Asylum Determination within the European Union (EU): Whether Capacity and Social Constraints Impact the Likelihood of Refugee Status Determination

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Abstract

This paper analyzes whether capacity and social constraints impact acceptance rates for asylum seekers in the European Union from 2000-2016. Theoretically people should receive asylum based on the criteria outlined in international law – a well-founded fear of persecution – but the influx and distribution of applicants in the European Union suggests that this may not hold in practice. For a group of pre-identified "legitimate" asylum cases, this paper finds that surges in applications in a country (i.e. capacity constraints) have a positive and statistically significant correlation with acceptance rates, while the percentage of migrants in a country (i.e. social constraints) has a negative and statistically significant correlation with acceptance rates. This suggests that the burden of proof becomes easier during a surge in total applications in a country. However, as the international migrant stock in that country increases, it is more difficult for that same group of applicants to receive asylum.

JEL classification: D73, D78, F22, H12, J11, J15, K37, O52

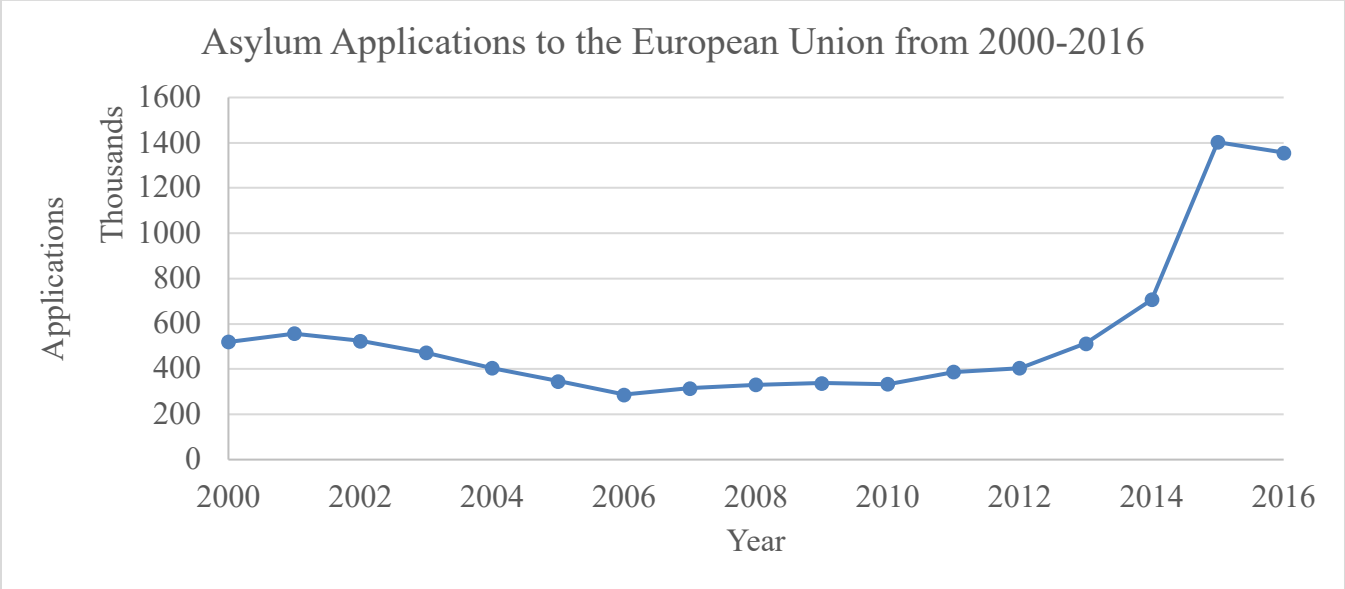
Keywords: Asylum; Refugees; European Union; Dublin III Regulation; Schengen Agreement; Migration Crisis

1. Introduction

As conflict and climactic changes across the globe have continued to force more and more people to flee their homes in search of safety, questions surrounding the responsibility of nation-states to provide refuge to these people have been a point of contention. The United Nations High Commissioner for Refugees (UNHCR) documents that an unprecedented 68.5 million people are now displaced from their homes, up significantly from the 42.7 million total displaced people in 2007 (UNHCR Figures, 2018). 16.2 million of these 68.5 million were newly displaced in 2017 (UNHCR Global Trends 2018). The growth in the total number of displaced people is not expected to subside; ongoing crises in Syria, South Sudan, and Myanmar are forcing more and more people to flee.

