V 01/05/1950
Netherlands Armenia	2009	AB, V 03/06/2009
Netherlands Bosnia and Herzegovina	2007	AB, V 01/11/2007
Netherlands Croatia	2005	AB, V 01/02/2005
Netherlands Serbia	2007	AB, V 01/11/2007
Netherlands Kazakhstan	2017	AB, V 01/06/2017
Netherlands Kosovo	2014	1-4-2014
Netherlands Montenegro	2004	AB, V 29/05/2004
Netherlands North Macedonia	2008	AB, V 01/12/2008
Poland Croatia	1995	V 27/05/1995
Poland Kazakhstan	2017	V 04/08/2017
Poland Moldova	1995	V 28/05/1995
Poland North Macedonia	2007	V 04/02/2007
Poland Russia	1961	V 15/02/1961 (ex USSR)
Poland Ukraine	1994	V 10/04/1994
Poland Vietnam	2005	V 14/05/2005
Portugal Canada	2000	V 05/09/2000
Portugal Guinea-Bissau	1981	V 05/09/1981 Migration agreement
Portugal Morocco	2004	V 22/10/2004, Border and Migration management agreement
Romania Albania	2005	V 23/05/2005
Romania Croatia	2002	V 24/10/2002
Romania Lebanon	2004	V 15/05/2004
Romania Moldova	2002	V 03/07/2002
Romania North Macedonia	2006	V 10/11/2006
Romania Turkey	2004	V 08/11/2004

Slovakia Croatia	2009	V 13/10/2009
Slovakia Serbia	2003	V 15/03/2003
Slovakia Ukraine	1994	V 02/12/1994 (Accord de coop. frontalière), 28-3-1994
Slovakia Vietnam	2006	V 20/01/2006
Slovenia Bosnia and Herzegovina	2006	V 26/09/2006
Slovenia North Macedonia	1999	V 01/02/1999
Spain Mauritania	2003	V 03/08/2003
Spain Morocco	2012	V 21/10/2012 (of the 1992 agreement)
Spain North Macedonia	2006	V 19/11/2006
Spain Cabo Verde	2008	Immigration agreement, V 19/01/2008
Spain Gambia, The	2008	Immigration agreement, V 08/11/2008
Spain Mali	2009	Immigration agreement, V 11/03/2009
Sweden Croatia	2003	V 06/04/2003
Spain Guinea	2007	Immigration agreement, V 07/01/2007
Spain Guinea-Bissau	2008	Immigration agreement, V 08/11/2008
Sweden Kosovo	2011	V 01/11/2011
Sweden Montenegro	2003	V 15/03/2003
Sweden Serbia	2003	V 15/03/2003
Sweden Vietnam	2008	V 31/12/2008
United Kingdom Albania	2005	V 16/08/2005
United Kingdom Algeria	2007	V 27/03/2007
United Kingdom South Korea	2012	V 01/06/2012
Spain Colombia	2002	V 11/03/2002
Italy Nigeria	2011	V 12/06/2011 (migration agreement)

Only binding bilateral agreements that has entered into force are included.

Other Non-Binding Bilateral Agreements		
Dyad	**Year of the Agreement**	**ID**
Belgium Morocco	2014	18-2-2014 (cooperation agreement)
Bulgaria Bosnia and Herzegovina	2008	CP V 28/08/2008
Bulgaria Serbia	2010	CP V 10/12/2010
Finland Afghanistan	2014	Partnership agreement V 01/07/2014
France Algeria	1994; 2003	EL 1984/1994; CP S 25/10/2003
France Central African Republic	1994	C 26/09/1994
France Congo	1993	C 31/07/1993; Pact on joint migration management V 01/08/2009
France Gabon	2002	C 11/03/2002
France Morocco	1993; 2001; 2020	EL 1983/1993; CP V 01/05/2001; C S 07/12/2020 (unaccompanied minors)
France Tunisia	1994	EL 1984/1994
France Vietnam	2012	CP V 17/02/2012

Greece Albania	1995	CP, V 10/02/1995
Greece China	1996	CP, V 28/07/1996
Greece Egypt	2000	CP, V 27/07/2000
Greece Pakistan	2005	CP, S 11/05/2005
Greece Russia	2004	CP, V 05/05/2004
Greece Tunisia	1990	CP S 19/05/1990
Greece Turkey	2002; 2016	CP V 05/08/2002; Framework agreement 08/03/2016
Greece Ukraine	2001	CP, S 24/04/2001
Italy Algeria	2009	CP S 22/07/2009
Italy Cote dIvoire	2018	EL S 08/02/2018; S 01/10/2018 (JWF);
Italy Egypt	2000	CP V 18/06/2000
Italy Gambia, The	2010; 2018	CP S 29/07/2010
Italy India	2000	CP V 21/01/2000
Italy Libya	2000; 2003; 2007; 2012	AA S 13/12/2000; AA S 03/07/2003; CP S 29/12/2007; EL,03/04/2012
Italy Mexico	2002	CP V 10/07/2002
Italy Nigeria	2019	S SOPs 27/03/2019
Italy Sri Lanka	2001	EL, V 24/09/2001
Italy Tunisia	1998; 2003; 2009	EL S 06/08/1998; CP S 13/12/2003; AA S 28/01/2009
Italy Turkey	2001	CP V 09/02/2001
Italy Uzbekistan	2001	CP V 17/08/2001
Latvia Croatia	1998	AP, V 21/09/1998
Malta Libya	2001	CP 1984 – N since 2001
Slovakia Belarus	2003	CP V 02/09/2003
Slovakia Bosnia and Herzegovina	2009	CP V 24/04/2009
Slovakia North Macedonia	2010	CP V 29/07/2010
Slovakia Serbia	2009	CP V 15/08/2009
Slovakia Uzbekistan	1997	CP V 17/01/1997
Spain Albania	2011	CP, V 19/06/2011
Spain Algeria	2004	P, V 18/02/2004
Spain Brazil	2011	CP V 31/08/2011
Spain Cameroon	2011	CP V 18/03/2011
Spain Croatia	2011	CP V 27/10/2011
Spain Dominican Republic	2002	AP gestion des flux; 16/01/2002
Spain Ecuador	2001	AP, 28/06/2001
Spain Guinea-Bissau	2003	AP S 01/03/2003
Spain Morocco	1992; 2012	AP S 13/02/1992; CP V 20/05/2012
Spain Niger	2008; 2015	AP S 09/06/2008; AP S 14/05/2015
Spain Serbia	2011	AP V 02/03/2011
Spain Turkey	2009	CP V 01/12/2009
Sweden Bosnia and Herzegovina	2005	AP, V 01/04/2005

Other non-binding bilateral frameworks that have either an entered into force or a signature date has been included.

