

POLICYBRIEF

Migrants, Refugees, and Policies: A Gravitational Analysis of Irregular Population Movements in Times of Crisis¹

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We describe key policy trends regarding the development of externalization policies in the last two decades and assess their impact on irregular migration flows to Europe. To do so, we use a new multidimensional policy dataset constructed by a team of MAGYC scholars and link them to Frontex data on irregular border crossings (IBCs). Focusing on EU readmission agreements (EURAs) and visa liberalization policies, we find that **implementing protocols to EURAs (IP-EURAs) are correlated with fewer IBCs identified as nationals of the country of origin implicated in the agreements.** However, irregular border crossers who are likely to obtain asylum in Europe (“likely refugees”) are not significantly impacted by these policies. At the same time, visa liberalizations are associated with fewer IBCs, including both “likely refugees” as well as “likely irregular migrants.” In other words, **people who are likely refugees attempt to cross Europe’s borders to escape from violence whatever the risk this implies, which leads to greater IBCs in the absence of legal migration channels.**

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¹ This policy brief has been reviewed by Paula Buskarova (University of Bratislava) and Bařak Yavan (University of Li ege) as part of the MAGYC’s internal review process.

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Introduction

Externalization policies were first adopted by Western European states in the 1980s and 1990s to minimize the risk of substantial migration from Eastern European states following the end of the Cold War. In turn, in the 2000s, the European Union (EU) and its member states signed migration-related partnerships and developed cooperation with countries bordering the Mediterranean Sea (notably Libya, Morocco, Turkey, etc.) and slowly expanded their cooperation efforts further south on the African continent through bilateral and regional multilateral negotiations. At the same time, the scope of externalization policies expanded to encompass both irregular migration as well as issues of asylum, which raised significant political, legal, and academic controversies. The EU and its member states came to use a growing variety of policy instruments to address migration involving bilateral and multilateral cooperation at various levels and including formal and informal tools and processes.

Externalization since the 1990s has thus expanded on four dimensions: (1) geographical scope, (2) policy domains, (3) policy instruments, and (4) levels of interventions. The main trends observed in externalization dynamics are the geographical expansion of cooperation and the informalization of policy instruments. The Rabat and Khartoum Processes, two regional dialogues, epitomize these trends as they aim to foster political collaboration at all levels and across policy domains (including security, development assistance, humanitarian aid, etc.) in order to address migration and asylum dynamics across Western and Eastern Africa, respectively. Given the steady expansion of externalization in the last two decades and its increasing costs (whether monetary or in terms of diplomacy, violations of international or European conventions, human deaths, and beyond) for the EU and its member states, an assessment of the efficacy of such policies is urgently needed.

This policy brief presents a research digest on key trends regarding the development of externalization policies in the last two decades and offers a quantitative assessment of their impact on irregular migration flows to Europe. Exploiting a novel multidimensional dataset on EU externalization policies, we link policies to Frontex data recording irregular border crossings (IBCs) across the EU and Schengen Area's external frontiers. Bringing together critical policy analysis and econometrics, this brief bridges the gap between qualitative and quantitative studies on migration politics.

To assess the effects of externalization policies, we develop a regression framework that uses longitudinal data on IBCs and controls for the main determinants of these flows identified in existing scholarship, such as population and economic growth as well as political factors. To understand the effects of externalization, we focus on EU readmission agreements (EURAs) and their bilateral implementation protocols (IPs), as well as visa liberalization decisions. Importantly, the latter provide a legal channel of entry which is often perceived as a reward granted by the EU for stronger border enforcement measures adopted by migrant countries of origin.

This brief constitutes the first step of a larger evidence-based project which aims at assessing the effects of externalization policies. Existing studies have called into question whether these policies are effective at reducing migration and have highlighted the fact that they are in tension with the international commitments European states have made to protect individuals fleeing from persecution and

violence.⁷ Although our descriptive analysis documents a clear expansion of externalization policy instruments in the last two decades, assessing their impact on IBCs opens many questions about their efficacy. These questions are hard to answer without further data analysis and a clear definition of policy goals. Even when such policies are assessed solely in terms of reducing the number of IBCs, as is done in this brief, understanding the mechanisms underlying the observed effects calls for complementary analyses of the flows of legal migrants to Europe and the stocks of irregular migrants overstaying their visas. Moreover, since EU states are bound by their obligation to welcome and protect asylum seekers, the protection of vulnerable migrants should be assessed jointly with the efficacy of externalization policies in ensuring “orderly migration.”⁸

Evidence and Analysis

The Evolution of Externalization Policies 2002-2018: Geographical Expansion and Informalization

Although externalization encompasses a diverse array of policies, our database focuses on migration-related bilateral and multilateral agreements between 31 European destination countries⁹ and all possible migrant origin countries worldwide. Such agreements include migration policy packages (Mobility Partnerships, Migration Partnerships, Migration Compacts), labor migration programs, readmission procedures (readmission agreements, memoranda, exchange of letters, administrative arrangements), border and police cooperation, ad hoc statements and declarations (the EU-Turkey Statement of March 2016), and international fora (the Khartoum and Rabat Processes). All these policies constitute cooperation between destination and origin countries on the issue of migration and asylum management and therefore qualify as some form of externalization instrument.

