Working Papers

Deflection into irregularity?

The (un)intended effects of restrictive asylum and visa policies

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- analyse migration as part of broader global change

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Abstract

Recent research into the impact of restrictive immigration and asylum policies has found a considerable deterrence effect reducing the number of persons claiming asylum, that is as rules and procedures are tightened fewer applications are received. However, restrictive asylum policy might also push potential and rejected applicants into an irregular status. This paper investigates to what extent the deterrence effect of asylum policy is counterbalanced by such a *'deflection into irregularity'*. We analyse this question drawing on a new large dyadic dataset detailing asylum and visa policy as well as forced and irregular migrant flows to 29 European states in the period 2001 to 2011. We find that restrictive asylum policy does, as expected, reduce the number of persons claiming protection. But there is also a significant deflection dynamic at work. Our estimates suggest that a ten percent increase in asylum rejections raises the number of (apprehended) irregular migrants by on average about three percent, and similarly, a ten percent increase in short-stay visa rejections leading to a five percent increase in irregular migration.

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1 Introduction

Since the end of the Cold war, policymakers in most industrialised countries have sought to tighten asylum regulations in an attempt to reduce the inflow of asylum seekers (Hatton 2011). This trend has attracted considerable attention among migration scholars and in public debates. While some have detected a major immigration control crisis in which poor people migrate increasingly through channels such as asylum or irregular means of entry (Bhagwati 2003; Castles 2004; Cornelius et al. 2004; Düvell 2005), others argue that by and large, immigration policies have been effective. In fact, migration policies have become increasingly sophisticated (Bonjour 2011; Brochmann and Hammar 1999; Geddes 2003), and the capability of states to effectively implement and enforce entry and stay policies such as the detection of irregular migrants has significantly increased (Broeders and Engbersen 2007). Carling (2002) argues that it has effectively become more difficult for poor people to migrate to Western countries due to restrictive visa policies and sophisticated border control systems.

A small but growing number of quantitative empirical studies support this view indicating that immigration restrictions do significantly affect the magnitude and composition of immigration flows (Beine et al. 2011; Hatton 2005; Mayda 2010; Ortega and Peri 2013; Czaika and de Haas 2014). In the area of asylum, existing studies on the effectiveness of migration controls have mainly attempted to measure the potential impact of policy changes on the number of new asylum claims (Neumayer 2005; Hatton 2004, 2009; Thielemann 2006; Keogh 2013). One of the main conclusions reached is that shifts in government regulations and practices do have a significant impact on the size of inflows, although evidence varies on the actual magnitude of the effect. Hatton (2011: 75) for instance, concludes that for the period 2001 to 2006 policy changes towards more restrictive regulations account for about a third of the total decline of 330,000 in asylum applications to 19 major Western destination countries. Neumayer (2005), Thielemann (2006) and Keogh (2013) also identify an impact, but of a somewhat smaller magnitude.

While existing empirical research has thus produced nuanced and well supported analysis of the impact of asylum policy, it is also clear that it has a number of limitations. Of these, a potentially important challenge concerns the limited conceptualisation and testing of *deflection* effects. Although toughened asylum regimes might deter many (potential) arrivals altogether, it is very likely that this policy has the unintended effect of shifting asylum seekers into an irregular status (cf. Massey and Pren 2012). As access to refugee protection becomes more circumscribed, some potential or rejected asylum seekers may instead choose to go 'underground'.[1]

This paper seeks to identify whether such a potential policy failure exists by investigating the interplay between asylum and visa policies and the number of asylum seekers and irregular migrants arriving in European destination states. We conceptualise deterrence and deflection effects and assess their empirical validity. Key hypotheses are tested utilizing a large-N dataset detailing shifts in asylum recognition and visa refusal practices as well as asylum-seeking and irregular migrant flows into 29 European states from about 180 origin countries over the period from 2001 to 2011.

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[1] Asylum seekers could also respond to tightened rules by travelling to other receiving states (see Neumayer 2004) or searching out new legal options. We return to these various deflection dynamics in the conceptual discussion.

2 Conceptualising asylum and visa policy effects

Concerns about the arrival of asylum-seekers and irregular migrants have been at the forefront of public debates on migration policy for many years. In many cases, public debates have been intensive with new arrivals presented in terms of fears of a 'flooding' and 'invasion' (Huysmans 2006; Massey and Pren 2012). In this context, a key theme in academic research has been an attempt to understand the drivers of migration flows and the effect of different policy responses (de Haas 2011). Here, we focus on the interplay between refugee and visa policy on the entry propensities of asylum seekers and irregular migrants. Quantitative analyses on these issues have so far followed two distinct tracks. In a European setting, the focus has predominantly been on explaining shifts in the number of asylum-seekers (Neumayer 2004, Thielemann 2006, Hatton 2004, 2009, 2011). In contrast, a key theme in studies on US Immigration concerns irregular migration and, first and foremost, the Mexican border (Cornelius 2005, Massey and Pen 2012, Cornelius and Salehyan 2007).

Starting with the European case, the key conclusion has been that restrictive policy changes reduce asylum inflows. The often more contested issue in these studies however, is the conceptualisation of migration policy effectiveness (Czaika and de Haas 2013). The objective of separate migration policies – to influence particular migration categories – can have unintended effects on other migration flows. De Haas (2011) proposed four 'substitution effects' that can limit the effectiveness of immigration restrictions: 1) *spatial substitution* through the diversion of migration to other countries; 2) *categorical substitution* through a reorientation toward other legal or illegal channels of immigration; 3) *inter-temporal substitution* affecting the timing of migration, such as 'now or never migration' in the expectation of future tightening of policies; and 4) *reverse flow substitution* if immigration restrictions reduce not only inflows but also return migration, which can make the effects on net immigration rather ambiguous. The existence of such 'policy externalities' might counteract the intended effects to a large extent so that some policy measures appear at least ineffective and sometimes even counterproductive for realising stated and unstated policy objectives (Czaika and de Haas 2013).

Capturing the intended and unintended effects of immigration policy changes on different entry channels is thus by no means a straightforward empirical task. Various policy indicators have been proposed in the asylum literature. Thielemann (2006: 458f) uses an ordinal index combining information on 'access control', 'determination procedures' and 'integration'. Hatton (2005, 2011) sets up a similar index, although relies on a wider range of empirical indicators. Whereas Thielemann focuses on safe third country rules as a proxy for access control, Hatton also includes visa requirements as another migration policy variable. Entry visas or permits introduce a considerable barrier to travel, even more when they are issued sparingly or when lodging an application becomes difficult and expensive, for example, where consular facilities are far away (sometimes only in a neighbouring country, see Hobolth 2012). Neumayer (2004), finally, uses the asylum recognition rate as a proxy variable, suggesting that a lower share of asylum claims recognised imply a more restrictive asylum policy. Thielemann and Hatton's indices vary by destination state and over time. They capture both overall government efforts in relation to limiting access to territory and subsequent treatment of claimants. Neumayer's recognition rates in contrast, allow for variation in policy across different origin countries but only cover the status determination procedure.

Regardless of the operationalization and measurement choice, existing research suggests that we should expect restrictive shifts in asylum policy to deter and reduce the number of asylum applications. Underlying this argument is an understanding that an individual's decision to flee is, at least to some extent, informed by an assessment of the risk and hardship involved in reaching the

destination, the generosity of the host during the status determination, and the likelihood of being granted a protection status. It is thus assumed that an individual has (limited) information about policies, spread through different channels such as friends and family living abroad, the media or other intermediaries. Obviously, these factors might be of no or only limited importance if other drivers such as large-scale political terror or complete economic destitution overwhelm asylum and visa policy changes or other shifts in people's opportunity structure. Hence, we hypothesise that restrictive asylum and visa policies diminish the willingness of potential asylum seekers to bear the costs of submitting a visa application for entering the destination country legally or to take the risk in accessing the territory by illegal means. However, to what extent this deterrence effect exists is hard to predict, and this study contributes to the ongoing attempt in the literature to provide a more holistic assessment of asylum policy impacts.