IMPLEMENTATION PROTOCOLS		
Dyad	**Year of the Agreement**	**ID**
Austria Albania	2007	IP V 29/06/2007
Austria Georgia	2014	IP V 01/01/2014
Austria Moldova	2010	IP V 26/11/2010
Austria Montenegro	2010	IP V 22/09/2010
Austria Russia	2011	IP V 03/06/2011
Austria Serbia	2011	IP V 18/04/2011
Austria Ukraine	2014	IP V 20/11/2014
Belgium Albania	2008	IP AB, V 06/03/2008
Belgium Bosnia and Herzegovina	2021	IP AB V 01/08/2021
Belgium Montenegro	2014	2014-01-01)
Belgium North Macedonia	2021	1-8-2021
Belgium Serbia	2019	1-2-2019
Belgium Armenia	2020	17-3-2020
Belgium Moldova	2021	1-8-2021
Belgium Georgia	2018	1-6-2018
Belgium Ukraine	2020	17-3-2020
Belgium Russia	2010	IP V 12/03/2010
Bulgaria Bosnia and Herzegovina	2020	1-10-2020
Bulgaria Georgia	2012	IP V 08/10/2012
Bulgaria Russia	2012	IP V 16/11/2012
Croatia Russia	2017	10-6-2018
Cyprus Russia	2011	IP V 13/06/2011
Cyprus Serbia	2014	IP V 19/05/2014
Czechia Armenia	2019	1-10-2020
Czechia Georgia	2019	1-7-2020
Czechia Moldova	2012	IP V 01/03/2012
Czechia Montenegro	2012	IP V 01/02/2012
Czechia Russia	2012	IP V 01/05/2012
Czechia Ukraine	2015	IP V 01/01/2015
Estonia Armenia	2017	22-2-2018
Estonia Georgia	2012	IP V 09/11/2012
Estonia Moldova	2010	IP V 10/05/2010
Estonia North Macedonia	2010	IP V 23/07/2010
Estonia Russia	2011	IP V 28/11/2011
Estonia Ukraine	2016	13-4-2016
Finland Russia	2013	IP V 11/03/2013
France Albania	2015	12-12-2015
France Armenia	2020	11-8-2020
France Bosnia and Herzegovina	2019	IP V 30/12/2019
France Russia	2010	IP V 22/10/2010
Germany Armenia	2021	1-4-2021
Germany Bosnia and Herzegovina	2014	IP V 05/12/2014

Germany Georgia	2016	IP V 08/07/2016
Germany Moldova	2010	IP V 13/12/2010
Germany Montenegro	2013	IP V 22/01/2013
Germany North Macedonia	2014	IP V 13/09/2014
Germany Russia	2012	IP V 20/02/2012
Germany Serbia	2011	IP V 22/11/2011
Greece Bosnia and Herzegovina	2020	25-2-2020
Greece Moldova	2014	IP V 28/03/2014
Hungary Albania	2010	IP V 16/04/2010
Hungary Georgia	2013	IP V 28/02/2013
Hungary Montenegro	2017	IP V 11/07/2017
Hungary Russia	2011	IP V 24/11/2011
Italy Albania	2008	IP V 03/12/2008
Italy Bosnia and Herzegovina	2018	13-9-2018
Italy Moldova	2015	14-11-2015
Italy Montenegro	2015	IP V 10/02/2015
Italy North Macedonia	2019	IP V 13/04/2019
Italy Russia	2011	IP V 08/07/2011
Latvia Moldova	2010	IP V 29/10/2010
Latvia Russia	2009	IP V 26/09/2009
Lithuania Georgia	2014	IP V 01/11/2014
Lithuania Moldova	2011	IP V 06/12/2011
Lithuania Russia	2012	IP V 30/07/2012
Lithuania Ukraine	2020	1-1-2020
Luxembourg Albania	2008	IP AB, V 06/03/2008
Luxembourg Bosnia and Herzegovina	2021	IP AB V 01/08/2021
Luxembourg Montenegro	2014	1-1-2014
Luxembourg North Macedonia	2021	1-8-2021
Luxembourg Serbia	2019	1-2-2019
Luxembourg Armenia	2020	17-3-2020
Luxembourg Moldova	2021	1-8-2021
Luxembourg Georgia	2018	1-6-2018
Luxembourg Ukraine	2020	17-3-2020
Luxembourg Russia	2013	IP V 19/02/2013
Malta Albania	2011	IP V 09/03/2011
Malta Bosnia and Herzegovina	2010	IP V 19/07/2010
Malta Moldova	2011	IP V 04/04/2011
Malta Montenegro	2010	IP V 26/04/2010
Malta Russia	2011	IP V 03/06/2011
Malta Serbia	2010	IP V 19/07/2010
Netherlands Albania	2008	IP AB, V 06/03/2008
Netherlands Bosnia and Herzegovina	2021	IP AB V 01/06/2021
Netherlands Montenegro	2014	1-1-2014
Netherlands North Macedonia	2021	1-8-2021
Netherlands Serbia	2019	1-2-2019

Netherlands Armenia	2020	17-3-2020
Netherlands Moldova	2021	1-8-2021
Netherlands Georgia	2018	1-6-2018
Netherlands Ukraine	2020	17-3-2020
Netherlands Russia	2011	IP V 01/11/2011
Poland Moldova	2015	26-3-2015
Poland Russia	2013	IP V 22/04/2013
Poland Ukraine	2018	2-11-2018
Portugal Russia	2013	IP V 10/09/2013
Romania Russia	2012	IP V 04/09/2012
Slovakia Albania	2010	IP V 22/02/2010
Slovakia Bosnia and Herzegovina	2016	IP V 08/02/2016
Slovakia Georgia	2016	IP V 01/03/2016
Slovakia Moldova	2010	IP V 23/07/2010
Slovakia North Macedonia	2015	IP V 11/03/2015
Slovakia Russia	2010	IP V 01/06/2010
Slovenia Albania	2011	IP V 08/03/2011
Slovenia Bosnia and Herzegovina	2017	IP V 17/03/2017
Slovenia Montenegro	2009	IP V 07/03/2009
Slovenia Russia	2012	IP V 24/09/2012
Slovenia Serbia	2009	IP V 14/10/2009
Spain Albania	2018	IP V 09/07/2018
Spain Moldova	2014	IP V 16/01/2014
Spain Montenegro	2019	IP V 22/03/2019
Spain Russia	2011	IP V 04/04/2011
Spain Serbia	2017	IP V 01/12/2017
Sweden Russia	2012	IP V 18/06/2012
Sweden Serbia	2015	IP V 23/02/2015

Only IP that has entered into force has been coded.

MEMORANDUM OF UNDERSTANDING		
Dyad	**Year of the Agreement**	**ID**
Belgium Democratic Republic of the Congo	2006 , 2017	ME S 10/03/2006; ME S 21/04/2017
Belgium Ecuador	2008	ME S 25/07/2008
Belgium Mauritania	2018	ME S 13/11/2018
Belgium Rwanda	2019	ME S 03/04/2019
Belgium Tunisia	2018	ME S 17/07/2018
Belgium Vietnam	2009	ME S 19/01/2009
Denmark Afghanistan	2004	S ME 18/10/2004 with UNHCR
Denmark Iraq	2009	S ME 13/05/2009
Finland Nigeria	2015	ME, S 12/01/2015
France Afghanistan	2002	S ME 28/09/2002 with UNHCR
Italy Cote dIvoire	2020	ME S 31/01/2020
Italy Djibouti	2012	ME S 27/06/2012