The European Union (EU) in particular has struggled to handle the recent influxes of people seeking asylum. Figure (1) below shows the magnitude of these influxes from 2000-2016. Reporters and scholars have repeatedly pointed to the inability and/or unwillingness of countries in the EU to accept asylum seekers. This inability to accept asylum seekers is thought to be associated with a country's lack of capacity to process the number of asylum applications it has received. The unwillingness to accept asylum seekers, on the other hand, is often explained as a result of an increased number of migrants, financial struggles, or cultural factors in a country (i.e. social constraints). Many indicators of this inability/unwillingness are easily observable. Some EU countries have constructed borders and fences to prevent asylum seekers from entering. Others have seen a rise in nationalist and far-right political parties. These factors have likely translated into fewer total asylum applications to countries in the EU over time, but the impact on asylum applicants beyond total number of applications is difficult to observe. This paper analyzes whether these capacity and social constraints impact asylum seekers' likelihood of acceptance.

Figure 1: Total Asylum Applications by Year in the European Union from 2000-2016



2. Background

2a. Asylum and the Asylum System in the EU

As background, a displaced person – a person forced to flee their home – has to apply for asylum to be granted refugee status or another temporary form of protection in order to obtain legal rights in another country. Visas are not available for those claiming asylum (Amnesty International, 2018). The country where the application is filed has the primary responsibility for processing that application and determining asylum status, but the UN Refugee Agency can process applications or work jointly with states that are unable or unwilling to do so (UNHCR Refugee Status).

The EU country in which an applicant files an asylum claim is the country where he/she would be granted refugee status. If an application is accepted, therefore, the refugee must live in that country. Though the UN Refugee Agency sometimes resettles refugees (i.e. transfers refugees to a different country from the country where they applied for asylum), this only occurs in countries with the least capacity to support the number of refugees in their country. From 2014-2017, the only country in the EU

from which the UN has resettled refugees is Malta. Since 2014, 1,771 refugees have been resettled from Malta (UNHCR Resettlement, 2018). For comparison over that time period of 2014-2017, 54,787 refugees have been resettled to EU countries, 4,280,457 asylum applications have been filed in EU countries, and 1,008,088 applications have been accepted (UNHCR Population Statistics, 2018). Clearly, the overwhelming majority of refugees in the EU applied for asylum in the country which they now reside. This fact presumably impacts the decision of an asylum applicant to choose to enter a certain country to seek asylum (to the extent that they can make a choice).

The structure of asylum determination in Europe is governed by the Common European Asylum System (CEAS). As part of the CEAS, the Dublin III Regulation outlines the European country that is responsible for an asylum seeker's application. Though criteria are extensive and include family unification, document possession, irregular entry or stay, and visa-waived entry, the tenet most frequently used in practice is irregular entry (Ivanov, 2017). Under this rule, the country where the asylum applicant first entered the EU is responsible for processing that application. Since frontline countries are often the first place in the EU where asylum applicants arrive, they are then responsible for evaluating most of the asylum claims.

Complicating the Dublin III Regulation is the Schengen Agreement, which allows for movement within 26 European countries without a passport. The United Kingdom, Ireland, Bulgaria, Cyprus, Croatia, and Romania are not members of this agreement, but the majority of countries in the EU – in addition to Iceland, Norway, Switzerland, and Liechtenstein – operate under this system of passport-free travel (Nugent, 2017). Countries under this agreement understandably struggle to prevent asylum applicants from traveling from their country to a different country in the EU. Lehne, a visiting scholar at Carnegie Europe, notes that the "refugee crisis [has] revealed the brittleness of the Schengen system" (2018). Asylum seekers can use this system to apply for asylum in the country that they find the most

desirable or that they feel is most likely to grant them asylum status. Nugent agrees, stating in his book *The Government and Politics of the European Union* that smooth operation of this agreement requires strong borders, efficient communication among members, and limited migration pressure (or an effective way a dealing with migration pressure). He points out that none of these have held in the EU during this wave of asylum seekers.