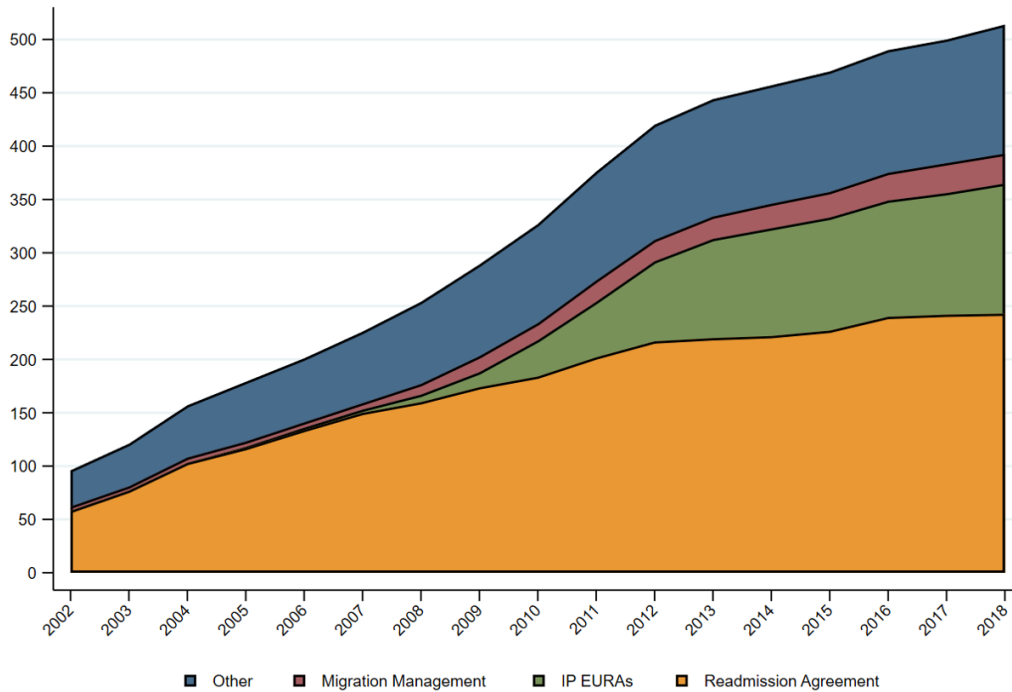
Our novel dataset reveals the steady quantitative expansion of externalization policies since the early 2000s as a strategy for managing migration flows (**Figure 1**). This trend was led first by European states at the bilateral level, followed by the EU at the multilateral level (**Figure 2**), notably after the 2015 migrant/refugee crisis. **While bilateral agreements remain numerically dominant, Figure 2 highlights the growing salience of informal policies, in particular for the EU.**

⁷ See, for example, Caron, H. (2017). “Refugees, Readmission Agreements, and Safe Third Countries: A Recipe for Refoulement.” *Journal of Regional Security*, 12(1): 27-50; Oelgemoller, C. (2011). “Transit and Suspension: Migration Management and the Metamorphosis of Asylum-Seekers into ‘Illegal’ Immigrants.” *Journal of Ethnic and Migration Studies*, 37(3): 407-424.

⁸ Two of the 2030 Sustainable Development Goal targets pertain to ensuring “orderly migration” in order to ensure the health and safety of migrants.

⁹ The 31 European countries of destination are Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom.

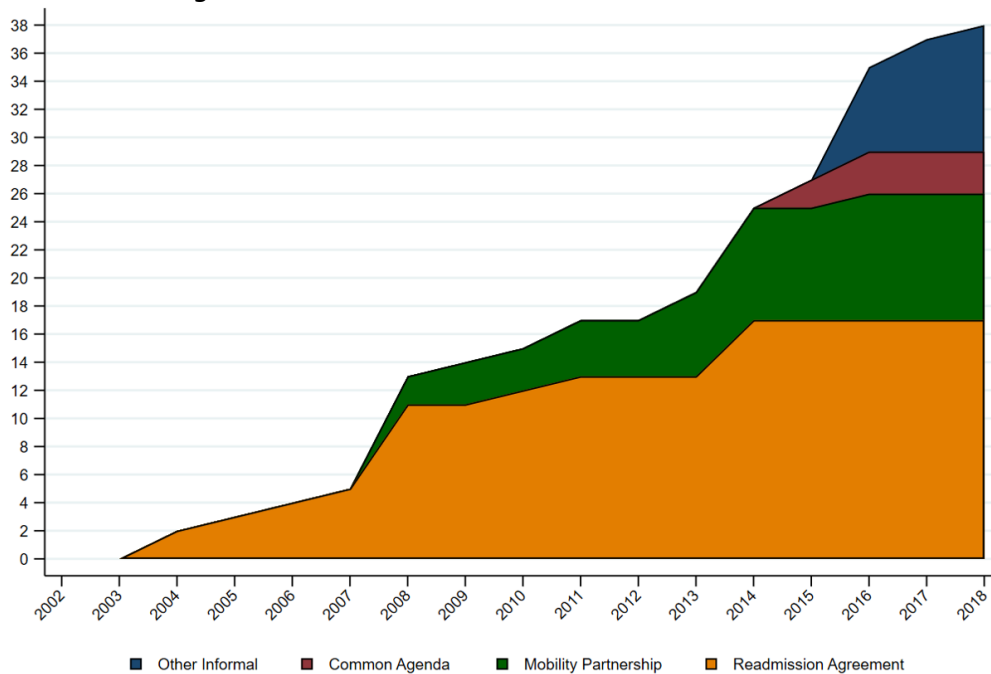
Figure 1: Bilateral Externalization Instruments and Implementing Protocols to EURAs 2002-2018



Note: Other includes: Administrative Arrangements; Circular Migration Agreements; Conventions; Framework Agreements; Exchange of Letters; Memoranda of Understanding; Police Cooperation Agreements; Provisional Agreements.

Sources: Underlying data derived from Cassarino, J.-P. (2020). "Inventory of the bilateral agreements linked to readmission." Accessible at: <https://www.jeanpierrecassarino.com/datasets/ra/>; Migreurop. (2021). Accessible at: <https://migreurop.org/?lang=en>.

Figure 2: EU Externalization Instruments 2002-2018



Note: Other Informal includes: Admission Procedures; Good Practices; Joint Declaration; Joint Statement; Joint Way Forward; Standard Operating Procedures
Note: Percentage designates the share of IP EURAs signed given all such agreements possible between member states and partner countries.

Sources: Underlying data derived from Cassarino, J.-P. (2020). "Inventory of the bilateral agreements linked to readmission." Accessible at: <https://www.jeanpierrecassarino.com/datasets/ra/>; Migreurop. (2021). Accessible at: <https://migreurop.org/?lang=en>.