Italy Gambia, The	2015; 2017	ME S 06/06/2015; ME S 26/10/2017
Italy Ghana	2010	ME S 08/02/2010
Italy Libya	2006; 2011; 2017	ME S, 18/01/2006, ME S, 17/06/2011, ME S, 02/02/2017
Italy Montenegro	1999	ME S, 09/12/1999
Italy Morocco	1998	S 27/07/1998
Italy Niger	2010	ME S 09/02/2010
Italy Nigeria	2017	ME S 01/03/2017
Italy Peru	2004	ME 12/10/2004
Italy Russia	2006	ME S, 20/01/2006
Italy Senegal	2010; 2018	ME S 28/07/2010; ME S 16/03/2018
Italy Sudan	2016	ME S 03/08/2016
Italy Tunisia	2011	ME S 05/04/2011
Malta Burkina Faso	2013	ME S, 27/02/2013
Malta Gambia, The	2014	ME S, 23/09/2014
Malta Libya	2019	ME S 10/11/2019
Netherlands Afghanistan	2003	ME S 18/03/2003, tripartite MoU with UNHCR
Netherlands Somalia	2009	ME S 01/07/2009
Spain Ghana	2005	ME S 07/12/2005
Spain Morocco	2003; 2007	ME S 23/12/2003, ME S 06/03/2007
Spain Senegal	2008	ME V 01/07/2008
Sweden Iraq	2008	S ME 18/02/2008
United Kingdom Afghanistan	2002	ME S 12/10/2002, tripartite MoU with UNHCR
United Kingdom Angola	2007	ME, S 06/11/2007
United Kingdom Burundi	2007	ME, S 23/02/2007
United Kingdom Djibouti	2008	ME, S 18/06/2008
United Kingdom Ethiopia	2008	ME, S 12/12/2008
United Kingdom India	2018; 2021	ME S 11/04/2018, ME S 04/05/2021
United Kingdom Iraq	2005	ME, S 26/01/2005
United Kingdom Jordan	2005	ME, S 10/08/2005
United Kingdom Kuwait	2012	ME, S 28/11/2012
United Kingdom Lebanon	2005	ME, S 23/12/2005
United Kingdom Libya	2005	ME, S 18/10/2005
United Kingdom Morocco	2011	ME, S 24/09/2011
United Kingdom Nigeria	2004; 2016	ME, S 19/11/2004, ME, S 01/09/2016
United Kingdom Rwanda	2008	ME, S 23/06/2008
United Kingdom Somalia	2007	ME, S 03/06/2007
United Kingdom Vietnam	2004; 2009	ME, S 28/10/2004, ME, S 13/01/2009
Belgium Morocco	1993; 2016	ME S 21/10/1993 , ME S 22/04/2016 (part of Cooperation agreement S 18/02/2014)
France India	2018	S ME 10/03/2018
Malta Nigeria	2014	ME, S 03/04/2014
United Kingdom Pakistan	2005	ME S 25/07/2005

Memorandum of Understanding that have been signed or entered into force have been coded.

POOLED FRAMEWORKS				
Third countries	**EU-binding agreements (EURA)**	**EURA linked to visa facilitation**	**MP**	**Other EU-wide non-binding frameworks**
Afghanistan				JWF (02/10/2016); JDMC (26/04/2021)
Albania	1-5-2006	1-5-2006		
Algeria				
Armenia	1-1-2014	1-1-2014	27/10/2011[3]	
Azerbaijan	1-9-2014	1-9-2014	05/12/2013[4]	
Bangladesh				SOP (25/09/2017)
Belarus	1-7-2020	1-7-2020 (suspended in November 2021)	13/10/2016[5]	
Bosnia-Herzegovina	1-1-2008	1-1-2008		
Cape Verde	1-12-2014	1-12-2014	05/06/2008[6]	
China*				
Cote d'Ivoire				GP (01/12/2018)
Ethiopia				CAMM (11/11/2015); AP 05/02/2018
Ghana				JDM (16/04/2016)
Georgia	1-3-2011	1-3-2011	30/11/2009[7]	
Guinea				GP (24/07/2017)
India				CAMM (29/03/2016)
Jordan			09/10/2014[8]	
Mali				JDM (11/12/2016)
Moldova	1-1-2008	1-1-2008	05/06/2008[9]	
Montenegro	1-1-2008	1-1-2008		

[3] The EU countries that participate in the Mobility Partnership with Armenia are Belgium, Bulgaria, Czechia, Germany, France, Italy, the Netherlands, Poland, Romania and Sweden. https://home-affairs.ec.europa.eu/policies/international-affairs/collaboration-countries/eastern-partnership/mobility-partnerships-visa-facilitation-and-readmission-agreements_en

[4] The EU countries that participate in the Mobility Partnership with Azerbaijan are Bulgaria, Czechia France, Lithuania, the Netherlands, Poland, Slovenia and Slovakia. https://home-affairs.ec.europa.eu/policies/international-affairs/collaboration-countries/eastern-partnership/mobility-partnerships-visa-facilitation-and-readmission-agreements_en

[5] The EU countries that participate in the Mobility Partnership with Belarus are Bulgaria, Latvia, Lithuania, Hungary, Poland, Romania and Finland. https://home-affairs.ec.europa.eu/policies/international-affairs/collaboration-countries/eastern-partnership/mobility-partnerships-visa-facilitation-and-readmission-agreements_en

[6] The EU countries that participate in the Mobility Partnership with Cape Verde are Portugal, France, Spain, Luxembourg and the Netherlands. https://macimide.maastrichtuniversity.nl/wp-content/uploads/2019/05/Evaluation-of-EU-Mobility-Partnerships.pdf

[7] The EU countries that participate in the Mobility Partnership with Georgia are Belgium, Bulgaria, Czechia, Denmark, Germany, Estonia, Greece, France, Italy, Lithuania, Latvia, the Netherlands, Poland, Romania, Sweden, The United Kingdom. https://home-affairs.ec.europa.eu/policies/international-affairs/collaboration-countries/eastern-partnership/mobility-partnerships-visa-facilitation-and-readmission-agreements_en

[8] The EU countries that participate in the Mobility Partnership with Jordan are Cyprus, Denmark, France, Germany, Greece, Hungary, Italy, Poland, Portugal, Romania, Spain, Sweden. https://ec.europa.eu/commission/presscorner/detail/en/IP_14_1109

[9] The EU countries that participate in the Mobility Partnership with Moldova are Bulgaria, Cyprus, Czechia, France, Greece, Germany, Hungary, Italy, Lithuania, Poland, Portugal, Romania, Slovenia, Slovakia and Sweden. https://home-affairs.ec.europa.eu/policies/international-affairs/collaboration-countries/eastern-partnership/mobility-partnerships-visa-facilitation-and-readmission-agreements_en

Morocco			07/06/2013[10]	
Niger				JDM (03/05/2016)
Nigeria				CAMM (12/03/2015)
North Macedonia	1-1-2008	1-1-2008		
Pakistan	1-12-2010			
Russia	1-6-2007	1-6-2007		
Serbia	1-1-2008	1-1-2008		
Sri Lanka	1-5-2005			
The Gambia				GP (16/11/2018)
Tunisia			03/03/2014[11]	
Turkey	1-10-2014			JS (07/03/2016)
Ukraine	1-1-2008	1-1-2008		

Note: MP=Mobility Partnership; CAMM=Common Agenda on Migration and Mobility; JWF=Joint Way Forward; JDMC= Joint Declaration on Migration Cooperation; JS=Joint Statement; SOP=Standard Operating Procedure for the identification and return of persons without an authorization to stay; GP=Good Practices for the efficient operation of the return procedure; AP=Admission Procedures for the return of foreign nationals from European Union Member States; JMD=Joint Migration Declaration.

Denmark, the United Kingdom (pre-Brexit), and Ireland have opt-out arrangements, meaning they only participate in EU-wide frameworks if they explicitly opt in. According to our records, the UK opted into EURAs with Albania, Pakistan, Georgia, Serbia, Turkey, Sri Lanka, Ukraine, Russia, Moldova, Bosnia-Herzegovina, Montenegro, Macedonia, Macao, and Hong Kong (House of Lords International Agreement Committee 2021). As we lack the exact date of the UK's participation decisions, we have recorded their involvement from the moment the EURAs entered into force with the EU. Additionally, the UK participated in the mobility partnership with Georgia (see footnote 5).