As a result, countries have acted unilaterally to deal with their own migration pressures and patch the weaknesses in the system. For example, Hungary and Bulgaria have erected fences and borders. Meanwhile, Greece, Croatia, and Italy have frequently allowed asylum seekers to pass through their countries (BBC, 2016). However, the countries where these asylum seekers end up have often allowed them to apply for asylum in their country rather than sending them back to apply in the country of first arrival.[1] Germany in particular has processed an extraordinary number of applicants since 2016. Landlocked except for a small segment of the country in the north, Germany has likely processed many applicants who first arrived in the EU in a different country. These unilateral efforts have led to an extremely unequal distribution of asylum seekers within Europe.

2b. Evidence of the Existence of Capacity and Social Constraints

Doctors Without Borders released a scathing review in 2015 of the EU's response to the influx of asylum seekers, reporting that "the EU and its member states collectively fail[ed] to address the urgent humanitarian and medical needs of refugees and migrants arriving at external or internal EU borders" and its "deterrence and anti-immigration policies – developed over the last 15 years and further strengthened in 2015 – have increased the demand for migrant smuggling networks and pushed people towards ever more dangerous routes which jeopardize their health and lives."[2] Other reports and news

[1] If a person is identified/fingerprinted in the country of first arrival, other EU countries can use a centralized database to determine where they first arrived.
[2] Medecins Sans Fronteires (2015), p. 4.

articles have reiterated similar themes of stretched capacities and social issues caused (or exacerbated) by migration.

The geographical location of frontline countries and the tenets of the Dublin III Regulation have led Greece and Italy to receive and process a disproportionate share of applications and have stretched their capacities to a maximum. The influx of asylum seekers since 2000, however, has impacted far more than Greece and Italy. Many European countries are facing significant capacity constraints in processing applications, according to a report from Carnegie Europe (Lehne, 2018). Moreover, a 2015 report from the Brookings Institution provides several examples of this, reporting that "Germany is struggling with screening, registering, and welcoming the current influx" and "Greece has all but given up processing them."[3] Germany and Greece are two of reportedly many of the countries in the EU that are struggling with the influx of asylum seekers. EU law mandates that acceptance decisions be made within six months, but many applicants have had to wait much longer than six months to receive a decision (Faiola, 2015). Clearly, the capacity of countries to process applicants has important implications for the ability of asylum seekers to receive timely decisions. This capacity may also impact an asylum seeker's likelihood of acceptance, all else equal.

The influx of asylum seekers has also impacted the EU socially, spurring a range of responses from EU countries. European Commission public opinion polls show the top concern of EU citizens is migration (European Commission, 2017). The Pew Research Center even reports that many in the EU see the migration crisis as "dangerous and untenable" (Poushter 2015). Additionally, Nugent links the influx of asylum seekers with populism and nationalism and believes it has played a part in the election of what he refers to as Euroscepticism governments in Hungary, Poland, Slovenia, and the United Kingdom (Nugent 2017). The report from Carnegie Europe cited earlier also supports this idea, linking

[3] Garavogila (2015), Paragraph 11

the influx to the rise in xenophobia. It points out the EU's vulnerability when the influxes occurred, as it was still recovering from the financial crisis (Lehne, 2018). Joseph Stiglitz has described the slow economic recovery of Europe post-financial crisis in 2008 as "almost a lost decade" (Lowrey, 2016). The influx of migrants, then, had the potential to stretch an already stretched economy in the EU. Many EU citizens seemed concerned that refugees would disadvantage citizens hurt by the crisis. This has been explicitly expressed through politics and public opinion polls. It is less clear whether these social constraints impact an asylum seeker's likelihood of acceptance. As a country accepts more refugees, do case workers in that country more stringently review the asylum applications that follow?

3. Literature Review

3a. Distinguishing Migration from Asylum within Economics Scholarship

Much of the literature on migration has focused on the push-pull factors of the decision to migrate and the consequential impact on countries of departure and arrival, overlooking the specifics of migration with the intent to seek asylum. To contextualize this paper, it is important to understand the ways in which the decision to seek asylum differs from the typical decision to migrate. Unlike migration, which requires a visa and is a product of a variety of push-pull factors, asylum is granted to a person based on personal persecution, defined by 1951 Geneva Convention as:

> a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country.[4]

A person deciding whether to leave and seek asylum considers a very different cost-benefit analysis than a person deciding whether to migrate in general. Indeed, Missirian and Schlenker (2018) note that the