The additional and central challenge probed in this study is the fact that restrictive asylum and visa policy shifts might not only deter migration as such, but also deflect migrants towards other entry (and stay) channels. In a comprehensive and detailed analysis of Mexican mobility to the US, Massey and Pren (2012) document how illegal Mexican migration was to a large extent brought about by the dismantling of the 'Bracero' guest-worker programme in 1965 (see also Castles 2004). Through this recruitment system, a large circular labour migration network had formed as Mexicans travelled back and forth in response to the seasonal demand of the Californian labour market. As this legal (albeit exploitative) programme was abruptly brought to an end, migration flows continued albeit now with workers arriving and staying illegally. Over the years, negative externalities and unintended consequences multiplied as, for example, increased enforcement efforts became decoupled of trends in actual inflows and enhanced patrolling disrupted the seasonal cycle as those who now had managed to cross the border put even more effort into establishing their irregular and mostly permanent-like stay (Filindra 2012).[2]

The US-Mexican case thus illustrates the importance of studying potential deflection dynamics in order to understand the impact of restrictive immigration policy more comprehensively. Especially where cross-border migration flows are embedded into structural dynamics, such as the facilitating role of well-established migrant communities or the structural demand for cheap foreign workers in key labour market sectors, shifts in government policy might be unable to prevent access of migrants, and instead simply displace flows into other, mostly irregular entry categories. Similar conditions might well characterise, for example, relations between Spain and Morocco, France and Algeria or Poland and Ukraine.

As with labour migration, we can expect similar mechanisms to be at work when it comes to asylum migration. Altering entry rules might lead people to seek out other mobility options. Here we focus on illegal entry and stay. Simplifying the analysis, we hold the availability of other legal entry routes constant and assume that there is only one destination country. Hence, we do not consider potential complex scenarios resulting from varying openness of alternative legal channels such as student, labour or family migration. Nor do we factor in that varying degrees of asylum restrictiveness between receiving states might lead to a spatial deflection of asylum flows, i.e. policy changes in one state leading to a shift of migrant flows to other destinations (see Neumayer 2004).

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[2] This interruption of migration circulation ('reverse flow substitution') as a consequence of tightened visa policy regime is also found in other contexts (Czaika and de Haas 2014).

Although these assumptions rule out plausible migrant strategies, they are not as limiting as they might appear at first sight. Spatial deflection assumes a degree of freedom in the choice of destination which is often an unrealistic assumption. Reliance on smugglers puts the choice of travel route partly in the hands of intermediates and their interests will only strenuously overlap with that of asylum-seekers (Koser 2000). From the perspective of traffickers, the generosity of asylum regimes might matter less for the choice of receiving country compared with established contacts, market trends and risk of detection as well as penalties for smuggling. Opportunities for turning to other legal entry routes are in most cases very limited. Work and student visas are scarce and increasingly skill-selective. Family migration might be more realistic, but even this route has been tightly regulated for many years and is nowadays characterised by long-lasting processing procedures. Hence the practical choice at hand for forced migrants gravitates to a large extent on the question of pursuing a legal asylum route or embarking on an irregular presence.

By *deflection into irregularity* we understand, more specifically, the degree to which asylum and visa policy can influence the likelihood by which a person, who is seeking to escape the alleged fear of persecution, would (1) travel legally to the destination state or turn to irregular entry strategies; (2) apply for asylum in the receiving country upon arrival or embark on an irregular stay; and, (3) comply with a deportation order or respond by going underground. Figure 1 outlines the choice set available to a potential migrant:[3]

Figure 1: Migration decision-making: asylum versus irregular entry and stay
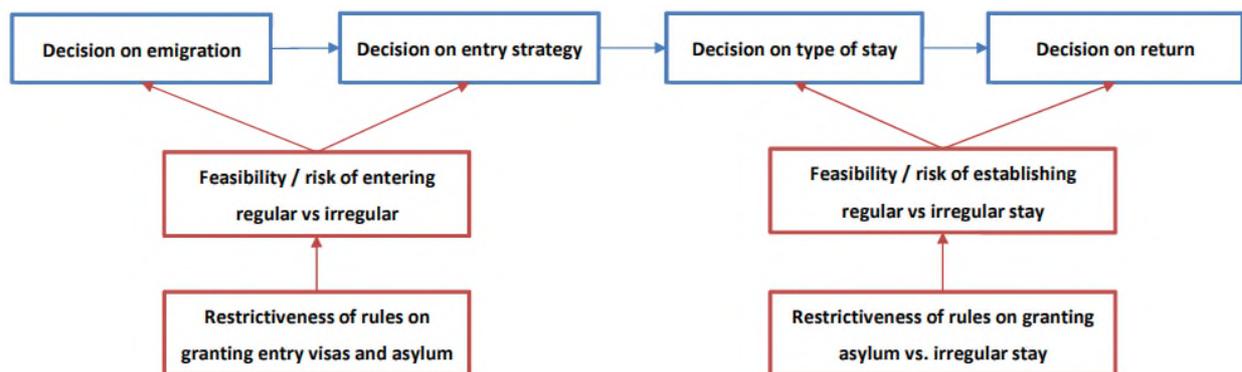
The link between irregular and asylum migration is, arguably, well-documented in connection with the decision on entry strategy. If visas are required and scarce, asylum seekers seeking protection almost by definition have to turn to irregular travel means. Koser (2000) discusses this dynamic in considerable detail, drawing on qualitative interviews with Iranian asylum applicants in the Netherlands. He notes that of his 32 informants, 29 arrived via an irregular route – assisted by smugglers – and only 3 directly in the Netherlands on a visa. Two of those who arrived with a valid visa had obtained their permits as a result of previous travel to family residing in Europe. The third was able to obtain a visa as he had regularly travelled for business purposes to Turkey, and therefore, had a contact at the Dutch consulate in Turkey who was able to assist. The remaining 29 reported that they only turned to smugglers after their visa application was refused. This case underlines that visa availability influences the propensity to which migrants turn to irregular entry strategies. Although it is not clear to

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[3] We assume that persons have uniform valuation and risk profile: given the same institutional, economic and policy environment individuals seeking to achieve the same goal will act in a similar way.

what extent the Iranian example can be generalised, it is evident that legal travel visas are hard to come by for potential refugees (cf. Hobolth 2012).

Koser (2000) highlights, however, that even if visa availability and irregular entry strategies are linked, the precise causal character of the relationship is open to debate. Forced migrants might need to turn to smugglers for other reasons, for example to circumvent internal police and exit controls and to escape their home country in the first place. Thus, visa refusal is neither a necessary nor a sufficient cause for adopting an irregular strategy. Koser's analysis also highlights that turning to irregular means entails travel through transit states and here being uphold for smaller or longer period without having the proper documentation. Hence, the irregular entry strategy might entail illegal stay in other potential destination states en route.