Ireland opted into EURAs with Hong Kong, Sri Lanka, Russia, Pakistan, Macao, Albania, Bosnia-Herzegovina, Macedonia, Montenegro, Moldova, Serbia, and Georgia (Quinn & Gusciute, 2015). Since there is no data on returns for Macao and Hong Kong, they are not included in the dataset.

[10] The EU countries that participate in the Mobility Partnership with Morocco are Belgium, France, Germany, Italy, the Netherlands, Portugal, Spain, Sweden and the United Kingdom https://ec.europa.eu/commission/presscorner/detail/en/IP_13_513

[11] The EU countries involved in the Mobility Partnership with Tunisia are Belgium, Denmark, Germany, Spain, France, Italy, Poland, Portugal, Sweden and the United Kingdom. https://euromedrights.org/publication/tunisia-eu-mobility-partnership/

Table S2. Descriptive Statistics of the outcome variable before removing outliers and negative values.

Variable	Obs	Mean	Std. Dev.	Min	Max
Enforced return rate	22,823	40.333	189.856	-16,300	6,800

Table S3. Descriptive Statistics of the outcome variable and its constituent variables when outcome variable contains negative values.

Dyad	Year	Number of returns to a third country	Number of orders to leave	Number of returns to a non-third country	Rate of Enforced Return
Austria Iraq	2008	25	275	280	-500
Austria Iraq	2009	30	150	210	-50
Austria Palestine	2009	5	10	15	-100
Austria Syria	2021	20	30	40	-200
Austria Tunisia	2008	10	75	95	-50
Austria Tunisia	2009	5	65	75	-50
Denmark Gambia	2012	5	15	30	-33.333
Denmark Gambia	2013	5	20	55	-14.286
Denmark Gambia	2014	5	10	20	-50
Denmark Gambia	2015	5	10	20	-50
Denmark Nigeria	2015	25	75	95	-125
Denmark Nigeria	2017	35	80	95	-233.333
Denmark Senegal	2012	10	5	35	-33.333
Denmark Senegal	2013	5	10	40	-16.667
Denmark Senegal	2014	5	5	20	-33.333
Denmark Senegal	2015	5	5	25	-25
Denmark Tunisia	2012	10	5	10	-200
Finland Japan	2020	10	10	15	-200
Germany Eritrea	2011	5	35	45	-50
Germany Nepal	2008	35	10	15	-700
Germany Togo	2008	50	45	55	-500
Hungary Afghanistan	2021	10	660	745	-11.765
Ireland Nigeria	2015	40	55	90	-114.286
Ireland Nigeria	2016	25	90	155	-38.462
Slovenia Afghanistan	2009	5	5	20	-33.333
Slovenia Albania	2009	45	45	50	-900
Slovenia Albania	2018	15	40	95	-27.273
Slovenia Albania	2019	10	35	110	-13.333
Slovenia Albania	2020	10	35	75	-25
Slovenia Albania	2021	10	40	50	-100
Slovenia China including Hong Kong	2008	10	5	70	-15.385
Slovenia China including Hong Kong	2009	5	5	100	-5.263
Slovenia China including Hong Kong	2011	5	5	25	-25
Slovenia China including Hong Kong	2018	5	15	30	-33.333
Slovenia China including Hong Kong	2019	5	20	60	-12.5
Slovenia Moldova	2008	15	10	85	-20
Slovenia Moldova	2010	5	25	100	-6.667
Slovenia Moldova	2011	5	20	50	-16.667
Slovenia Morocco	2011	5	5	10	-100

Slovenia Nigeria	2009	5	5	10	-100
Slovenia Nigeria	2010	5	5	10	-100
Slovenia North Macedonia	2009	90	85	135	-180
Slovenia Turkey	2018	20	30	160	-15.385
Slovenia Turkey	2019	15	65	490	-3.529
Slovenia Turkey	2020	5	10	210	-2.5
Slovenia Turkey	2021	10	20	290	-3.704
Slovenia Ukraine	2008	20	15	175	-12.5
Slovenia Ukraine	2009	10	5	130	-8
Slovenia Ukraine	2010	5	145	185	-12.5
Spain Tunisia	2009	10	85	90	-200
Sweden Djibouti	2011	5	5	10	-100
Sweden Eritrea	2010	30	105	140	-85.714
Sweden Eritrea	2011	25	105	110	-500
Sweden Eritrea	2013	20	135	240	-19.048
Sweden Liberia	2011	5	10	15	-100
Sweden Mali	2013	10	10	20	-100
Sweden Senegal	2012	5	15	20	-100
Sweden Somalia	2008	10	85	275	-5.263
Sweden Somalia	2010	30	360	745	-7.792
Sweden Somalia	2011	20	350	510	-12.5
Sweden Somalia	2012	15	340	535	-7.692
Sweden Sudan	2013	20	60	80	-100
Sweden Syria	2013	155	145	755	-25.410
Sweden Yemen	2013	45	70	80	-450
United Kingdom Angola	2018	10	30	40	-100
United Kingdom Angola	2019	30	30	45	-200
United Kingdom Argentina	2009	65	10	65	-118.182
United Kingdom Argentina	2010	40	15	70	-72.727
United Kingdom Argentina	2011	50	25	65	-125
United Kingdom Argentina	2012	50	10	60	-100
United Kingdom Argentina	2013	45	15	50	-128.571
United Kingdom Argentina	2014	40	10	50	-100
United Kingdom Argentina	2015	70	10	65	-127.273
United Kingdom Argentina	2016	50	20	55	-142.857
United Kingdom Argentina	2017	50	25	55	-166.667
United Kingdom Argentina	2018	55	5	65	-91.667
United Kingdom Argentina	2019	80	15	85	-114.286
United Kingdom Armenia	2009	5	5	20	-33.333
United Kingdom Australia	2009	490	95	220	-392
United Kingdom Australia	2010	325	50	160	-295.455
United Kingdom Australia	2011	265	45	195	-176.667
United Kingdom Australia	2012	310	40	175	-229.630
United Kingdom Australia	2013	390	60	145	-458.824
United Kingdom Australia	2014	320	50	160	-290.909
United Kingdom Australia	2015	310	20	170	-206.667