[4] The UN Refugee Agency, p. 16, Article I(A)(2).

legal hurdle of migration, which usually plays a large role in a person's decision-making process to migrate, is lowered significantly for those seeking asylum. One does not need to obtain a visa to enter a country and seek asylum. Though it is acknowledged that the cost-benefit analysis for asylum seekers differs from those migrating under normal conditions, the specifics of the cost-benefit analysis for asylum seekers have not been outlined – in part because the decision varies so significantly between individuals and the opportunity cost of staying in place often outweighs any other considerations an individual might have. One contribution of this paper is an attempt to develop a specific cost-benefit analysis equation for those seeking asylum.

Though narrowly defined, asylum is a distinct subset of total migration and represents a significant amount of migration from developing to developed countries (Berthel, 2015). In 2016, for example, non-EU citizen migration to the EU totaled two million (Eurostat, 2018). Refugees comprised 394,581 of that two million, or 19.7% of total non-EU citizen migration (UNHCR Population Statistics, 2018). Applications for asylum in the world have increased greatly from 1980 to 2000 (Hatton 2004), and applications for asylum to the EU from people with non-EU countries of origin have been trending upwards since 2006 with large spikes in 2014, 2015, and 2016 (Asylum statistics, 2018).

3b. Shortcomings of the European Asylum System

As stated in the introduction, asylum applications in the EU are governed by the Common European Asylum System (CEAS), an important component of which is the Dublin Regulation. There is no shortage of literature surrounding the shortcomings of the Dublin Regulation. Though European Union documents have named the Dublin Regulation a "cornerstone" of the Common European Asylum System (CEAS), Di Filippo (2016) notes that "if the so-called cornerstone is ill-conceived, the overall structure of the CEAS becomes unstable, unfair, and ineffective."[5] Citing Guild (2014), Hruschka

[5] pp. 2-3.

(2016), and Maiani (2016), he discusses the evidence showing that the Dublin Regulation does not work in normal periods or in times of crisis. Specifically, Di Filippo argues that the literature shows that the Dublin Regulation leads to tensions between European countries, smuggling networks, limited integration of asylum seekers, and unsustainable expenditure (2016). Nevertheless, Article 78 of the Treaty on the Functioning of the European Union documents the need for a common asylum policy in the EU, a policy which must "[ensure] compliance with the principle of non-refoulement and in accordance with the Geneva Convention… and other relevant treaties."[6] The European Parliament has also documented the necessity of revising this tenet in its resolution on April 12, 2016. However, an overhaul of this tenet or the regulation as a whole has not yet come to fruition (European Parliament, 2016). Suggestions for change have included establishing a central collection of applications on an EU level, creating a maximum number of applications per country, implementing some sort of fairness mechanism, building a new database with more robust applicant data, and determining some way to see when a state is under disproportionate pressure (Ivanov, 2017). In sum, the structural limitations of the Dublin III Regulation have been well-researched and the necessity of an asylum policy is recognized by the EU.

3c. Previous Analysis of EU Asylum Decisions

In a 2018 paper that begins to use regression-based techniques to analyze the composition of asylum decisions in the EU, Missirian and Schlenker (2018) use asylum application data from UNHCR to show that relative to non-EU OECD countries and the rest of the world, the EU has the lowest asylum acceptance rate from 2000-2014 (13%) and the highest rejection rate (more than 50%). The authors interpret this as either a result of stricter examination of asylum cases or a larger fraction of applicants

[6] Goodwin-Gill (2011), p. 446.

applying with invalid reasons for asylum.[7] The authors then regress asylum acceptances/decisions on applications and find that spikes in applications lead to higher acceptance rates (and more decisions) than average in the EU and lower acceptance rates (and fewer decisions) than average in non-EU OECD countries and the rest of the world. They explain that positive deviations in applications should typically lead to greater acceptance rates as shown in their analysis for the EU, as migration during surges is more likely to be distress-driven and stem from a crisis. They suggest that the lower acceptance rates they find in the non-EU countries during surges might be due to selection issues or administrations and UNHCR offices being unable to cope with surges in applications.