On the territory of the destination state, the irregular-asylum migration link mainly arises in connection with two decisions: whether to apply for asylum; and whether to stay or return in case of a negative asylum decision. For example, the establishment of 'manifestly unfounded' procedures and mandatory internment in camps during status determination could push entrants into illegality. In these cases, applying for asylum would pose little chance of success and present considerable hardship. Some might instead choose to stay clandestine. Similarly, if economic destitution is a major concern then limited opportunities to work and minimal social benefits during the status determination procedure might reduce the incentive to apply for asylum. As rules are tightened, increasing psychological strain and exclusionary social effects of being in the asylum system might also be a considerable deterrent. If an asylum claim is finally refused, staying irregularly might also be an option. This decision is linked to overall asylum regulations and practices. For instance, rules could have been tightened so that asylum seekers are detained throughout the process, and hence, are not able to circumvent an order to leave, or finally, their forced deportation. The choice of entry and stay strategy is also influenced by concerns about how it might limit future migration possibilities. For instance, will an initial pursuit of an irregular stay make it more difficult to later apply for protection (cf. Koser 2000)? While the restrictiveness of asylum rules is thus a key factor in deciding on the type of entry and return, a deflection into irregularity also involves considerations about the feasibility of establishing a clandestine stay. For instance, an already large and 'established' illegal community or rather liberal policies providing access of irregular migrants to health care or education services are likely to facilitate this stay option for newcomers. Reversely, highly regulated labour markets and strong internal policing reduces the attractiveness of choosing an irregular status.

Consequently, deterrence as well deflection into irregularity are likely behavioural consequences of restrictive asylum policies and procedures. Arguably, if reduced asylum inflows (deterrence) are counterbalanced by a rise in irregular migration (deflection) this would be an important caveat to the existing finding that restrictive asylum policies limit the number of entries. It would rather suggest the existence of an important policy failure in the area of asylum. Assessing the relative magnitude of this effect is thus a key challenge. Before outlining our empirical strategy, we turn to the description of the context of this study.

3 European asylum and irregular migration inflows and policies since 2000

Forced and irregular migration has been high on the political agenda in Europe for many years. Spurred, in particular, by disputes over burden-sharing and concerns over 'asylum-shopping', considerable efforts have been invested in coordinating and harmonising policies (Geddes 2003). A wide range of common (minimum) standards have thus been adopted, albeit the substantive importance and practical implementation of these remains uncertain. Still, the shared governance setup is considerable and a high degree of interdependence forms an important backdrop to understanding and comparing asylum inflows to the European area. The 'Schengen' and 'Dublin' agreements, both in the main dating back to the mid-1980s and 1990s, are of central importance to this study.

Schengen refers to a complex of rules agreed upon in the wider context of the establishment of a Europe-wide border-free travel area. Under the Schengen heading member states cooperate both on customs and judicial matters as well as policing and migration control. Among the most harmonized policy areas is the issuing of short-stay visas for persons seeking to visit Europe for purposes of tourism, family visit or business. There is thus a common list of nationals which require a visa to visit Europe, as well as common rules and administrative cooperation on the issuing of permits. With these shared rules the member states have little freedom to decide on visa requirements but retain somewhat more scope to pursue different implementation practices on the ground.

According to the Dublin rules, the first member state an asylum seeker enters is the one responsible for handling his or her application. Upon receiving an asylum application a member state will thus seek to ascertain the applicant's travel route. If the person is deemed to have arrived through another EU-state a Dublin transfer will be requested. The Dublin rules complicate the interpretation of European asylum statistics as inflow figures will also reflect this 'through-flow' between the destination countries. Yet in practice the number of Dublin transfers is relatively low, at about 5,000 annually (Eurostat 2014), a small number compared with the total number of applications as we will see.

In the recent past, numbers on the size of the two migration channels varied significantly.[4] Between 2008 and 2011, annual asylum applications averaged about 330,000 while apprehensions of irregular migrants were about three times higher (about 990,000 on average). Numbers for the two migration categories have also evolved quite differently over the years. While numbers of asylum applications have seen a steady increase, the apprehension statistics show a very marked decline in the same period, which is mainly due to a marked drop in numbers for Spain. European asylum seekers originate across a large and heterogeneous set of origin countries (Figure 2). Many of the prime origins are known for on-going conflict situations, but asylum seekers are also coming from a wider range of other Latin-American, African and particularly Asian countries.

Asylum arrivals concentrate in the Western Europe (Figure 3). The United Kingdom, France and Germany receive the largest numbers, but inflows are also substantial to the other countries, especially in relative terms. Northern and Southern Europe also receive a significant share while numbers in Eastern Europe are quite small. Among the Northern countries, Norway and Sweden account for the bulk of the inflows. In Southern Europe it is Italy and Greece.

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[4] See Table A1 in the appendix.

Figure 2: Origins of asylum seekers in 29 European destinations, 2000-2011

[0,500]
(500,5000]
(5000,50000]
(50000,500000]
29 European destinations
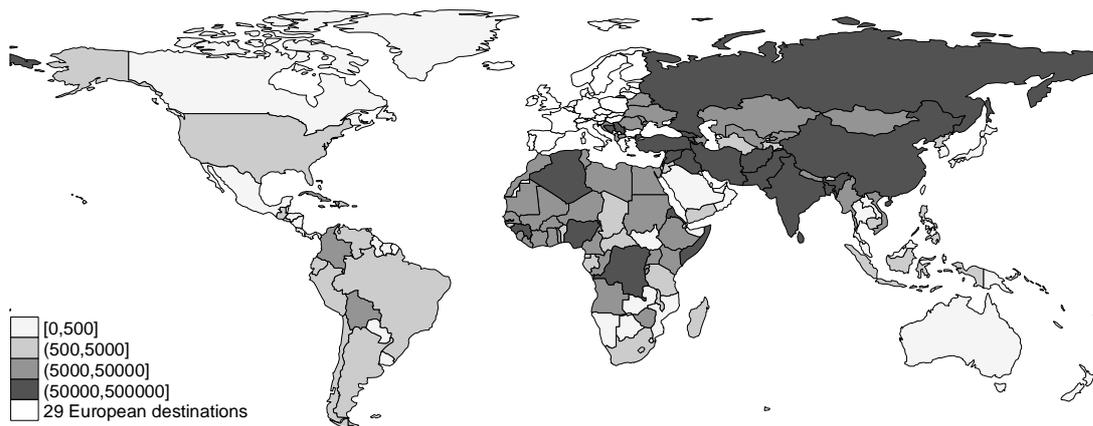
Source: own

Figure 3: Allocation of asylum seekers in 29 European destinations, 2000-2011

[0,50000]
(50000,100000]
(100000,500000]
(500000,1000000]
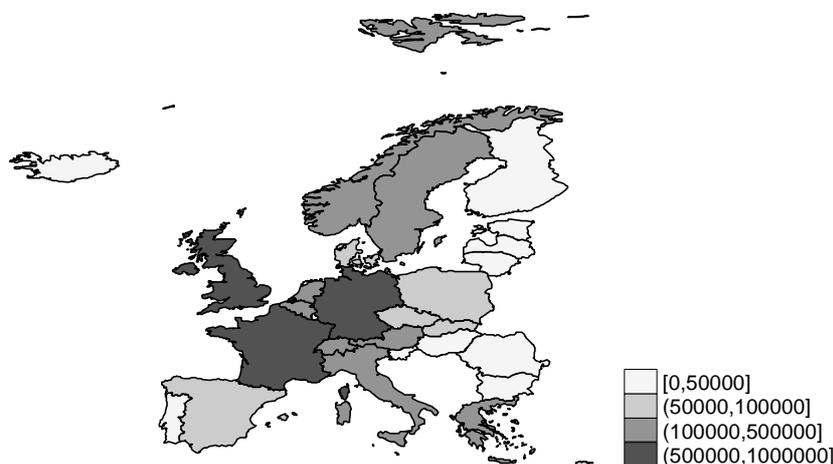
Source: own

Further investigation of main asylum migration corridors identifies three distinct destination clusters: United Kingdom, France and Sweden. For France and the UK, key countries of origin are to large extent former colonial territories. Most of these former colonies have not established similar ties with other European destinations. In the case of Sweden, the composition of origin countries is more diverse. Other Western European asylum receiving states do not share the same level of diversity of origin countries. Italy, for instance, receives most of its asylum seekers from Africa such as Togo, Burkina Faso and Tunisia, while Germany is rather a destination for asylum seekers from Eastern Europe, Central Asia and the Middle East.