United Kingdom Australia	2016	315	50	150	-315
United Kingdom Australia	2017	260	100	130	-866.667
United Kingdom Australia	2018	200	20	95	-266.667
United Kingdom Australia	2019	135	30	75	-300
United Kingdom Bahrain	2015	45	5	10	-900
United Kingdom Belarus	2009	40	35	45	-400
United Kingdom Belarus	2013	35	30	45	-233.333
United Kingdom Belarus	2014	20	20	45	-80
United Kingdom Belarus	2016	40	20	45	-160
United Kingdom Belarus	2017	20	15	45	-66.667
United Kingdom Belarus	2018	20	10	20	-200
United Kingdom Belarus	2019	15	10	25	-100
United Kingdom Benin	2019	5	5	10	-100
United Kingdom Bosnia and Herzegovina	2009	20	15	35	-100
United Kingdom Bosnia and Herzegovina	2010	15	20	35	-100
United Kingdom Bosnia and Herzegovina	2011	15	10	40	-50
United Kingdom Bosnia and Herzegovina	2012	10	5	35	-33.333
United Kingdom Bosnia and Herzegovina	2013	10	10	35	-40
United Kingdom Bosnia and Herzegovina	2014	5	5	35	-16.667
United Kingdom Bosnia and Herzegovina	2015	10	5	40	-28.571
United Kingdom Bosnia and Herzegovina	2016	10	5	35	-33.333
United Kingdom Bosnia and Herzegovina	2017	15	10	25	-100
United Kingdom Bosnia and Herzegovina	2018	5	5	40	-14.286
United Kingdom Bosnia and Herzegovina	2019	5	10	40	-16.667
United Kingdom Brazil	2014	815	475	480	-16,300
United Kingdom Brazil	2015	845	450	470	-4,225
United Kingdom Brazil	2018	1745	695	815	-1,454.167
United Kingdom Cabo Verde	2010	5	5	20	-33.333
United Kingdom Cabo Verde	2017	5	5	10	-100
United Kingdom Cabo Verde	2018	5	5	25	-25
United Kingdom Cameroon	2019	30	60	65	-600
United Kingdom Canada	2009	640	60	165	-609.524
United Kingdom Canada	2010	485	35	155	-404.167
United Kingdom Canada	2011	475	55	170	-413.044
United Kingdom Canada	2012	425	40	155	-369.565
United Kingdom Canada	2013	565	60	125	-869.231
United Kingdom Canada	2014	430	60	115	-781.818

United Kingdom Canada	2015	420	55	135	-525
United Kingdom Canada	2016	410	65	130	-630.769
United Kingdom Canada	2017	280	75	90	-1,866.667
United Kingdom Canada	2018	285	20	105	-335.294
United Kingdom Canada	2019	170	25	70	-377.778
United Kingdom Chile	2010	85	45	55	-850
United Kingdom Chile	2012	70	45	55	-700
United Kingdom Chile	2013	75	25	40	-500
United Kingdom Chile	2014	45	25	35	-450
United Kingdom Chile	2015	80	35	50	-533.333
United Kingdom Chile	2016	85	35	55	-425
United Kingdom Chile	2018	110	45	60	-733.333
United Kingdom Chile	2019	120	40	80	-300
United Kingdom Colombia	2016	170	75	125	-340
United Kingdom Colombia	2017	115	90	140	-230
United Kingdom Colombia	2018	110	50	120	-157.143
United Kingdom Colombia	2019	75	45	140	-78.947
United Kingdom Congo	2011	15	35	45	-150
United Kingdom Congo	2018	5	10	20	-50
United Kingdom Congo	2019	5	10	30	-25
United Kingdom Costa Rica	2009	10	5	20	-66.667
United Kingdom Costa Rica	2015	10	5	10	-200
United Kingdom Costa Rica	2018	15	5	10	-300
United Kingdom Cote dIvoire	2018	20	40	50	-200
United Kingdom Cote dIvoire	2019	15	25	45	-75
United Kingdom Croatia	2009	105	20	70	-210
United Kingdom Croatia	2010	80	10	45	-228.571
United Kingdom Croatia	2011	85	15	50	-242.857
United Kingdom Croatia	2012	85	10	30	-425
United Kingdom Cuba	2009	10	15	25	-100
United Kingdom Cuba	2012	5	5	15	-50
United Kingdom Cuba	2013	15	5	10	-300
United Kingdom Cuba	2015	15	10	30	-75
United Kingdom Cuba	2016	25	5	20	-166.667
United Kingdom Cuba	2017	15	10	20	-150
United Kingdom Cuba	2019	10	5	15	-100
United Kingdom Democratic Republic of the Congo	2018	35	55	70	-233.333
United Kingdom Democratic Republic of the Congo	2019	25	50	105	-45.455
United Kingdom Dominica	2018	35	10	20	-350
United Kingdom Dominica	2019	45	15	25	-450
United Kingdom Dominican Republic	2009	15	5	15	-150
United Kingdom Dominican Republic	2010	25	5	20	-166.667
United Kingdom Dominican Republic	2011	10	5	25	-50
United Kingdom Dominican Republic	2012	5	5	20	-33.333
United Kingdom Dominican Republic	2013	20	15	20	-400

United Kingdom Dominican Republic	2014	10	5	20	-66.667
United Kingdom Dominican Republic	2016	20	5	30	-80
United Kingdom Dominican Republic	2017	10	25	30	-200
United Kingdom Dominican Republic	2018	20	5	25	-100
United Kingdom Dominican Republic	2019	20	5	30	-80
United Kingdom Ecuador	2018	30	15	60	-66.667
United Kingdom Ecuador	2019	30	20	35	-200
United Kingdom Eritrea	2018	5	185	575	-1.282
United Kingdom Eritrea	2019	5	90	465	-1.333
United Kingdom Guatemala	2011	20	10	25	-133.333
United Kingdom Guatemala	2012	20	5	10	-400
United Kingdom Guatemala	2017	15	5	10	-300
United Kingdom Guinea	2018	15	10	20	-150
United Kingdom Guinea	2019	5	10	30	-25
United Kingdom Guinea-Bissau	2017	5	10	15	-100
United Kingdom Guinea-Bissau	2018	5	5	10	-100
United Kingdom Guyana	2018	15	5	10	-300
United Kingdom Honduras	2018	155	15	50	-442.857
United Kingdom Honduras	2019	110	50	170	-91.667
United Kingdom Indonesia	2012	75	15	20	-1500
United Kingdom Indonesia	2018	120	20	25	-2400
United Kingdom Iraq	2018	275	490	795	-90.164
United Kingdom Iraq	2019	280	330	485	-180.645
United Kingdom Israel	2009	295	80	120	-737.5
United Kingdom Israel	2011	125	30	85	-227.273
United Kingdom Israel	2012	90	20	70	-180
United Kingdom Israel	2013	130	30	60	-433.333
United Kingdom Israel	2014	115	20	50	-383.333
United Kingdom Israel	2015	140	10	55	-311.111
United Kingdom Israel	2016	100	30	35	-2000
United Kingdom Israel	2017	115	20	40	-575
United Kingdom Israel	2018	125	5	30	-500
United Kingdom Israel	2019	260	15	40	-1040
United Kingdom Japan	2009	195	25	125	-195
United Kingdom Japan	2010	175	30	110	-218.75
United Kingdom Japan	2011	170	20	125	-161.905
United Kingdom Japan	2012	255	15	110	-268.421
United Kingdom Japan	2013	240	50	90	-600
United Kingdom Japan	2014	175	25	85	-291.667
United Kingdom Japan	2015	135	15	80	-207.692
United Kingdom Japan	2016	135	25	80	-245.455
United Kingdom Japan	2017	95	45	55	-950
United Kingdom Japan	2018	85	5	45	-212.5
United Kingdom Japan	2019	60	10	25	-400
United Kingdom Kazakhstan	2009	25	10	20	-250
United Kingdom Kazakhstan	2015	40	5	15	-400