Our data collection begins with the year 2002, by which point 96 bilateral agreements had already been adopted between 31 European destination states and numerous partners around the world (excluding agreements between European states themselves). As shown in **Figure 1**, by 2018, the number had grown to 514, including bilateral implementation protocols to EURAs (IP-EURAs). The primary externalization instrument adopted between states has persistently been readmission agreements, which facilitate the deportation of individuals with an irregular status who have the nationality of one of the two state parties. Although the agreements are reciprocal, deportations of European nationals are relatively rare. European states have also negotiated other agreements as well as primarily informal instruments with partners, all of which consist of measures covering many policy issues (border controls, training and labor migration, humanitarian aid and development assistance, etc.).

Our data show that, while the rate of adoption of purely bilateral readmission agreements among all externalization instruments has declined, the rise of IP-EURAs until 2015 indicates continued commitment to using readmission agreements to facilitate deportation and deter irregular migration. Nevertheless, the number of EURAs and related IPs plateaued following the 2015 crisis. This is in part due to the reticence of partner countries to commit to readmitting third country nationals who had transited through their territories in existing or future agreements. This trend is singled out in European policy documents as a main obstacle to both the expansion of existing agreements, the signing of new ones, and their effective implementation (European Court of Auditors, 2021). This proves particularly important to understand the pivotal role played by so-called “transit countries” in the management of irregular migration to Europe and of countries declared “safe” by the EU as places of containment for asylum seekers.

In tandem with bilateral agreements, following the 1999 Treaty of Amsterdam, which gave to the EU a co-competence over migration policy, and since the adoption of the “Global Approach to Migration and Mobility” in 2005, the EU has likewise adopted multilateral instruments to advance cooperation on migration with the aim of complementing and bolstering member state efforts to stem irregular migration flows. **Figure 2** illustrates the growth of these EU multilateral agreements and reveals the spike in the number of instruments—particularly informal measures—adopted in the wake of the 2015 crisis.

The bilateral and multilateral agreements described so far are just the most visible part of the broader trend of externalization which also relies upon policy linkages across domains of external intervention. For example, when a third country signs a readmission agreement it often receives enhanced operational and financial support as well as facilitated travel opportunities or temporary visas for its citizens, or it is at least promised such benefits by its European partner(s). Similarly, trade concessions and/or development aid are linked to partners’ commitments with respect to migration cooperation. Ignoring these corollaries of externalization policies may lead to wrong inferences from naive data analyses that omit these additional determinants of migration flows. Therefore, our regressions control for Official Development Assistance (ODA) and for visa liberalization, and we include route-year and route-country of origin fixed effects to control for many other confounding factors correlated to the implementation of externalization policies, such as the expansion of Frontex budgets to enforce border controls.

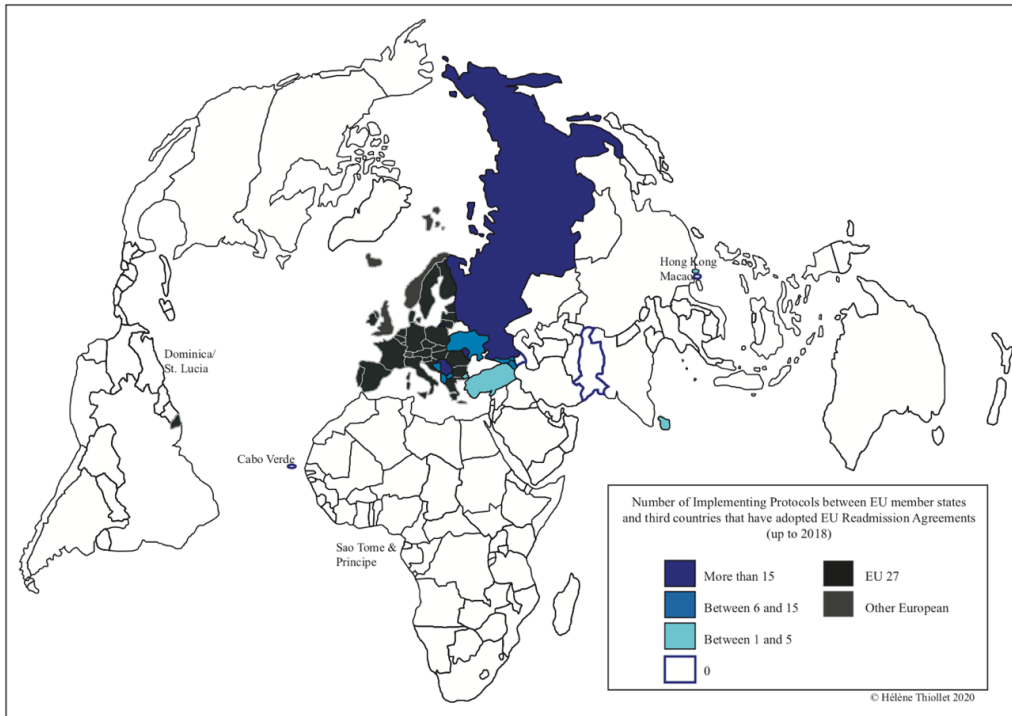
Our regression results in **Tables 1 and 3** in the Appendix show that the more IP-EURAs signed by an origin country with European (destination) countries, the fewer the IBCs of that nationality are detected. In **Table 4** in the Appendix, we describe the variables that we use in our regression analyses which contextualize our findings. This result suggests that multilateral readmission agreements implemented through IP-EURAs may have a deterrent effect on irregular migrants seeking to reach Europe. This is not the case, however, with bilateral readmission agreements (RAs), which are not significantly correlated with IBCs. Specifically, the coefficients for IP-EURAs in Tables 1 and 3 indicate that, all else equal, the adoption of one additional IP by a country of origin is associated with approximately 2.6% fewer IBCs of nationals from that country - a relationship that is neither very large nor completely negligible (on average, nine IP-EURAs are signed by eligible origin countries). Moreover, this coefficient captures the average effect across the nine routes, and therefore may be higher on the primary routes taken by nationals of a particular country. Yet, the effect is non-linear, as shown in column 2 of Table 1. **Signing one additional IP-EURA with a new partner in Europe has diminishing efficacy on deflating IBCs when several IP-EURAs are already in place.**