Geographical patterns on irregular migration flows share some similarities when it comes to the allocation of origin countries (Figure 4), but show significant differences in the cross-European allocation (Figure 5). Numbers on apprehensions of irregular migrants are highest in Southern Europe, with volumes particularly high in Spain and Greece. Western Europe is the second largest receiving area, followed by Eastern and then the Nordic countries.

The United Kingdom forms a distinct migration network with the former colonies as the prime origin countries. Spain stands out as a distinct destination for its former colonies in Southern America

and shares hereby some similarities with Portugal, especially when it comes to Cape Verde, Guinea-Bissau and partially also Angola. France and Germany receive irregular migrants from a relatively diverse group of countries while Eastern European countries, geographically positioned at the European periphery, receive some substantial inflows from neighbouring states such as Belarus, Ukraine and Russia.

Figure 4: Origins of apprehended irregular migrants in 29 European states, 2008-2011
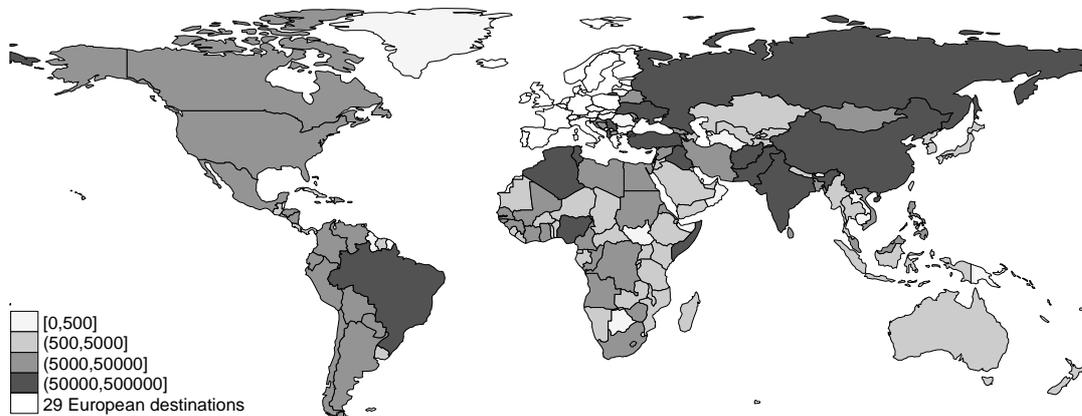
Source: own

Figure 5: Allocation of apprehended irregular migrants in 29 European states, 2008-11
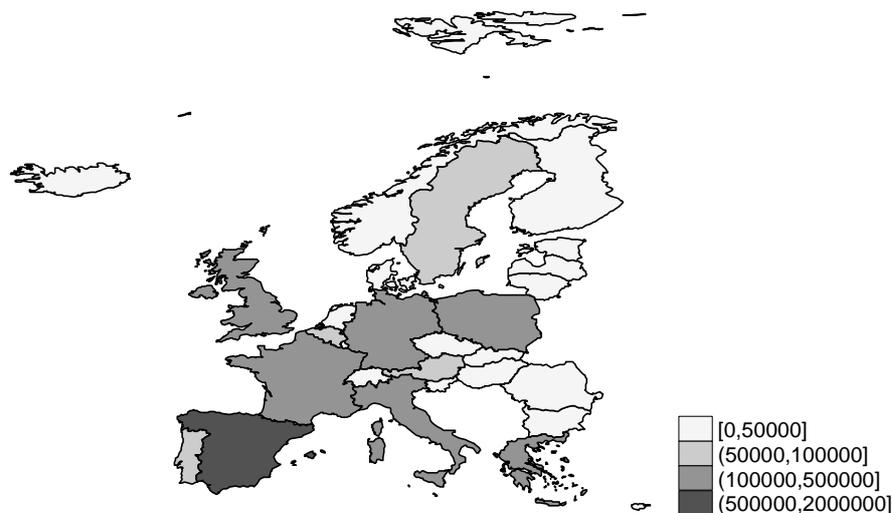
Source: own

Overall, analysis of bilateral corridors highlights the importance of colonial ties, European integration and geographical location. We presume that historical ties play an important role in explaining variations in numbers. Similarity in numbers and composition of inflows among, especially Western European countries, suggests considerable harmonization dynamics at work, with these countries for many years now lifting border controls and engaging in close cooperation on external borders and controlling irregular and forced migration. Geographical location – that is, distance of a European destination to external borders in the East or South of Europe also appear to hold considerable importance. Patterns suggest that the two migration channels are interlinked, but in sometimes rather complex ways. For some destination states, such as the United Kingdom, we see a high degree of similarity in asylum and irregular migration patterns, suggesting that flows might more easily shift

between the two. In other cases, notably Spain, origin patterns are different suggesting that the asylum and irregular migration flows are rather weakly interlinked. Finally, for some origin countries, the set of destinations appears quite circumscribed with migrants concentrating in only one or two European destinations. In other cases several European receiving countries appear as significant suggesting a higher possibility for interchangeable choices of destinations.

In the following analysis we aim to quantify a potential deflection effect by estimating to what extent both rejected asylum and visa applications increase the number of irregular migration. We hypothesize that both channels significantly contribute to an increasing willingness of rejected asylum seekers and visa applicants to bear the risk of irregular entry and/or stay as a consequence of a negative decision on their asylum and visa claims, respectively.

4 Empirical strategy

4.1 Estimation model and data

In order to study deterrence and deflection effects of asylum visa policies, we put together a large three-dimensional (origin, destination, year) cross-national comparative dataset detailing asylum applications and asylum and visa refusals, respectively, for 29 European destination states in the period from 2001 to 2011 (UNHCR 2012). For each receiving country we collect bilateral and origin-specific data for about 180 sending states. Due to some data limitations, our empirical analysis on apprehensions of irregular migrants captures only the period 2008 to 2011 (Eurostat 2012a).

In order to operationalise asylum policy restrictiveness we use a destination country's nationality-specific (i.e. bilateral) asylum recognition rate (see Neumayer 2005). However, in order to ease interpretation and later comparison with visa refusal rates, we calculate the mirror measure of the asylum refusal rate. The assumption is that if the refusal rate is, 60% for Syrian applications and 20% for nationals from Libya for example, then the policy is more restrictive for the former. For each European destination country j, the bilateral asylum refusal rate ARR_{ij} for asylum seekers from country i is calculated as

$$ARR_{ij} = 1 - \frac{P_{ij} + O_{ij}}{P_{ij} + O_{ij} + N_{ij}} \cdot 100\%$$

with P_{ij} capturing the number of recognized asylum claims based on the full Geneva Convention, O_{ij} being the number of otherwise (e.g. humanitarian reasons) granted subsidiary protection status, and N_{ij} reflecting the number of reject asylum claims in first and appeal (e.g. judicial review) instances. These data are available from UNHCR's annual statistical yearbooks (2000-2012). Differences in bilateral refusal rates for asylum seekers from the same country of origin can thus be the consequence of different policies and/or the result of differences in the composition in pool of asylum applicants. Bearing in mind the latter limitation, the measure should provide good indicator of differences in asylum policy restrictiveness across European destination states. Additional to refusal rates, we also utilise information on the absolute number of bilaterally rejected asylum applications per year.