United Kingdom Kazakhstan	2018	75	5	15	-750
United Kingdom Kuwait	2019	180	10	35	-720
United Kingdom Madagascar	2012	5	5	15	-50
United Kingdom Mali	2014	5	15	20	-100
United Kingdom Mexico	2009	285	55	205	-190
United Kingdom Mexico	2010	255	65	150	-300
United Kingdom Mexico	2011	185	60	160	-185
United Kingdom Mexico	2012	200	70	115	-444.445
United Kingdom Mexico	2013	160	60	70	-1600
United Kingdom Mexico	2014	150	35	75	-375
United Kingdom Mexico	2015	140	35	90	-254.546
United Kingdom Mexico	2016	185	55	105	-370
United Kingdom Mexico	2017	200	65	95	-666.667
United Kingdom Mexico	2018	150	20	105	-176.471
United Kingdom Mexico	2019	125	35	100	-192.308
United Kingdom Moldova	2013	45	35	45	-450
United Kingdom Moldova	2014	20	20	50	-66.667
United Kingdom Moldova	2015	30	20	60	-75
United Kingdom Moldova	2016	50	25	70	-111.111
United Kingdom Moldova	2017	40	25	95	-57.143
United Kingdom Moldova	2018	25	25	115	-27.778
United Kingdom Moldova	2019	35	20	110	-38.889
United Kingdom Montenegro	2013	10	5	10	-200
United Kingdom Montenegro	2014	10	5	10	-200
United Kingdom Montenegro	2016	5	5	10	-100
United Kingdom Morocco	2010	75	135	145	-750
United Kingdom Morocco	2018	105	100	125	-420
United Kingdom New Zealand	2009	200	55	70	-1,333.333
United Kingdom New Zealand	2010	145	40	50	-1450
United Kingdom New Zealand	2011	125	40	50	-1250
United Kingdom New Zealand	2012	100	25	65	-250
United Kingdom New Zealand	2013	150	40	50	-1500
United Kingdom New Zealand	2014	100	30	65	-285.714
United Kingdom New Zealand	2015	115	25	60	-328.571
United Kingdom New Zealand	2016	105	30	40	-1050
United Kingdom New Zealand	2018	70	10	35	-280
United Kingdom New Zealand	2019	50	10	25	-333.333
United Kingdom Nicaragua	2019	40	5	10	-800
United Kingdom North Macedonia	2010	15	10	30	-75
United Kingdom North Macedonia	2011	25	15	20	-500
United Kingdom North Macedonia	2012	10	5	25	-50
United Kingdom North Macedonia	2013	15	5	45	-37.5
United Kingdom North Macedonia	2014	10	10	25	-66.667
United Kingdom North Macedonia	2015	15	5	25	-75
United Kingdom North Macedonia	2016	30	15	20	-600
United Kingdom North Macedonia	2017	25	15	40	-100

United Kingdom North Macedonia	2018	10	5	35	-33.333
United Kingdom North Macedonia	2019	15	5	20	-100
United Kingdom Oman	2012	20	5	10	-400
United Kingdom Oman	2014	60	5	35	-200
United Kingdom Panama	2016	10	5	10	-200
United Kingdom Paraguay	2009	40	10	25	-266.667
United Kingdom Paraguay	2011	20	5	10	-400
United Kingdom Paraguay	2014	10	5	15	-100
United Kingdom Paraguay	2017	10	5	10	-200
United Kingdom Peru	2009	30	15	55	-75
United Kingdom Peru	2010	35	30	50	-175
United Kingdom Peru	2011	30	25	55	-100
United Kingdom Peru	2012	20	15	35	-100
United Kingdom Peru	2013	35	20	55	-100
United Kingdom Peru	2014	25	20	50	-83.333
United Kingdom Peru	2015	25	10	30	-125
United Kingdom Peru	2016	40	20	60	-100
United Kingdom Peru	2017	30	15	60	-66.667
United Kingdom Peru	2018	25	5	75	-35.714
United Kingdom Peru	2019	15	5	60	-27.273
United Kingdom Qatar	2014	165	5	55	-330
United Kingdom Qatar	2016	140	5	30	-560
United Kingdom Qatar	2018	130	5	15	-1,300
United Kingdom Russia	2009	200	140	180	-500
United Kingdom Russia	2010	210	145	165	-1,050
United Kingdom Russia	2011	200	140	180	-500
United Kingdom Russia	2013	325	135	175	-812.5
United Kingdom Russia	2014	275	110	175	-423.077
United Kingdom Russia	2015	295	80	175	-310.526
United Kingdom Russia	2016	355	105	200	-373.684
United Kingdom Russia	2017	325	95	185	-361.111
United Kingdom Russia	2018	225	20	160	-160.714
United Kingdom Russia	2019	200	35	175	-142.857
United Kingdom Saint Kitts and Nevis	2015	20	5	10	-400
United Kingdom Saudi Arabia	2015	540	30	40	-5400
United Kingdom Saudi Arabia	2018	325	20	35	-2,166.667
United Kingdom Senegal	2018	10	15	40	-40
United Kingdom Senegal	2019	10	20	50	-33.3333
United Kingdom Serbia	2009	125	40	80	-312.5
United Kingdom Serbia	2010	50	30	80	-100
United Kingdom Serbia	2011	55	30	95	-84.6154
United Kingdom Serbia	2012	40	20	65	-88.8889
United Kingdom Serbia	2013	40	25	80	-72.7273
United Kingdom Serbia	2014	40	15	65	-80
United Kingdom Serbia	2015	35	20	65	-77.7778
United Kingdom Serbia	2016	50	20	65	-111.1111

United Kingdom Serbia	2017	35	25	75	-70
United Kingdom Serbia	2018	25	10	65	-45.4545
United Kingdom Serbia	2019	25	10	55	-55.5556
United Kingdom Singapore	2012	50	5	15	-500
United Kingdom Singapore	2014	70	5	15	-700
United Kingdom Singapore	2015	80	10	15	-1600
United Kingdom South Korea	2009	280	95	130	-800
United Kingdom South Korea	2010	270	85	90	-5400
United Kingdom South Korea	2011	185	55	105	-370
United Kingdom South Korea	2012	180	55	95	-450
United Kingdom South Korea	2013	200	70	85	-1,333.333
United Kingdom South Korea	2014	180	55	75	-900
United Kingdom South Korea	2015	170	45	95	-340
United Kingdom South Korea	2016	155	20	90	-221.429
United Kingdom South Korea	2018	125	20	50	-416.667
United Kingdom South Korea	2019	40	10	35	-160
United Kingdom Sudan	2019	60	90	155	-92.308
United Kingdom Syria	2018	20	60	105	-44.444
United Kingdom Syria	2019	15	50	60	-150
United Kingdom Taiwan	2011	105	25	30	-2100
United Kingdom Taiwan	2012	55	20	55	-157.143
United Kingdom Taiwan	2013	80	10	30	-400
United Kingdom Taiwan	2014	85	10	40	-283.333
United Kingdom Taiwan	2015	70	5	55	-140
United Kingdom Taiwan	2016	120	50	55	-2400
United Kingdom Taiwan	2018	65	5	20	-433.333
United Kingdom Taiwan	2019	40	5	20	-266.667
United Kingdom Thailand	2018	195	10	40	-650
United Kingdom Togo	2018	5	5	10	-100
United Kingdom Tunisia	2009	35	60	70	-350
United Kingdom United Arab Emirates	2014	215	15	55	-537.5
United Kingdom United Arab Emirates	2015	105	5	95	-116.667
United Kingdom United Arab Emirates	2016	95	5	50	-211.111
United Kingdom United Arab Emirates	2017	80	20	45	-320
United Kingdom United States	2009	2505	210	690	-521.875
United Kingdom United States	2010	1980	180	570	-507.692
United Kingdom United States	2011	1885	200	595	-477.215
United Kingdom United States	2012	1770	150	625	-372.632
United Kingdom United States	2013	2305	210	570	-640.278
United Kingdom United States	2014	1965	210	575	-538.356
United Kingdom United States	2015	1975	205	630	-464.706
United Kingdom United States	2016	1710	265	510	-697.959
United Kingdom United States	2017	1555	435	470	-4,442.857