Although this result is robust across all specifications, we are nevertheless circumspect that IP-EURAs have a deterrence effect per se on irregular migration to Europe. As we show in **Figure 3** and **Table 2**, as of 2018, only 17 states have signed an EURA, and, among those 17 states, only a few Western Balkan and post-Soviet states have signed significant numbers of IPs to activate the EU agreements. Thus, we believe that other underlying factors are driving the observed relationship. The countries of the Western Balkans and post-Soviet Eastern Europe are interested in joining the EU, or at least in developing closer ties with this group of states. As such, they are likely to be most committed to cooperating with the EU and its members with respect to reducing irregular migration. Therefore, we surmise that such agreements are a proxy measure of a deeper commitment to reduce irregular migration as well as other forms of cooperation across various policy domains. Our measure of IP-EURAs captures this underlying commitment rather than a specific deterrent effect tied specifically to those agreements. Further work using more data on border controls and other types of cooperation will need to be conducted to confirm this hypothesis.

Furthering our analysis, we distinguish between border crossers who would likely be granted asylum in destination states (“likely refugees”) and those who would not (“likely irregular migrants”) given weighted average of asylum acceptance rates by nationality, taking into consideration the number of first instance asylum adjudications across the 31 countries of destination (**Figure 4**). We estimate that, between 2009 and 2020, 54% of IBCs were likely refugees and that, at the peak of arrivals in 2015, 75.5% were likely refugees.¹⁰ While scholars approach policy categories critically, we use the composition of mass irregular flows across borders to analyze policy impacts regarding likely refugees and likely irregular migrants.

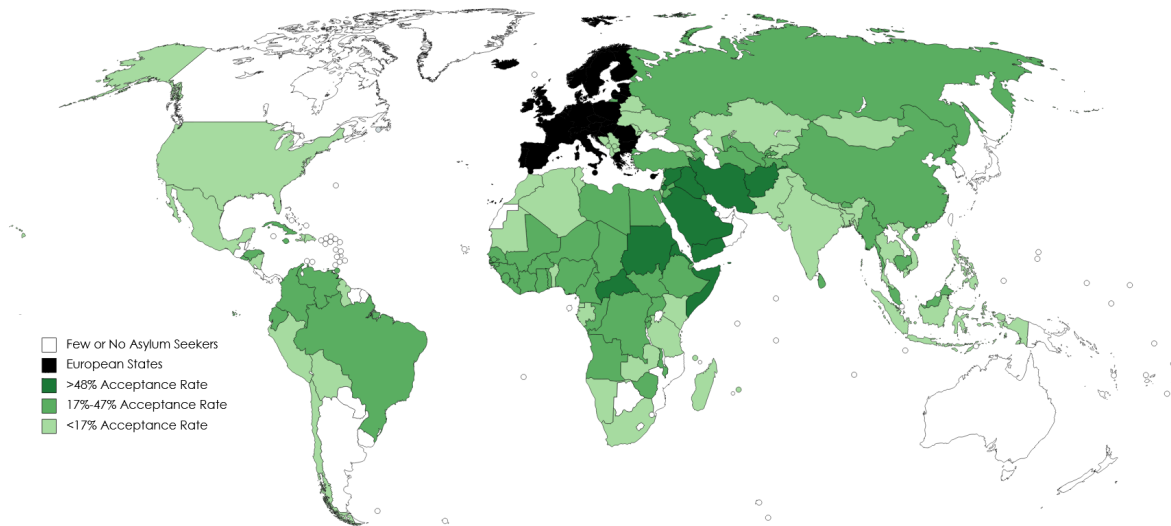
¹⁰ See MAGYC Deliverable 8.2 for further information on our methodology, accessible here: <https://www.magyc.uliege.be/wp-content/uploads/2021/11/D8.2v1October2021.pdf>.

Figure 3: Implementing Protocols to EU Readmission Agreements by Partner States in 2018



Sources: Underlying data derived from Cassarino, J.-P. (2020). "Inventory of the bilateral agreements linked to readmission." Accessible at: <https://www.jeanpierrecassarino.com/datasets/ra/>; Migreurop. (2021). Accessible at: <https://migreurop.org/?lang=en>.

Figure 4: Weighted Average Asylum Acceptance Rate for 2008- 2018



Sources: Underlying data derived from Eurostat, accessible at: <https://ec.europa.eu/eurostat/web/main/data/database>.