The initial analysis of Missirian and Schlenker (2018) shows a positive correlation between application increases and acceptance rates in the EU. I build on the analysis by testing some of the authors' hypotheses and separating out the specific factors impacting acceptance rates. Instead of explaining higher acceptance rates during surges as a result of a greater percentage of distress-driven migration, I choose a subset of similarly qualified applicants to factor out this explanation. I then estimate whether capacity and social constraints impact acceptance rates.

4. Theoretical Framework

An asylum seeker should theoretically receive asylum strictly based on whether he or she meets the criteria outlined in international law – a well-founded fear of persecution. In practice, the determination may rely on additional factors, including:

[7] It is also possible that for countries to refuse to process asylum claims, though this is rare in practice. It is against international law and countries typically face a great deal of criticism for doing so.

1. The capacity of a country to process asylum applications (i.e. capacity constraints)
2. The willingness of a country to accept all asylum seekers who qualify for asylum (i.e. social constraints)

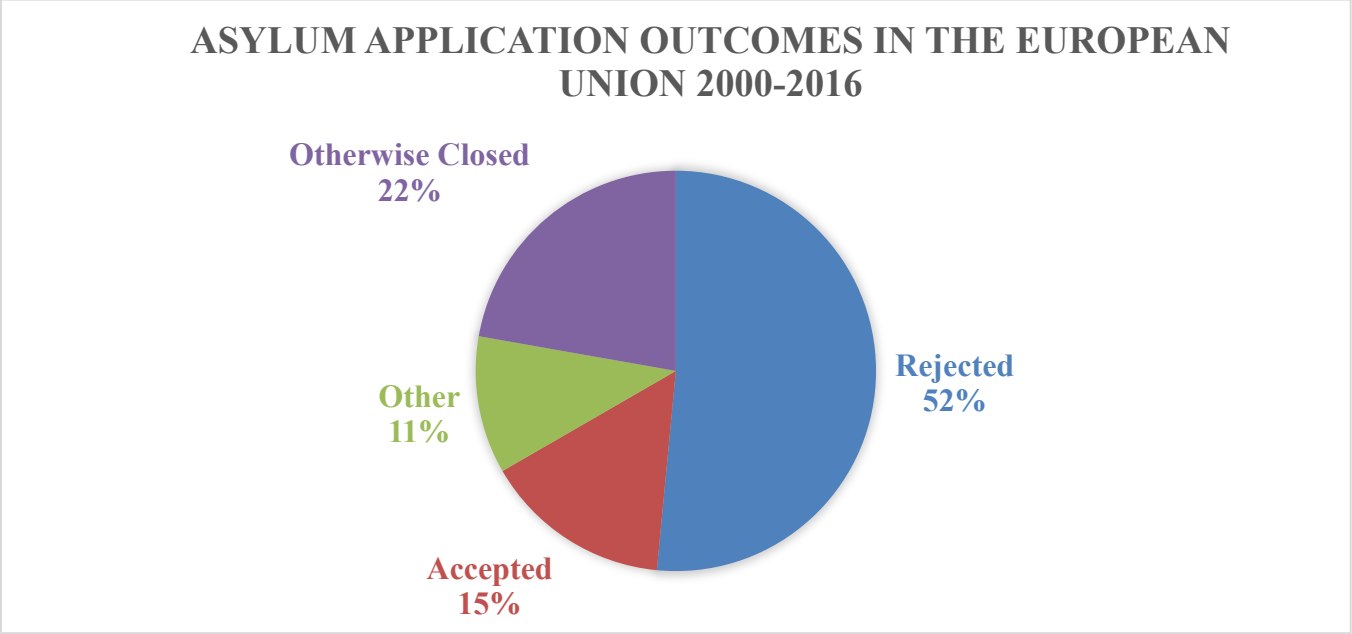
This paper seeks to measure whether these constraints result in changes in acceptance rates. The types of possible asylum decisions are categorized by UNHCR as:

1. **Recognized Convention/Mandate:** The applicant is determined to meet the criteria to be granted refugee status.
2. **Recognized Other:** The applicant is offered a complementary form of protection.
3. **Rejected:** The applicant is not determined to meet the criteria to be granted for refugee status.
4. **Otherwise Closed:** The application is closed for administrative reasons. Missirian and Schlenker (2018) suggest this could happen if "the asylum-seeker failed to follow up at some point of the procedure, because he/she died, abandoned or withdrew his/her application, moved to another country, or that, in the European Union, in observance of the "Dublin rule," the case has been transferred to another member country."[8]

The breakdown of these decisions during 2000-2016 is shown below in Figure (2). Of the 9,200,170 decisions, 15% of applicants were accepted, 11% were recognized other, 52% were rejected, and 22% were otherwise closed. In this paper, recognized convention/mandate and recognized other are grouped together in a group called "accepted," as the decisions offer complementary forms of protection.