United Kingdom United States	2018	1510	90	495	-372.840
United Kingdom United States	2019	785	145	300	-506.452
United Kingdom Uruguay	2009	10	5	10	-200
United Kingdom Venezuela	2009	155	45	305	-59.615
United Kingdom Venezuela	2010	110	40	175	-81.481
United Kingdom Venezuela	2011	85	30	145	-73.913
United Kingdom Venezuela	2012	70	25	85	-116.667
United Kingdom Venezuela	2013	85	40	65	-340
United Kingdom Venezuela	2014	105	35	155	-87.5
United Kingdom Venezuela	2015	80	30	100	-114.286
United Kingdom Venezuela	2016	55	45	95	-110
United Kingdom Venezuela	2017	35	35	75	-87.5
United Kingdom Venezuela	2018	45	15	65	-90
United Kingdom Venezuela	2019	30	15	70	-54.545
United Kingdom Yemen	2019	20	10	15	-400

Table S4. Robustness. Fixed Effects Poisson on the 3-year-Average Rate of Enforced Return.

	Any Framework		Level		Bindingness				Issue linkage		Implementation	
	Model 1a	**Model 1b**	**Model 2a**	**Model 2b**	**Model 3a (I)**	**Model 3b (I)**	**Model 3a (II)**	**Model 3b (II)**	**Model 4a**	**Model 4b**	**Model 5a**	**Model 5b**
Any framework	0.949	0.992										
	(0.046)	(0.071)										
Bilateral			1.333*[12]	1.144								
			(0.156)	(0.130)								
Binding					1.139+	1.034	1.135+	1.034	1.133+	1.036	1.135+	1.039
					(0.077)	(0.098)	(0.077)	(0.098)	(0.077)	(0.099)	(0.077)	(0.099)
Non-binding					1.818*[13]	1.330						
					(0.518)	(0.331)						
							1.817*[14]	1.385	1.811*	1.383	1.813*	1.383
Memo of Understanding							(0.542)	(0.371)	(0.540)	(0.369)	(0.541)	(0.369)
Other non-binding							1.264	0.963	1.267	0.964	1.264	0.965
							(0.196)	(0.217)	(0.197)	(0.218)	(0.195)	(0.215)
EU-wide			0.895*	0.820*								
			(0.042)	(0.076)								
Binding					1.112	0.920	1.101	0.919				
					(0.073)	(0.159)	(0.071)	(0.158)				

[12] Following a t-test, we observe that the effect of bilateral frameworks is statistically different from EU-wide frameworks: $\overline{\chi}^2 = 0.0018$.

[13] Following a t-test, we observe that the effect of non-binding bilateral frameworks is not statistically different from binding bilateral ones: $\overline{\chi}^2 = 0.1105$.

[14] Following a t-test, we observe that the effect of MoU is not statistically different from other forms of bilateral non-binding frameworks: $\overline{\chi}^2 = 0.3032$, also not from bilateral binding ones: $\overline{\chi}^2 = 0.1241$.

Without visa facilitation									(omitted)	(omitted)	(omitted)	(omitted)
Non-EURA									1.033	1.340	1.032	1.324
									(0.085)	(0.240)	(0.085)	(0.237)
With visa facilitation									1.227+	1.404	1.224+	1.387
									(0.147)	(0.299)	(0.147)	(0.295)
Non-binding					0.842**[15]	0.974						
					(0.048)	(0.082)						
Mobility Partnership							0.940	1.012	0.916	1.007	0.917	1.007
							(0.091)	(0.106)	(0.088)	(0.105)	(0.089)	(0.105)
Other non-binding							0.802**[16]	0.909	0.820**	0.928	0.821**	0.929
							(0.056)	(0.124)	(0.059)	(0.129)	(0.059)	(0.129)
Implementation Protocols of EU binding frameworks											1.029	1.053
											(0.067)	(0.070)
Constant	63.833***	63.464***	62.134***	65.448***	59.918***	63.571***	60.181***	63.872***	57.797***	46.882***	57.773***	47.293***
	(1.013)	(1.534)	(1.205)	(1.921)	(1.138)	(2.510)	(1.017)	(2.452)	(4.667)	(7.707)	(4.663)	(7.742)
Observations	23,648	23,399	23,648	23,399	23,648	23,399	23,648	23,399	23,648	23,399	23,648	23,399
Akaike's information criterion (AIC)	468,318.4	363,735.6	467,515.1	363,474.2	467,027.3	363,599.2	466,921.8	363,559.6	466,762.5	363,486.8	466,753.3	363,467.5
Bayesian information	468,334.5	363,751.8	467,539.3	363,498.3	467,067.6	363,639.5	466,978.3	363,616	466,827	363,551.3	466,826	363,540.1

[15] Following a t-test, we observe that the effect of non-binding EU-wide frameworks is statistically different from binding EU-wide frameworks: $\overline{\chi}^2$ =0.0035.

[16] Following a t-test, we observe that the effect of other non-binding EU-wide frameworks is statistically different from binding EU-wide frameworks: $\overline{\chi}^2 = 0.0021$.

criterion (BIC)												
Fixed effects												
Country-pair	X	X	X	X	X	X	X	X	X	X	X	X
Time	X		X		X		X		X		X	
Origin-country-year		X		X		X		X		X		X
Destination-country-year		X		X		X		X		X		X

Note: Estimates reported in incidence rate ratio. Standard errors clustered by dyad in parentheses. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, $^{+}p < 0.1$.

Table S5. Robustness. Fixed Effects Poisson on the Rate of Enforced Return (excluding EU border countries).[17]

	Any Framework		Level		Bindingness				Issue linkage		Implementation	
	Model 1a	**Model 1b**	**Model 2a**	**Model 2b**	**Model 3a (I)**	**Model 3b (I)**	**Model 3a (II)**	**Model 3b (II)**	**Model 4a**	**Model 4b**	**Model 5a**	**Model 5b**
Any framework	0.941	1.059										
	(0.073)	(0.092)										
Bilateral			1.668**[18]	1.445*								
			(0.311)	(0.242)								
Binding					1.273+	1.099	1.266	1.099	1.265	1.101	1.263	1.103
					(0.183)	(0.184)	(0.183)	(0.183)	(0.183)	(0.184)	(0.183)	(0.184)
Non-binding					2.608**[19]	1.962*						
					(0.837)	(0.564)						
Memo of Understanding							2.338**[20]	1.885*	2.328**	1.883*	2.325**	1.882*
							(0.764)	(0.565)	(0.759)	(0.563)	(0.758)	(0.563)
Other non-binding							1.663**	1.316	1.671**	1.317	1.674**	1.317
							(0.271)	(0.231)	(0.272)	(0.232)	(0.273)	(0.233)
EU-wide			0.836**	0.916								
			(0.057)	(0.079)								
Binding					1.057	1.030	1.051	1.033				
					(0.119)	(0.149)	(0.116)	(0.152)				

[17] The EU border countries are: Bulgaria, Estonia, Finland, Greece, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia.

[18] Following a t-test, we observe that the effect of bilateral frameworks is statistically different from EU-wide frameworks: $\overline{\chi}^2 = 0.0006$.

[19] Following a t-test, we observe that the effect of non-binding bilateral frameworks is statistically different from binding bilateral ones: $\overline{\chi}^2 = 0.0412$.