We also capture migration policy restrictiveness by the annual absolute number and rate of visa refusals. This is to provide an alternative indicator that might better capture deflection dynamics at work prior to arrival in a receiving country's territory. There is good qualitative and quantitative evidence that visa restrictions are often used to constrain access to territory of potential asylum applicants (see e.g. Watson 2009, Sherman 1973, Hobolth 2012). The toughness of short-stay visa policies and

regulations affects the ability of asylum applicants to arrive legally on a destination country's territory in order to lodge an asylum application. The data source is the European Visa Database (Hobolth 2014). We measure the restrictiveness of this dimension by using the refusal rate for short-stay visas, calculated as the annual share of visa refusals divided by the total amount of decisions. This measure captures how wide or narrow the criteria for issuing visas are interpreted by executives. Here, similar concerns exist for asylum refusal rates. That is, differences in bilateral refusal rates are assumed to mainly be due to different policy stances of receiving countries towards sending countries, but they can also reflect some variation in characteristics in the pool of visa applicants from the same origin country. As with the asylum policy measure, we also look at the absolute number of visa rejections as an alternative way to attempt to capture the 'likelihood' that a refused applicant turns up as an apprehended irregular migrant.

The annual bilateral flow of asylum seekers is measured by the number of asylum applications a European destination country received from a certain origin country in a particular year (UNHCR 2012). Estimating irregular migration is considerably more difficult (see, for example, Kraler and Reichel 2011), especially as our aim is to assess the (unknown) volume of irregular migrants for a comprehensive list nationalities. In order to do so, we rely on statistics provided by Eurostat (2012a) on the number of persons refused entry at the border and those apprehended on territory without proper documentation or violating the terms of their permit (for example by overstaying a visa or working without this being allowed). This information limits our analysis significantly as data has only been made available for the period 2008 to 2011.

Data on apprehensions of irregular migrants has several limitations. First and foremost, numbers underestimate the actual entry of irregular migrants as their number depends on the amount, quality and effectiveness of government resources dedicated to policing and detecting irregular migrants. One possible approach, which is pursued by Massey and Pren (2012) in their study of the US-Mexican border, is to adjust official figures by the number of border patrol guards and/or the size of border control budgets. In a European setting, however, such data is not available. Instead, we control for resources dedicated to the apprehension of irregular migrants by using the crude proxy of the relative size of police forces in the different countries (Eurostat 2012b). This allows us, at least very partially, to capture differences in policing levels between destination states which affect the likelihood of irregular migrants of being apprehended. But still, it is important to note that we cannot interpret the Eurostat figures on entry refusals and on-territory detections as an estimate of the *absolute* number of irregular inflows as such. Rather, what we aim to arrive at is a measure that gets the relative ranking right. The assumption is thus that when controlled for differences in policing resources, the number of apprehended persons gives a valid approximation of the relative level of irregular migration across different origin and destination states.

The three-dimensional empirical model estimates separately the absolute number of asylum applications and apprehended irregular migrants M_{ijt}, respectively, both regressed on a set of origin-specific X_{it}, destination-specific Y_{jt}, dyad-specific Z_{ijt} explanatory variables:

$$M_{ijt} = \beta_0 + \beta_1 X_{it} + \beta_2 Y_{jt} + \beta_3 Z_{ijt} + u_{ijt}, \qquad (1)$$

where $E(u) = 0$, and $cov(X_{it}, u) = 0, cov(Y_{jt}, u) = 0,$ and $cov(Z_{ijt}) = 0$, for an unbalanced dataset of 180 origin countries i and 29 destination countries j. Our asylum and visa policy variables P (with P ∈ Z) are potentially endogenous either due to reverse causality or an omitted variable bias, in which in either case OLS (ordinary least square) or fixed effect estimation would produce inconsistent estimates. In order to address this endogeneity problem we apply the GMM method as our preferred

estimation procedure.[5] We use a linear system dynamic GMM model, developed by Arellano and Bover (1995) and Blundell and Bond (1998), which uses first-difference and level equations in which lagged values of the endogenous policy variables are used as instruments. In this case, Eq (1) includes an autoregressive term of order q additional to the vector of exogenous indicators. By design, autoregressive terms are correlated with the unobserved panel-level fixed effects, and thus, causing inconsistent standard OLS estimators. For the combination of many panels (29x180=5220) and rather few periods (11 and 4 years respectively, for the asylum and irregular migration model), the dynamic GMM estimator uses first-differences to remove the panel-level fixed effects and using instruments to form moment conditions (Arellano and Bover, 1995, Arellano and Bond, 1991). However, Blundell and Bond (1998) point to the fact that lagged-level instruments become weak as the autoregressive process becomes too persistent or the variance of the panel-level fixed effects ω_{ij} to the variance of the idiosyncratic errors u_{ijt} becomes too large. The Arellano-Bover/Blundell-Bond (one-step) estimator, therefore, uses moment conditions in which lagged differences are used as instruments for the level equation in addition to the moment conditions of lagged levels as instruments for the differenced equation. The additional moment conditions are valid only if the initial condition $E\left(\omega_{ij}\Delta M_{ij,2}\right) = 0$ holds for all panels (Roodman, 2006).

In both equations (i.e. level and first-difference), we include the following control variables. As bilateral factors we consider the geographical *distance* between sending and receiving country as well as a dummy for country pairs that share a *common border* as proxies for migration costs (CEPII 2012). Additionally, we assume that migration costs are more affordable if a significant community of migrants from the same origin country are already residing in a destination state. This *migrant stock* variable is usually assumed to capture the role of migration networks in facilitating legal or illegal entry (Beine et al 2011). Factors that make destination countries attractive for immigration economic opportunities, which are broadly captured by income per capita (GDP per capita adjusted for differences in purchasing power, PPP). In the tradition of gravity models, we use the absolute population size as a proxy for general formal and informal labour market opportunities. In our subsequent analysis on irregular migration, we additionally include estimates on the size of the informal sector (as share of GDP) indicating job opportunities specifically available for irregular migrants (Buehn and Schneider 2012).

Additional to economic factors, we try to capture the quality of a destination country's political-institutional environment by data from the World Governance Indicators (WGI) project (see Kaufmann et al 2010). The WGI, available for over 200 countries and territories, measures annually six dimensions of governance: voice and accountability, political stability and absence of violence and/or terrorism, government effectiveness, regulatory quality, rule of law, and control of corruption. Since we consider all six dimensions as equally relevant, we employ the equally-weighted average score of all six indicators in our regressions.[6]

In our analysis on irregular migration, we additionally include the total number of police staff as a control variable which may roughly capture the 'detection technology', proxying the overall

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[5] As a robustness check, we also applied an instrumental variable approach (2SLS) with two exclusion restrictions: the share of Muslim population and the share of informal sector of the gross domestic product (GDP) in the origin country. Since we estimate each of our models only with one policy variable at a time, we slightly over-identify our model by using both instruments simultaneously, which may increase the precision of the estimates. Results largely confirm GMM estimates and reported in Tables A2 and A3 of the appendix.
[6] We also considered indices from FreedomHouse (2012) on political rights and civil liberties, respectively, as alternative measures for the politico-institutional environment in the destination country, yet due to limited variation across our 29 destination countries, we decided to drop these indicators and only to use WGI.

willingness and effectiveness of receiving states in apprehending irregular migrants. For capturing more structural drivers on the sending side, we use income per capita as a very effective proxy variable for economic hardship and lack of opportunities known as relevant 'root causes' of emigration. Beyond economic drivers, we also control for political factors, captured by the above mentioned six dimensions of the WGI, which we expect to be highly relevant in explaining differences in numbers of forced emigration across origin countries.[7]

4.2 Results

Table 1 shows estimations of the size of the deterrence effect of asylum and visa policy, respectively, on asylum migration. Table 2 further elaborates on the existence of potential deflection effects of rejected asylum applications and restrictive visa policies.