Figure 5: Visa Liberalization for Travel to the Schengen Area¹¹

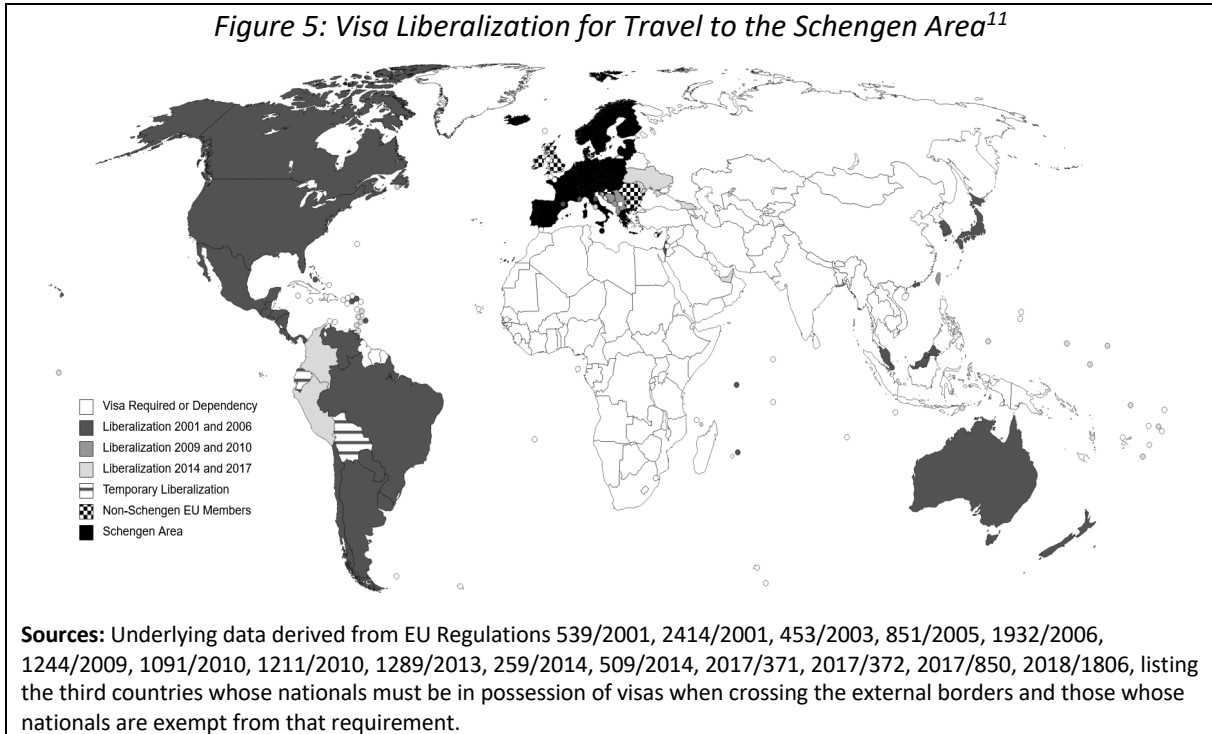
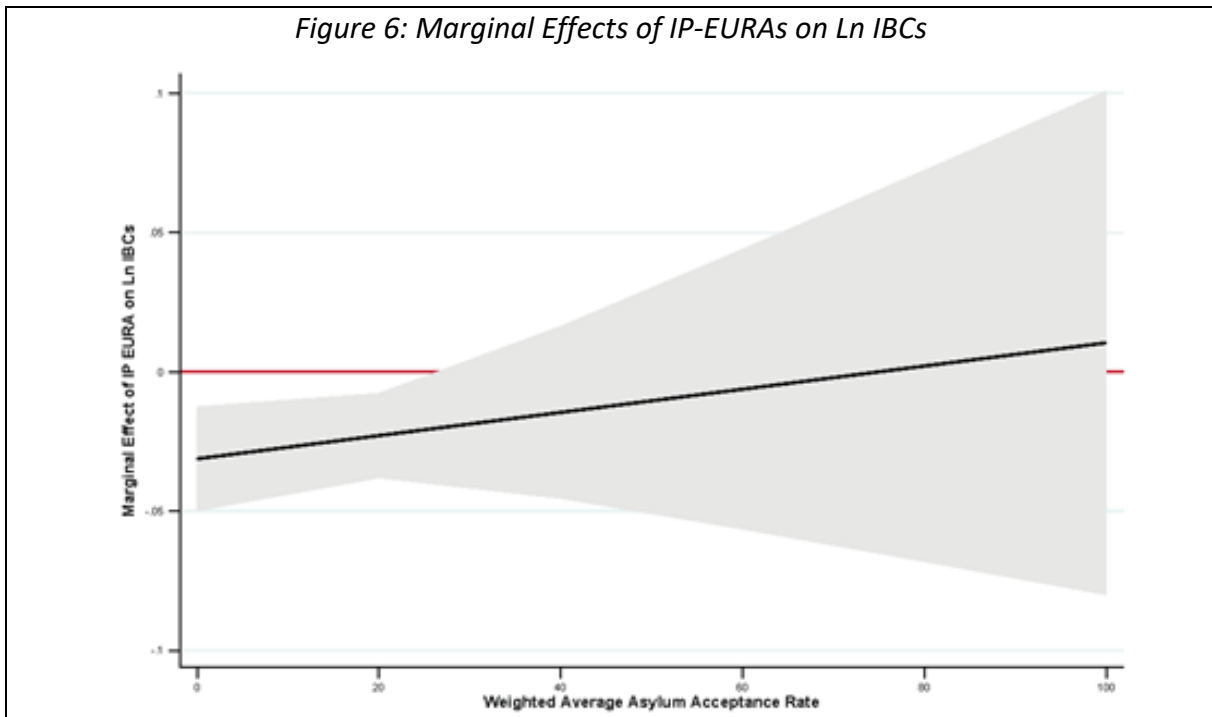


Figure 6: Marginal Effects of IP-EURAs on Ln IBCs



¹¹ For reference, the countries granted visa liberalization by year are indicated here. **2001:** Andorra; Argentina; Australia; Brazil; Brunei; Canada; Chile; Costa Rica; El Salvador; Guatemala; Honduras; Hong Kong; Israel; Japan; Macao; Malaysia; Mexico; Monaco; New Zealand; Nicaragua; Panama; Paraguay; San Marino; Singapore; South Korea; United States; Uruguay; Venezuela; **2006:** Antigua and Barbuda; Bahamas; Barbados; Mauritius; Seychelles; St. Kitts and Nevis; **2009:** Montenegro; North Macedonia; Serbia; **2010:** Albania; Bosnia-Herzegovina; Taiwan; **2014:** Colombia; Dominica; Grenada; Kiribati; Marshall Islands; Micronesia; Moldova; Nauru; Palau; Peru; Samoa; Solomon Islands; St. Lucia; St. Vincent and the Grenadines; Timor-Leste; Tonga; Trinidad and Tobago; Tuvalu; United Arab Emirates; Vanuatu; **2017:** Georgia; Ukraine; **Temporary:** Ecuador (2001-2003) and Bolivia (2001-2006).