[8] Missirian and Schlenker (2018), pp. 437-438.

Figure 2: Breakdown of the 9,200,170 Asylum Decisions in the EU from 2000-2016



Outlining the cost-benefit analysis in the decision to seek asylum demonstrates the importance of this paper's empirical approach. One can think of the general form of the decision-making equation for an asylum seeker as:

$$(1)\ a_{ijkt} = E(P_{jkt}) \bullet\ E\ (NPV \sum_{t+1}^{T} Y_{ijk}) - E(N_{ilt}) - E(C_{ijkt})$$

The decision of individual *i* from country of origin *j* to submit an application for asylum *a* to European country *k* depends on the expected probability of acceptance *P*, the expected value of the net present value of all future income *Y*, the expected opportunity cost *N* of staying in any other country *l*, and the expected explicit cost of the journey to country *k* from country *j*.

The value of each of these variables will be vastly different across those seeking asylum. For example, a variety of factors influence the expected value of asylum for an individual: language match, translatability of job skills, networks, proximity to those from a person's country of origin, level of

social services in the country of asylum, etc. Similarly, the opportunity cost of residing in a country outside of Europe that is closer to an individual's country of origin will differ greatly among people. For example, for those fleeing for their lives, staying in place in not an option. The opportunity cost for these people will be the difference in expected value between being granted asylum in a specific European country and the expected value of the alternative: whether it is staying in a refugee camp, living illegally in a place closer to their country of origin, or applying for asylum in a neighboring country or a different European country. The explicit travel cost will vary depending on a person's networks, risk-taking tolerance, and distance from their target country *k*.

Because of the influence of all of these factors, the number of applications a country in the EU receives will depend on more than just EU-wide policy and the geographical location of a country. It will also depend on the country's desirability as a country of asylum and its history of asylum decisions and asylum acceptances. National policy and asylum decisions in one year will likely have an impact on the number of asylum applicants in the following years as asylum seekers adjust their expectations about the country.

One can think that refugees form their expectation of the probability of asylum based primarily on the observed percentage of applicants from country *j* to country *k* granted asylum in the previous year. Asylum seekers are unlikely to have access to full data from the previous year. They likely rely on their networks, the news, and the Internet to guide their estimation of this probability. Moreover, asylum seeker choice is constrained. The necessity of fleeing from home may force asylum seekers to make quick decisions based on feasibility and timing. For the purposes of this paper, the probability of asylum is estimated as:

$$(2)\ \text{Probability of Asylum}_{ijkt} = \text{Qualifications}_{i} + \text{Capacity Constraints}_{kt} + \text{Social Constraints}_{kt}$$

In other words, the probability that an individual receives asylum is a product of an individual meeting the criteria for asylum status as well as capacity and social constraints in the application country.

The endogeneity inherent in the decision to seek asylum presents a significant challenge when estimating the impact of surges. To understand the impact of factors impacting acceptance rates, surges cannot be comprised of more or less qualified applicants than average. If a surge were made up of more qualified applicants, one would except the acceptance rate and number of acceptances to increase. Missirian and Schlenker (2018) suggest their finding of a positive correlation between applications and acceptance rates is indicative of exactly this. However, analyzing a group that is differently qualified for asylum applying during surges makes it difficult to parse out the impact of any capacity or social constraints.

Since the impact of those constraints is the focus of this paper, I address this qualification issue by choosing a group of similarly qualified applicants. This group is referred to as pre-identified "legitimate" applicants. It is comprised of the applicants from 2013-2016 escaping from what is widely considered to the greatest humanitarian crisis in recent years: the Syrian civil war. Theoretically, almost all of the asylum seekers in this group should receive asylum according to international law, as they are arriving from the worst humanitarian crisis that occurred during the time period analyzed. Migration of this kind is definitely distress-driven, whereas other applications in the data may or may not be distress-driven. Though the crisis started earlier than 2013, it is likely that the most privileged in Syria left at the beginning of the crisis. Including those people would have complicated the interpretation of the correlation because their disposable income and connections make them a fundamentally different group than those who arrived from 2013-2016.