For the asylum migration model (Table 2), we test three different policy variables. First, we test whether bilateral asylum refusal rates have a deterring effect on the number of applications filed in the future (including a one year lag). As an alternative measure of asylum policy restrictiveness, we report estimates on the effect of the absolute number of rejected asylum claims. We test the role of asylum policy on both the full sample of country dyads as well as for the sub-sample of destination-origin country pairs that require a short-term visa for entering the country. Second, we include two measures regarding visa policies: in the full sample, we employ binary variable indicating dyad-years in which a visa is required. For the sub-sample of visa restricted dyads, we test whether and to what extent the absolute number of visa refusals and the respective visa refusal rate, respectively, have a negative effect on the number of asylum applications. For all of our model specifications we use a system dynamic panel estimator (Arellano-Bond/Blundell-Bond), which includes an first order autoregressive term AR(1). Additionally, and for checking robustness of our results, Table A2 in the appendix reports results for the same models using a two-stage least square (2SLS) estimator.

We find for all model specifications that asylum policy restrictiveness has a robust negative effect on the number of asylum applications, which implies that tightening of asylum policies has a deterring effect in terms of lowering future asylum applications. Obviously, this only holds under the condition that other contextual factors, such as the political and economic situation, do not change on both the origin and destination side. For the entire sample, which includes both dyads with a visa requirement and those with a visa waiver implemented, the overall effect of a 10 per cent increase in the asylum refusal rate (average unweighted refusal rate is 76.5 per cent) would decrease the asylum flow by about 0.8 per cent (at mean of 183 applications per dyad). Interestingly, the same estimates on the sub-sample of visa-free dyads (model 2) suggest that this deterrence effect of a restrictive asylum policy is even stronger when no short-term visa is required. This should however, be interpreted with some caution because the number of observations is rather low, and our 2SLS estimations do not confirm this result. The estimates on the sub-sample of dyads where the destination country requests an entry visa (Model 3) are more reliable however. Here, our estimate (0.073) implies that a 10 per cent increase in the number of rejected asylum applications reduces the number of next year's asylum applications by about 0.73 per cent. The related estimate for the asylum refusal rate (0.142) indicates that an increase in the asylum refusal rate by ten percentage points reduces the number of future asylum applications by about 1.4 per cent, compared to an estimate of 1.2 per cent for visa-free regimes (Model 6). Although statistically significant, effectively both estimates seem to be rather moderate in their size

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[7] In the 2SLS regression (see appendix), we capture further unobserved heterogeneity by including time-invariant destination country fixed effects, which may also capture differences in the overall design and effectiveness of immigration policy regimes as well as other factors that make a particular destination country (un-)attractive.

and it is worth noting that major shifts in the overall restrictiveness are rather rare as governments are considerably constrained by for example domestic courts and international refugee law (Joppke 1998). Nevertheless, these estimates imply that the combination of a tight asylum policy practice and the requirement of an entry visa may jointly hinder or discourage a significant number of potential asylum seekers in filing an asylum application.

Table 1: GMM regression: Asylum deterrence

DV:Asylum applications (log)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Visa regimes	All	free	required	all	required	all	required	required
Policy								
Asylum rejections (log)	-0.084**	-0.118**	-0.073**					
	(0.009)	(0.037)	(0.009)					
Asylum refusal rate						-0.121**	-0.142**	
						(0.040)	(0.042)	
Visa required (0/1)				-0.526**				
				(0.112)				
Visa refusals (log)					0.029+			
					(0.016)			
Visa refusal rate								0.032
								(0.164)
Bilateral								
Distance	-0.798**	-0.559**	-0.804**	-0.774**	-0.492**	-0.689**	-1.041**	-0.485**
	(0.071)	(0.125)	(0.097)	(0.082)	(0.096)	(0.069)	(0.095)	(0.095)
Neighbour	5.253*	-4.586*	4.251	-1.839	5.000	6.469**	4.596+	3.795
	(2.530)	(1.853)	(3.113)	(2.841)	(3.107)	(2.483)	(2.740)	(3.403)
Migrant stock (log)	0.492**	0.481**	0.630**	0.442**	0.976**	0.537**	0.545**	0.717**
	(0.064)	(0.145)	(0.057)	(0.063)	(0.083)	(0.072)	(0.053)	(0.083)
Destination								
Income p.c. (log)	0.288*	1.832**	0.365**	0.287*	0.870**	0.440**	0.180	1.180**
	(0.116)	(0.610)	(0.132)	(0.139)	(0.248)	(0.121)	(0.140)	(0.209)
Governance	0.006	0.039	0.015	-0.024	0.045	0.038	0.002	0.027
	(0.022)	(0.076)	(0.022)	(0.023)	(0.029)	(0.024)	(0.023)	(0.032)
Origin								
Income p.c. (log)	-0.845**	-2.534**	-0.822**	-0.698**	-0.623**	-0.938**	-0.722**	-0.628**
	(0.088)	(0.466)	(0.102)	(0.102)	(0.145)	(0.089)	(0.110)	(0.128)
Governance	-0.089**	0.064	-0.107**	-0.095**	-0.132**	-0.107**	-0.110**	-0.135**
	(0.016)	(0.081)	(0.018)	(0.018)	(0.035)	(0.018)	(0.019)	(0.031)
Population size (log)	-0.353*	0.355	-0.385*	-0.309+	0.263*	-0.412**	-0.925**	0.112
	(0.162)	(0.302)	(0.185)	(0.178)	(0.116)	(0.148)	(0.219)	(0.122)
Constant	Yes	yes	yes	yes	yes	yes	yes	yes
Observations	16,090	1,646	12,831	14,528	5,184	13,126	10,712	7,020
Number of dyads	2,339	467	1,899	2,286	980	2,068	1,717	1,416

Notes: Standard errors in parentheses: ** $p<0.01$, * $p<0.05$, + $p<0.1$. Observation period: 2001-2011. 29 European destination countries, 190 countries of origin. GMM regressions apply Arellano-Bover/Blundell-Bond linear dynamic panel-data estimator (xtdpdsys) with robust standard errors. All models include AR(1) term.

The strongest deterrence effect on its own seems to be established by the visa requirement variable. Bilateral asylum flows are ceteris paribus more than 50 per cent lower for corridors without a visa waiver. However, and interestingly enough, visa refusal has a weak positive effect on asylum applications. Thus, for bilateral corridors in which a visa is required, refusal of a short-term entry visa may actually increase the number of asylum seekers. Given that legal entry is largely impossible without a visa, this estimate indicates that a significant number of asylum claims are potentially filed *after* illegally entering the destination country. Thus, requesting a short-term visa for entering a country does

deter a significant number of potential asylum seekers; but some (or rather many) of those who are – after all – applying for a visa and subsequently rejected, are potentially deflected into irregularly and enter the destination country by illegal means before claiming asylum. A similar dynamic is found by Koser (2000) in his qualitative interview study of Iranian asylum applicants to the Netherlands of which many started out on their irregular journey to Europe after having had a travel visa application refused. Thus, we find one of our hypotheses largely confirmed, which is, more restrictive asylum and visa policies are largely translating into lower asylum inflows. However, the absolute size of this effect seems rather minor.