Specifically, we investigate whether IP-EURAs have a similar impact on individuals who would likely gain refugee status in Europe, in contrast to those who would likely be classified as irregular migrants. To do so, we interact the variable IP-EURAs with the average asylum acceptance rate by nationality weighted by the number of applications adjudicated by each of the 31 European destination states (**Table 1, Model 3**). We find that IP-EURAs are significantly correlated with fewer IBCs for those nationalities whose asylum acceptance rates are relatively low. This is visually represented by **Figure 6**. At first glance this finding seems consistent with the formal policy obligations of EU states to protect likely refugees while deterring likely irregular migrants – which implies that likely refugees should be less impacted by stringent externalization measures enforced by third countries.

A strong note of caution is warranted here: though we cannot detect any significant correlation between IP-EURAs and IBCs in the cases where asylum acceptance rates are high, (**Figure 6**), the very large confidence interval of the estimate in these cases is explained by the low number of IP-EURAs signed with the countries of origin whose nationals are more likely to obtain refugee status (**Figures 3 and 4**). In other words, asylum acceptance rates are typically very low for the Western Balkan and Post-Soviet states that have signed many IP-EURAs. Since the composition of flows may influence policy impact, we cannot predict similar results for future partner countries whose nationals frequently obtain asylum in Europe.

Additionally, it should be noted that states that have signed numerous IP-EURAs have in most cases also been granted visa-free travel to the Schengen Area for their nationals (**Figure 5**). The effects of IP-EURAs could be confounded with the effects of this visa liberalization, which is why we control for this additional variable in all our regressions. We find that the effect of IP-EURAs is robust. The case of Russia, which has adopted IP EURAs but does not have visa liberalization agreements with the EU, illustrates the complementarity rather than confusion between policy effects.

At the same time, **Table 3** in the Appendix shows that visa liberalization is significantly and strongly negatively correlated to the flows of IBCs. This correlation is sizable and large, indicating that visa liberalization is associated with approximately 17% fewer IBCs. Tentatively, we introduce a discussion on the interaction between visa liberalization policies and asylum policies. **As schematized in Table 5 in the Appendix, asylum acceptance rates may only matter in absence of visa liberalization.** Specifically, if governments adopt visa liberalization policies, then neither likely irregular migrants nor likely refugees have any incentive to cross borders irregularly as both categories can enter the Schengen Area for a period of three months without any prior justification or visa. However, if there is no visa liberalization, then likely refugees are more likely to cross borders irregularly, at substantial risk to their lives. **In other words, individuals who are likely refugees attempt to cross borders to Europe to escape from violence whatever the risk, which feeds the flows of IBCs in the absence of legal migration channels.**

Policy Implications and Recommendations

Our results highlight the main trends in externalization dynamics and the impact of the 2015 crisis on policy development. The number and diversity of externalization instruments grew incrementally since 2002, expanding geographically and across levels of cooperation (bilateral, multilateral). In turn, we show that the crisis impacted

policy dynamics in three ways: they halted the expansion of formal readmission agreements, notably EURAs, fostered the development of informal measures and instruments, and furthered the geographical expansion of externalization policies.

Secondly, the results of our regression analyses demonstrate that IP-EURAs are negatively correlated with IBCs. Importantly, IP-EURAs affect the flows of likely irregular migrants more than likely refugees. Moreover, visa liberalizations are also negatively correlated with IBCs across both categories of likely refugees and likely irregular migrants. We conclude that **likely refugees may not respond significantly to border enforcement measures such as IP-EURAs, but respond strongly to visa liberalization**. The most likely explanation for this finding is that likely refugees cross borders at any cost, even when border closures are strongly enforced.

On the one hand, if the sole policy objective of externalization is to decrease the number of IBCs to Europe, **IP-EURAs appear to be an effective policy instrument to deter crossings from migrants, especially by likely irregular migrants (Table 1)**. Yet, these results are tied to the composition of flows from the relevant partner countries, which are small and include few likely refugees. Additionally, visa liberalizations, as expected, are significantly and substantially associated with fewer IBCs from the country of origin concerned (**Table 2**).¹²

On the other hand, if the EU policy objectives are two-pronged—protecting refugees and deflating flows of IBCs—creating legal channels for migration would need to be considered seriously in the design of future policies. In line with recent proposals to multiply legal channels to enter Europe to fight against human smuggling, notably through visas against smuggling,¹³ this result suggests that **visa liberalization could be an effective way of decreasing irregular border crossings to Europe, without endangering the lives and asylum rights of likely refugees**.¹⁴

Research Parameters

This Policy Brief serves two objectives. The first one is to describe the trends in externalization of European migration policies. This is accomplished through a review of data compiled in a novel dataset on the formal cooperative measures agreed between 31 European countries and partner states, which has been systematically collected through the efforts of political scientists in our Sciences Po-based MAGYC team. Even though the measures are of different types - some pertain to bilateral and multilateral agreements while others reflect counterparts offered to cooperating countries - they are all related to international cooperation on migration.

The second objective is to assess the efficacy of these measures in helping EU states to comply with their obligations to protect and welcome refugees while deterring

¹² Further research is required to investigate the channels underlying this effect, its implications in terms of migrant protection, and its possible undesirable effects such as inflating the number of migrants overstaying in the EU upon the expiration of their visas.

¹³ See Auriol and Mesnard. (2016)., "Sale of Visas: A Smuggler's Final Song?" *Economica*, 83: 646–678; Auriol, Mesnard, and Perrault. (2020). "Temporary Visas against Smuggling." Working Paper presented at the 13th IZA-AFD World Bank Conference.

¹⁴ Further work is also required to estimate the effects of these measures on risks taken by migrants, especially by some refugees who continue to cross irregularly despite strong enforcement of border controls and cooperation with origin countries (such as through IP-EURAs).

irregular migrants. We leave for future work the analysis of the policy effects on migrants' protection and focus here on their effects on flows of IBCs. Yet, as some IBCs are more likely to be irregular migrants or others more likely to be refugees, depending on their country of origin and the time of their departure, we disaggregate our empirical results along these categories to generate further policy insights.