Thus, if asylum determination for these asylum seekers depends only on whether they meet the criteria for asylum, which this paper assumes that they do, one would expect all other factors like

capacity and social constraints to be insignificant. Limiting the initial analysis to pre-identified "legitimate" cases controls for the endogeneity inherent in the choice to seek asylum, although it does not necessarily control for the country where a person chooses to seek asylum. Almost all of the applicants in this pre-identified group are qualified to receive refugee status, and their decision to seek asylum is based on the extraordinary increase in opportunity cost associated with the danger of staying in their country of origin. They may still choose the European country in which they seek asylum based on the observed percentage of applicants granted asylum in the previous year, but the decision to seek asylum in the first place is not based on this. If instead all applications were considered together, surges in applications could potentially be comprised of a larger percentage of applicants applying for valid or invalid reasons. It would then be more difficult to estimate the true impact of capacity and social constraints, as higher or lower acceptances could be due to the composition of applicants rather than capacity or social constraints.

Table (1) below describes this group of pre-identified applicants. Note that the average accepted/rejected rates between crisis years and non-crisis years differs greatly, as one would expect for a highly qualified group arriving from an immense crisis. A comparison between pre-identified applications and non-pre-identified applications is shown below in Figure (3) and Figure (4).

Table 1: Comparison of Pre-Identified "Legitimate" Cases to Other Cases

Country of Origin	Crisis Years	Average Accepted Rate During Crisis Years	Average Accepted Rate for Syrians Outside of Crisis Years	Average Accepted Rate of Non-Pre-Identified	Average Rejected Rate During Crisis Years	Average Rejected Rate for Syrians Outside of Crisis Years	Average Rejected Rate of Non-Pre-Identified
Syria	2013-2016	57.7%	28.7%	16.9%	16.5%	47.6%	56.3%

Figure 3: EU Asylum Decision Breakdown for the 892,564 Pre-Identified "Legitimate" Applications (i.e. Syria 2013-2016)