The control variables work as expected. The more autocratic the origin state, the larger the outflow of asylum seekers. Lack of opportunities in terms of low mean incomes in the origin country acts as a major push factor, whereas European prosperity and wealth seems to raise aspirations, which may encourage people in despair to seek asylum in a European country, and not elsewhere. Furthermore, aspirations for migration are even more spurred and migration itself potentially facilitated by the presence of a significant migration network. However, even if the diaspora community (migrant stock) seems very effective in providing support and assistance for compatriots in entering and settling in the destination country, substantial migration costs roughly proxied by origin-destination distances seems to be a major obstacle for many persecuted and deprived people to seek asylum in Europe.

Results on our estimations of irregular migration inflows are reported in Table 2 suggesting a potential deflection dynamic at play: the more restrictive the asylum policy, the larger the inflow of irregular migrants. A ten percent increase in rejected asylum applicants turn –on average- into an approximately three percent increase of (apprehended) irregular migrants (Model 1+2, Table 2), although only statistically significant in visa-required regimes.

Additional to the effects of asylum refusals, visa policy contributes not only to the inflow of asylum seekers but also to the number of (apprehended) irregular migrants. It is evident that visa requirements are associated with significantly lower irregular migration flows compared to bilateral corridors in which no visa is required. On the other hand, more restrictive visa policies in terms of higher visa refusal practices generate higher numbers of (apprehended) irregular migrants. This implies that not only asylum, but also restrictive visa policies deter entry as such while visa refusal at least partly deflects people into clandestine entry routes.

The control variables largely operate as expected. Migrant community (migrant stock) has mostly a positive impact on the size of irregular inflows. Presence of a significant diaspora seems to be a key factor in directing irregular migrants who might find it easier to establish an irregular entry and/or stay strategy through the assistance and advice of compatriots. Lack of economic opportunities in the origin country is a significant push factor, whereas economic affluence in destination countries is associated with increasing irregular inflows. Irregular immigration though is not markedly higher between countries sharing a common land border. In contrast to asylum-seeking, presence of relatively weak governance structures in the origin country seem not to be a reason why people choose irregular migration routes.

Table 2: GMM regression: Deflection into irregularity?

DV: Irregular Migrants (log) Visa regime	(1) free	(2) required	(3) required	(4) all
Policy				
Asylum rejections (log)	0.311	0.311**		
	(0.330)	(0.097)		
Visa refusals (log)			0.540*	
			(0.258)	
Visa required (0/1)				-0.569+
				(0.291)
Bilateral				
Distance	-43.512	63.052**	110.550**	29.928**
	(29.480)	(9.006)	(24.896)	(3.281)
Neighbour	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Migrant stock (log)	29.429	-0.866	18.553**	11.578**
	(21.742)	(0.583)	(5.076)	(1.410)
Destination				
Income p.c. (log)	-4.663	10.508**	13.873*	1.728+
	(4.040)	(2.673)	(6.453)	(0.928)
Governance	-3.083*	2.661**	4.006**	1.059**
	(1.450)	(0.484)	(1.152)	(0.170)
Informal sector (log)	11.759	-98.101**	-260.956**	-55.725**
	(24.734)	(10.443)	(49.598)	(4.254)
Police forces (log)	-46.465	80.519**	176.709**	28.350**
	(33.990)	(10.594)	(37.511)	(2.831)
Origin				
Income p.c. (log)	8.682*	-20.271**	-61.347**	-8.696**
	(4.389)	(3.546)	(14.353)	(1.332)
Governance	0.235	0.966**	2.644**	0.381**
	(0.602)	(0.247)	(0.750)	(0.099)
Population size (log)	35.229	-50.876**	-89.770**	-21.099**
	(21.461)	(7.213)	(20.032)	(2.434)
Constant	yes	yes	yes	yes
Destination FE	yes	yes	yes	yes
Observations	864	6,161	3,555	12,956
Number of dyads	362	1,900	1,074	3,361

Notes: Standard errors in parentheses: ** p<0.01, * p<0.05, + p<0.1. Observation period: 2008 - 2011. 29 European destination countries, 190 countries of origin (unbalanced). GMM regressions apply Arellano-Bover/Blundell-Bond linear dynamic panel-data estimator (xtdpdsys) with robust standard errors and include AR(1) term.

Keeping in mind the multiple challenges involved in the operationalization of asylum and visa policy respectively, and the measurement of irregular and asylum migration flows, our results indicate that while more restrictive asylum policies do decrease the inflow of asylum seekers, there is simultaneously a deflection dynamic at work. Existing research might however, have somewhat overstated the overall deterring impact of asylum policy on inflows. A stronger dynamic – at least for our dataset and estimation technique – is that tightened asylum and visa practices displace arrivals into an irregular status.

5 Conclusion

This paper has provided a conceptual and empirical analysis of the relationship between refugee policy and forced and irregular migration inflows. Existing research has shown that restricting asylum policy has a considerable deterrence effect on asylum numbers. Tightened procedures do reduce the number

of persons who apply for protection. To what extent, however, this impact is counterbalanced by a displacement of protection seekers into irregularity has not been investigated so far. It is very likely that restrictive asylum policies not only lower asylum numbers per se, but also shifts new entrants into irregular routes and stays. Such a mechanism is suggested by existing research on labour migration and irregular traffic across the US-Mexican border. Here, significant displacement effects of tightening legal entry routes have been identified (Massey and Pren 2012; Cornelius 2005).

Our analysis of immigration into 29 European countries supports the conclusion that there exists a (intended) deterrence effect of restrictive asylum and visa policy. Yet our results suggest also that this effect is largely counter-balanced by an (unintended) displacement of asylum seekers into irregularity. Notably, the deflection dynamic appears to be of almost similar magnitude as the deterrence effect on asylum inflows. Indeed, our estimates suggest that the deflection effect may balance out or even exceed the deterrence effect. This means that on average the decline in asylum applications that have been 'achieved' through implementing relatively restrictive asylum policies and procedures might be lower than the consequent increase in the number of irregular migrants. Thus, the gross inflow of asylum seekers and irregular migrants might even increase with a tightening of asylum policies and practices. On the other hand, a visa requirement seems to be the most effective way to deter both asylum seekers and irregular migrants. However, the 'fine-tuning' in visa processing and refusal practices might be rather counterproductive by increasing the number of asylum applications as a consequence of tighter visa issuance procedures. Further tests are needed to assess the robustness of these result. Additional analyses are called for in light of the numerous challenges involved in measuring changes in policies and inflows.

Nevertheless, this finding of a sizable 'deflection into irregularity' has considerable bearing on our understanding of asylum policy effects and effectiveness. While previous studies suggested that restrictive changes in government rules and practices could claim a 'success' in terms of a reduction in the number of asylum claims, our results suggest that this conclusion is problematic as part of the intended deterrence is counterbalanced by a considerable unintended deflection of forced migrants into irregularity. Controlling immigration remains a challenging task likely to result in paradoxical consequences.