We collected data on the formal cooperative measures from the database on readmission agreements developed by Jean-Pierre Cassarino as well as the Migreurop website, and official government sites.¹⁵ Externalization policies were all coded as 1 when an instrument was adopted between one of 31 European destination states and a partner state. To build a proxy for the intensity of these measures affecting IBCs from each partner state, we aggregated over all European states the number of agreements of each type signed each year by each partner state.

Our empirical analysis correlates these policy variables with flows of migrants irregularly crossing European borders using a gravitational approach. We focus on irregular entries into Europe from 2009 to 2018, using data collected by the EU's Border and Coast Guard Agency (Frontex) on the number of "irregular border crossers" (IBCs) intercepted at the external borders of the EU and Schengen Area.¹⁶ The data itself is compiled by Frontex based on counts provided by state governments which partner with the Agency and are divided into nine primary routes of entry. Importantly, the state of origin, the year, and the route where IBCs are intercepted are reported in the data, such that we can link this longitudinal data to our dataset of measures of externalization policies, as well as other important drivers of migration flows coming from secondary data sources. The objective of our regression analysis is to explore the relative importance of externalization measures in deflating IBC flows, which to our knowledge has not yet been explored in previous studies.

In our regressions, we control for any determinant of migration flows that may also be correlated with externalization policies. To minimize omitted variables bias, we control for key migration drivers such as population and economic wealth, as well as political variables that have been identified in the existing literature as constituting push factors from countries of origin. They are all significant and have the expected effects, in line with previous studies. Moreover, to control for potential confounding factors linked to each specific route but that evolve over time, such as Frontex budgets, we include route-year fixed effects as well as route-country of origin fixed effects, which capture the special situation of origin countries vis-a-vis the points of entry to Europe (such as their geographical distance and commercial links). These fixed-effects are critical components of our gravitational approach, as discussed in our Appendix.

Nonetheless, all correlations presented in the tables must be interpreted with care as most policy variables are likely to affect IBCs but are themselves affected by migration flows or by any remaining unobserved determinants of IBCs. Therefore, estimated correlations should not be over-interpreted as causal effects. To minimize this problem - which economists call the "endogeneity" of our policy variables of interest - we lagged all explanatory variables by one year, used fixed effects and controlled for the main drivers of IBCs identified in the literature. We are therefore confident in the conclusions we draw at this preliminary stage of our research.

¹⁵ Cassarino's database is available here: <https://www.jeanpierrecassarino.com/datasets/>.

¹⁶ Frontex data on IBCs is available here: <https://frontex.europa.eu/we-know/migratory-map/>.

Appendix

Table 1 below refers to the OLS estimation of the following model:

$$\ln(IBC_{ort}) = \theta_{or} + \lambda_{rt} + X'_{ot-1}\beta + \varepsilon_{ort}$$

where $\ln(IBC_{ort})$ is the logarithm number of IBCs on route r from origin country o at year t , θ_{or} are route-country of origin fixed effects, λ_{rt} are route-year fixed effects, X'_{ot-1} is a set of origin-specific explanatory variables measured at year $t-1$ and ε_{ort} is an idiosyncratic error-term. (see Table 4 for a full description of the set of explanatory variables).

Column (1) reports the results of the benchmark estimation, while columns (2) adds a squared term for the variables Readmission Agreements and IP-EURAs and columns (3) and (4) add interaction terms between IP-EURAs/Readmission agreements and the asylum acceptance rate.

Table 1: Correlates of Ln IBCs 2008-2018 (One-Year Lags)

	(1)	(2)	(3)	(4)
Readmission Agreements (Bilateral)	-0.004 (0.010)	0.017 (0.028)	-0.004 (0.010)	-0.003 (0.011)
Readmission × Readmission		-0.001 (0.002)		
IP-EURAs	-0.026*** (0.007)	-0.064*** (0.018)	-0.031*** (0.010)	-0.026*** (0.007)
IP-EURAs × IP-EURAs		0.002** (0.001)		
Asylum Acceptance Rate	0.002*** (0.001)	0.002*** (0.001)	0.002*** (0.001)	0.003*** (0.001)
Asylum Acceptance Rate × IP-EURAs			0.000 (0.001)	
Asylum Acceptance Rate × Readmission				-0.000 (0.001)
Visa Liberalization	-0.170** (0.069)	-0.158** (0.069)	-0.166** (0.069)	-0.170** (0.069)
Ln ODA	0.008 (0.014)	0.010 (0.014)	0.008 (0.014)	0.008 (0.014)
Ln Battle Deaths	0.039*** (0.006)	0.040*** (0.006)	0.039*** (0.006)	0.039*** (0.006)
Ln GDP	-0.001 (0.092)	0.002 (0.093)	-0.000 (0.092)	-0.000 (0.093)
Ln Population	0.747*** (0.239)	0.642*** (0.243)	0.725*** (0.241)	0.749*** (0.239)
Democracy	-0.530*** (0.176)	-0.505*** (0.177)	-0.534*** (0.176)	-0.528*** (0.176)
Constant	-11.330*** (4.014)	-9.718** (4.079)	-10.988*** (4.037)	-11.391*** (4.022)
Observations	10251	10251	10251	10251
R^2	0.176	0.177	0.176	0.176
Route-Country of Origin Fixed Effects	YES	YES	YES	YES
Route-Year Fixed Effects	YES	YES	YES	YES

Table 2: EU Readmission Agreements and Bilateral Implementing Protocols by 2018

Partner Country	Year EURA Signed	IP-EURAs in 2018
Russia	2007	25
Moldova	2008	18
Serbia	2008	17
Albania	2006	12
Georgia	2011	11
Montenegro	2008	9
Ukraine	2008	8
North Macedonia	2008	7
Bosnia-Herzegovina	2008	6
Armenia	2014	6
Hong Kong	2004	1
Sri Lanka	2005	1
Turkey	2014	1
Macao	2004	0
Pakistan	2010	0
Azerbaijan	2014	0
Cabo Verde	2014	0

Sources: Underlying data derived from Cassarino, J.-P. (2020). "Inventory of the bilateral agreements linked to readmission." Accessible at: <https://www.jeanpierrecassarino.com/datasets/ra/>; Migreurop. (2021). Accessible at: <https://migreurop.org/?lang=en>.