[20] Following a t-test, we observe that the effect of MoU is not statistically different from other forms of bilateral non-binding frameworks: $\overline{\chi}^2 = 0.3775$ also not from bilateral binding ones: $\overline{\chi}^2 = 0.0863$.

Without visa facilitation									(omitted)	(omitted)	(omitted)	(omitted)
Non-EURA									1.176	1.140	1.177	1.128
									(0.130)	(0.213)	(0.130)	(0.213)
With visa facilitation									1.471+	1.356	1.475+	1.343
									(0.309)	(0.294)	(0.310)	(0.291)
Non-binding					0.734***[21]	0.948						
					(0.062)	(0.098)						
Mobility Partnership							0.790	0.888	0.755+	0.880	0.754+	0.880
							(0.126)	(0.140)	(0.118)	(0.136)	(0.118)	(0.136)
Other non-binding							0.709***[22]	1.012	0.734**	1.033	0.733**	1.033
							(0.071)	(0.128)	(0.074)	(0.133)	(0.074)	(0.133)
Implementation Protocols of EU binding frameworks											0.962	1.053
											(0.083)	(0.086)
Constant	69.626***	69.246***	65.833***	67.874***	64.126***	67.270***	64.639***	67.689***	53.982***	58.387***	54.019***	58.810***
	(1.643)	(1.950)	(2.028)	(2.287)	(1.876)	(2.422)	(1.775)	(2.361)	(5.995)	(10.473)	(6.001)	(10.614)
Observations	14,399	14,051	14,399	14,051	14,399	14,051	14,399	14,051	14,399	14,051	14,399	14,051
Akaike's information	410,477.5	285,325.3	409,054.3	285,002.4	408,221.8	284,889.7	408,306	284,918.8	407,997.2	284,866.7	407,987.4	284,857.3

[21] Following a t-test, we observe that the effect of non-binding EU-wide frameworks is statistically different from binding EU-wide frameworks: $\overline{\chi}^2 = 0.0135$.

[22] Following a t-test, we observe that the effect of other non-binding EU-wide frameworks is statistically different from binding EU-wide frameworks: $\overline{\chi}^2 = 0.0150$.

criterion (AIC)												
Bayesian information criterion (BIC)	410,492.6	285,340.4	409,077	285,025.1	408,259.6	284,927.5	408,359	284,971.6	408,057.8	284,927.1	408,055.6	284,925.3
Fixed effects												
Country-pair	X	X	X	X	X	X	X	X	X	X	X	X
Time	X		X		X		X		X		X	
Origin-country-year		X		X		X		X		X		X
Destination-country-year		X		X		X		X		X		X

Note: Estimates reported in incidence rate ratio. Standard errors clustered by dyad in parentheses. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, $^{+}p < 0.1$.

Table S6. Robustness. Fixed Effects Poisson on the Rate of Enforced Return (with minimum threshold of 25 orders to leave per dyad-year).

	Any Framework		Level		Bindingness				Issue linkage		Implementation	
	Model 1a	**Model 1b**	**Model 2a**	**Model 2b**	**Model 3a (I)**	**Model 3b (I)**	**Model 3a (II)**	**Model 3b (II)**	**Model 4a**	**Model 4b**	**Model 5a**	**Model 5b**
Any framework	1.024	1.095										
	(0.064)	(0.074)										
			1.437*[23]	1.257*								
Bilateral			(0.221)	(0.127)								
					1.186	1.229+	1.181	1.232+	1.179	1.233+	1.180	1.236+
Binding					(0.127)	(0.140)	(0.127)	(0.139)	(0.126)	(0.140)	(0.127)	(0.141)
Non-binding					2.248*[24]	1.176						
					(0.755)	(0.201)						
Memo of Understanding							2.335*[25]	1.019	2.326*	1.019	2.328*	1.020
							(0.892)	(0.191)	(0.890)	(0.191)	(0.891)	(0.191)
Other non-binding							1.568**	1.529*	1.573**	1.533*	1.572**	1.531*
							(0.253)	(0.265)	(0.254)	(0.267)	(0.253)	(0.268)
EU-wide			0.919	0.898								
			(0.052)	(0.084)								
Binding					1.196*	0.786+	1.189*	0.780*				
					(0.099)	(0.101)	(0.095)	(0.097)				

[23] Following a t-test, we observe that the effect of bilateral frameworks is statistically different from EU-wide frameworks: $\overline{\chi}^2 = 0.0075$.

[24] Following a t-test, we observe that the effect of non-binding bilateral frameworks is not statistically different from binding bilateral ones: $\overline{\chi}^2 = 0.0705$.

[25] Following a t-test, we observe that the effect of MoU is not statistically different from other forms of bilateral non-binding frameworks: $\overline{\chi}^2 = 0.3670$, also not from bilateral binding ones: $\overline{\chi}^2 = 0.0868$.

Without visa facilitation									(omitted)	(omitted)	(omitted)	(omitted)
Non-EURA									1.064	1.576**	1.063	1.558*
									(0.104)	(0.278)	(0.104)	(0.273)
With visa facilitation									1.504**[26]	1.558+	1.501**	1.537+
									(0.221)	(0.361)	(0.221)	(0.355)
Non-binding					0.788***[27]	0.908						
					(0.054)	(0.075)						
Mobility Partnership							0.862	0.818+	0.819+	0.817+	0.820+	0.818+
							(0.096)	(0.090)	(0.087)	(0.089)	(0.088)	(0.089)
Other non-binding							0.746***[28]	1.049	0.784**	1.072	0.785**	1.074
							(0.065)	(0.116)	(0.069)	(0.120)	(0.069)	(0.121)
Implementation Protocols of EU binding frameworks											1.020	1.064
											(0.066)	(0.074)
Constant	64.139***	63.996***	61.801***	65.845***	58.393***	69.062***	58.671***	69.196***	53.648***	41.813***	53.616***	42.095***
	(1.742)	(1.959)	(2.223)	(2.404)	(2.064)	(2.885)	(1.874)	(2.782)	(5.330)	(7.008)	(5.330)	(6.998)
Observations	11,785	11,374	11,785	11,374	11,785	11,374	11,785	11,374	11,785	11,374	11,785	11,374

[26] Following a t-test, we observe that the effect of EURAs with visa facilitation is statistically different from EURAs without such arrangements: $\overline{\chi}^2 = 0.0055$.

[27] Following a t-test, we observe that the effect of non-binding EU-wide frameworks is statistically different from binding EU-wide frameworks: $\overline{\chi}^2 = 0.0001$.

[28] Following a t-test, we observe that the effect of other non-binding EU-wide frameworks is statistically different from binding EU-wide frameworks: $\overline{\chi}^2 = 0.0002$.

Akaike's information criterion (AIC)	211,788.4	143,159.8	211,097	143,056.8	210,127.6	143,053.1	210,040.8	142,968.6	209,675.5	142,904.4	209,674	142,887
Bayesian information criterion (BIC)	211,803.1	143,174.5	211,119.1	143,078.8	210,164.5	143,089.8	210,092.4	143,020	209,734.5	142,963.1	209,740.4	142,953.1
Fixed effects												
Country-pair	X	X	X	X	X	X	X	X	X	X	X	X
Time	X		X		X		X		X		X	
Origin-country-year		X		X		X		X		X		X
Destination-country-year		X		X		X		X		X		X

Note: Estimates reported in incidence rate ratio. Standard errors clustered by dyad in parentheses. ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, $^{+}p < 0.1$.