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Appendix

Table A1: Allocation of asylum seekers and irregular migrants across 29 European destinations

Destination	Asylum applications				Apprehended irregular migrants			
	2008	2009	2010	2011	2008	2009	2010	2011
Northern	*63.298*	*70.132*	*72.013*	*64.493*	*9.205*	*30.790*	*30.230*	*25.870*
Denmark	2.321	3.678	4.918	3.697	645	655	660	475
Finland	3.849	5.068	3.331	2.938	7.015	7.655	4.845	4.630
Iceland	94	61	64	104	5	20	0	0
Norway	19.131	26.054	21.573	17.324	1.095	1.565	NA	1.940
Sweden	37.903	35.271	42.127	40.430	NA	20.895	24.605	18.825
Western	*154.985*	*172.246*	*215.479*	*231.811*	*319.935*	*276.325*	*230.545*	*244.310*
Austria	12.665	15.568	10.797	14.102	16.585	16.120	14.515	19.635
Belgium	11.747	16.279	25.643	32.524	14.670	15.035	13.270	15.375
France	42.086	47.235	75.276	56.820	125.945	86.995	63.390	66.105
Germany	27.053	31.720	47.157	51.827	59.225	49.210	49.920	56.055
Luxembourg	446	607	736	2.132	5	145	0	0
Netherlands	15.080	15.806	19.319	19.553	10.080	9.515	9.915	8.990
Switzerland	15.808	15.351	13.191	19.021	NA	10.325	10.460	10.310
UK	30.100	29.680	23.360	35.832	92.610	88.980	69.075	67.840
Eastern	*16.473*	*19.620*	*12.693*	*13.406*	*61.605*	*66.180*	*64.360*	*66.185*
Bulgaria	678	728	923	824	5.390	4.345	4.590	4.030
Czech Rep	2.641	1.752	1.326	726	3.480	4.250	2.855	3.305
Estonia	14	34	27	64	2.695	1.160	1.935	2.750
Hungary	3.087	4.649	2.066	1.660	7.250	9.785	13.455	15.200
Latvia	51	51	61	334	1.110	825	915	1.285
Lithuania	215	203	371	402	3.110	3.185	3.230	4.070
Poland	7.729	10.568	6.513	6.862	22.150	31.265	26.920	26.925
Romania	1.152	830	870	2.046	12.595	8.840	8.215	6.925
Slovak Rep	906	805	536	488	3.825	2.525	2.245	1.695
Southern	*61.830*	*45.983*	*36.294*	*55.169*	*835.310*	*676.760*	*560.460*	*466.685*
Cyprus	6.932	6.920	6.446	4.167	7.810	8.630	8.600	8.750
Greece	19.769	15.798	11.811	9.244	108.150	110.700	118.440	99.390
Italy	29.896	17.504	9.724	34.097	73.410	56.345	50.140	37.635
Malta	331	2.443	5.184	3.742	3.095	1.800	330	1.780
Portugal	160	139	160	274	32.030	13.595	12.030	10.925
Slovenia	230	180	240	366	8.470	8.465	10.810	11.945
Spain	4.512	2.999	2.729	3.279	602.345	477.225	360.110	296.260
Total	296.586	307.981	336.479	364.879	1.226.055	1.050.055	885.595	803.050

Table A2: 2SLS regression: Asylum deterrence

DV: Asylum applications (log)	(1)	(2)	(3)	(4)	(5)	(6)
Visa regimes	all	all	required	all	required	required
Policy						
Asylum rejections (log)	-0.869**					
	(0.220)					
Asylum refusal rate				-0.958*	-1.660**	
				(0.394)	(0.434)	
Visa required (0/1)		-0.995**				
		(0.167)				
Visa refusals (log)			-0.076			
			(0.159)			
Visa refusal rate						-2.166**
						(0.787)
Bilateral						
Distance	-0.064**	-0.070**	-0.065**	-0.054**	-0.061**	-0.056**
	(0.006)	(0.005)	(0.024)	(0.004)	(0.005)	(0.006)
Neighbour	-0.224*	-0.122+	-0.052	-0.222**	-0.339**	-0.390**
	(0.101)	(0.073)	(0.137)	(0.073)	(0.099)	(0.145)
Migrant stock (log)	0.093**	0.041**	0.072	0.050**	0.046**	0.066**
	(0.012)	(0.005)	(0.044)	(0.005)	(0.005)	(0.008)
Destination						
Income p.c. (log)	0.333**	0.315**	0.957**	0.153*	0.152+	1.158**
	(0.104)	(0.077)	(0.271)	(0.062)	(0.086)	(0.169)
Governance	-0.115**	-0.020	-0.025	-0.033+	-0.041+	-0.005
	(0.031)	(0.018)	(0.034)	(0.019)	(0.022)	(0.030)
Origin						
Income p.c. (log)	-0.087**	-0.118**	-0.061**	-0.061**	-0.069**	-0.162**
	(0.015)	(0.014)	(0.023)	(0.010)	(0.012)	(0.040)
Governance	-0.037**	-0.059**	-0.020	-0.006	0.018+	-0.023**
	(0.005)	(0.006)	(0.016)	(0.008)	(0.010)	(0.005)
Population size (log)	0.057**	0.050**	0.062	0.045**	0.056**	0.026*
	(0.009)	(0.006)	(0.043)	(0.006)	(0.007)	(0.011)
Constant	yes	yes	yes	yes	yes	yes
Destination FE	yes	yes	yes	yes	yes	yes
Observations	14,974	13,529	4,908	12,207	9,907	6,641
Number of dyads	2,174	2,123	925	1,926	1,584	1,333
R-sq (overall)	0.65	0.81	0.82	0.81	0.79	0.80

Notes: Standard errors in parentheses: ** p<0.01, * p<0.05, + p<0.1. Observation period: 2001-2011. 29 European destination countries, 180 countries of origin. 2SLS regressions use following instruments for policy variables: (1) Share of Muslim population at origin, (2) Share of informal sector at origin.

Table A3: 2SLS regression: Deflection into irregularity?

DV: Irregular Migrants (log)	(1)	(2)	(3)	(4)
Visa regime	Free	required	required	all
Policy				
Asyl rejections (log)	0.123	0.584		
	(0.622)	(0.636)		
Visa refusals (log)			0.928*	
			(0.410)	
Visa required (0/1)				-7.670*
Bilateral				(3.835)
Distance	-0.140+	-0.072	-0.026	-0.412**
	(0.082)	(0.138)	(0.089)	(0.144)
Neighbour	1.365	2.112**	1.474**	1.030+
	(1.372)	(0.450)	(0.404)	(0.595)
Migrant stock (log)	0.392*	0.256	0.156	0.311**
Destination	(0.175)	(0.158)	(0.133)	(0.051)
Income p.c. (log)	1.115	-2.000**	1.098	-1.370**
	(2.139)	(0.649)	(0.836)	(0.503)
Governance	0.048	0.024	-0.019	0.040
	(0.124)	(0.094)	(0.090)	(0.051)
Informal sector (log)	-0.657	-1.713	2.313	-0.759
	(4.428)	(1.165)	(1.702)	(0.750)
Police forces (log)	-6.307+	-1.978	-1.625	0.123
Origin	(3.223)	(2.572)	(1.046)	(0.741)
Income p.c. (log)	-0.955*	0.112	-0.284**	-0.797*
	(0.379)	(0.137)	(0.070)	(0.397)
Governance	0.005	0.045	-0.066*	-0.238**
	(0.081)	(0.041)	(0.030)	(0.092)
Population size (log)	0.284+	0.100	-0.110	0.105*
	(0.171)	(0.137)	(0.171)	(0.043)
Constant	yes	yes	yes	yes
Destination FE	yes	yes	yes	yes
Observations	825	5,795	3,362	11,642
Number of dyads	346	1,777	1,013	3,002
R-sq (overall)	0.77	0.71	0.61	0.22

Notes: Standard errors in parentheses: ** p<0.01, * p<0.05, + p<0.1. Observation period: 2008-2011. 29 European destination countries, 180 countries of origin. 2SLS regressions use following instruments for policy variables: (1) Share of Muslim population at origin, (2) Share of informal sector at origin.