Table 3 below refers to the OLS estimation of the following model:

$$\ln(IBC_{ort}) = \theta_{or} + \lambda_{rt} + X'_{ot-1}\beta + \varepsilon_{ort}$$

where $\ln(IBC_{ort})$ is the logarithm number of IBCs on route r from origin country o at year t , θ_{or} are route-country of origin fixed effects, λ_{rt} are route-year fixed effects, X'_{ot-1} is a set of origin-specific explanatory variables measured at year $t-1$ and ε_{ort} is an idiosyncratic error-term. (see Table 4 for a full description of the set of explanatory variables).

Column (1) reports the results of the benchmark estimation, while column (2) adds an interaction term between visa liberalization and the asylum acceptance rate.

Table 3: Correlates of Ln IBCs 2008-2018 (One-Year Lags)

	(1)	(2)
Readmission Agreements (Bilateral)	-0.004 (0.010)	-0.004 (0.010)
IP-EURAs	-0.026*** (0.007)	-0.027*** (0.007)
Asylum Acceptance Rate	0.002*** (0.001)	0.004*** (0.001)
Visa Liberalization	-0.170** (0.069)	-0.077 (0.073)
Visa Liberalization × Asylum Acceptance Rate		-0.005*** (0.001)
Ln ODA	0.008 (0.014)	0.005 (0.014)
Ln Battle Deaths	0.039*** (0.006)	0.038*** (0.006)
Ln GDP	-0.001 (0.092)	0.022 (0.093)
Ln Population	0.747*** (0.239)	0.702*** (0.239)
Democracy	-0.530*** (0.176)	-0.508*** (0.176)
Constant	-11.330*** (4.014)	-11.175*** (4.011)
Observations	10251	10251
R^2	0.176	0.177
Route-Country of Origin Fixed Effects	YES	YES
Route-Year Fixed Effects	YES	YES

Table 4: Description of Variables Utilized in Regression Analyses

Variable	Definition	Sources	Min	Max	Mean	Standard Deviation
Irregular Border Crossings (IBCs)*	Total number of irregular border crossings registered at the external borders of the EU, broken down by route (9 different routes) and country of origin	Frontex	0	496,340	447	7402.3
Readmission Agreements	Bilateral agreements signed between origin countries and 31 European destination countries.	Migreurop, Jean-Pierre Cassarino Database, and Government Websites	0	19	1.3	3.2
Implementing Protocols to EU Readmission Agreements (IP EURAs)	Bilateral agreements signed between origin countries and 31 European destination countries.	Migreurop, Jean-Pierre Cassarino Database, and Government Websites	0	25	0.5	2.6
Weighted Average Asylum Acceptance Rate	Average acceptance rate of asylum requests granted to nationals of each country of origin given the number of demands adjudicated by each European destination state.	Eurostat	0	100	21.9	22.1
Visa Liberalization	Indicator if nationals can enter the Schengen Area without a visa.	EUR-Lex	0	1	0.3	0.45
Official Development Assistance (ODA)*	Commitments of foreign aid from 31 European destination states to a country of origin in millions of constant 2017 United States Dollars.	OECD	0	5,140.8	280.3	456.3
Battle Deaths*	Estimate of the number of deaths that occurred due to violent conflict in countries of origin.	UCDP-PRIO	0	69,202	394.8	3187.9

GDP*	GDP of countries of origin in constant 2010 United States dollars.	World Bank Development Indicators	3.2 e ⁷	1.8 e ¹³	3.3 e ¹¹	1.5 e ¹²
Population*	Population of the country of origin.	World Bank Development Indicators	9939	1.4 e ¹³	4.1 e ¹¹	1.5 e ⁸
Democracy	Index between the values of 0 and 1 measuring the degree of democratic governance in a country of origin.	Varieties of Democracy (V-Dem) Database	0.042	0.86	0.4	0.2

**The natural log transformation of these variables is included in the regression analyses. The statistics provided here are for the variable prior to transformation.*

*Table 5: Schematic Relationship between
Asylum Acceptance Rates and Visa Liberalization Policies*

	Limited Visa Policy	Liberal Visa Policy
Low Asylum Acceptance Rates (Likely Irregular Migrants)	Few IBCs	Very few IBCs
High Asylum Acceptance Rates (Likely Refugees)	Many IBCs	Very few IBCs

Project Identity

PROJECT NAME	MAGYC - Migration Governance and AsYlum Crises
COORDINATOR	The Hugo Observatory (Université de Liège), Liège, Belgium. hugo.observatory@uliege.be
CONSORTIUM	Centre National de la Recherche Scientifique - Institut français du Proche-Orient (Beirut, Lebanon) GIGA Institute of Global and Area Studies (Hamburg, Germany) IDMC (Geneva, Switzerland) Lebanese American University (Beirut, Lebanon) Lund University (Lund, Sweden) Sabanci University (Istanbul, Turkey) Sciences Po (Paris, France) SOAS University of London (London, UK) University of Economics in Bratislava (Bratislava, Slovakia) University of Macedonia (Thessaloniki, Greece) University of Milan (Milan, Italy)
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FURTHER READING	Jaulin, Mesnard, Savatic, Senne, Thiollot (2020) <i>Externalization Policies and their Impacts on Migrant and Refugee Flows to Europe during the "Crisis." A preliminary study</i> (Report) Deliverable submitted Oct. 31 2020 (not public)

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