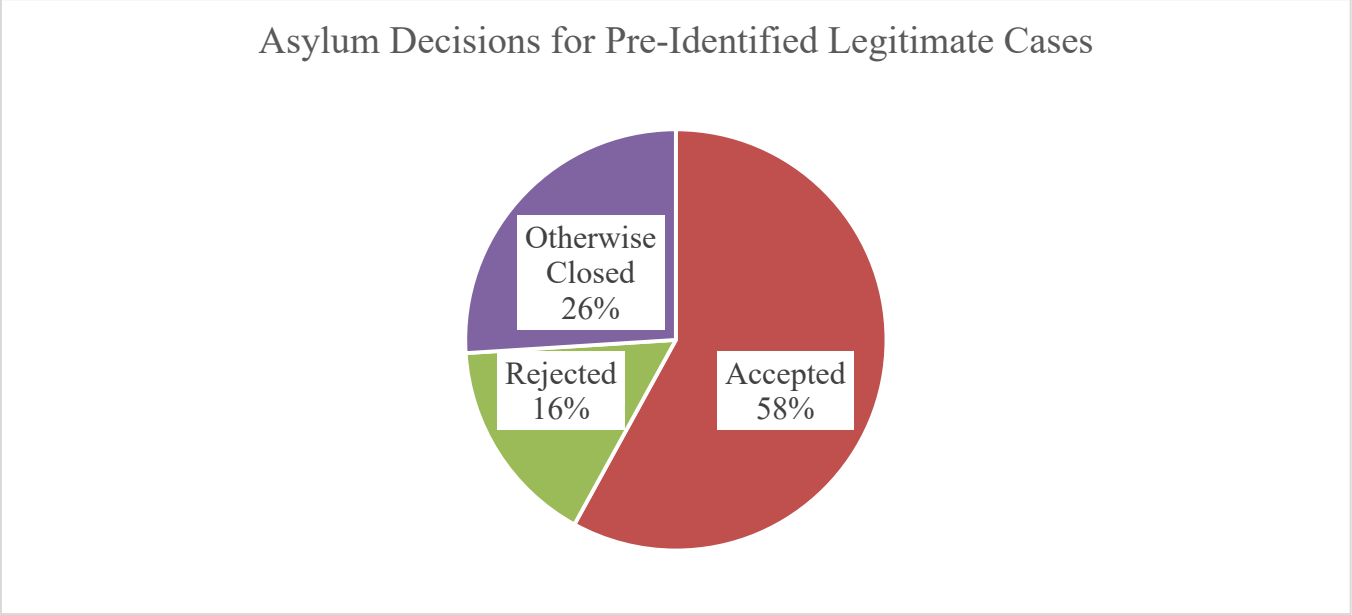
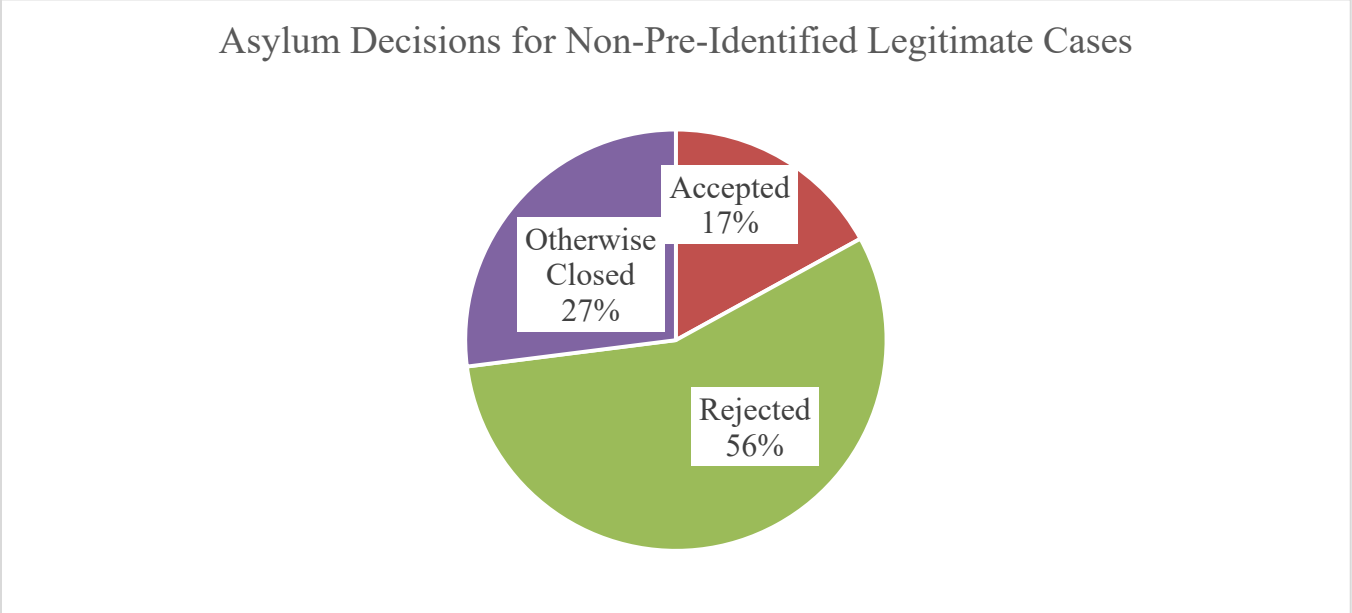


Figure 4: EU Asylum Decision Breakdown for the 8,307,606 Non-Pre-Identified "Legitimate" Applications



Due to the severity of the Syrian crisis, one would except the rejected rate for these pre-identified "legitimate" applicants to be extremely close to zero. Since that is not the case, it seems like capacity or social constraints might have impacted acceptance rates. The rejected rate could also be explained by applicants who lie about their identity. Because the Syrian crisis has been the worst humanitarian crisis in recent decades, non-qualified applicants from a country other than Syria may have incentives to pretend that they are coming from Syria. They could either say that they lost their identification documents or find some way to purchase fake documents. The prevalence of this behavior has not been estimated empirically. This paper acknowledges that this behavior might exist but assumes that its frequency is unlikely to change over the course of the time period analyzed. For example, it assumes that if 3% of the Syrian applications in 2013 were rejected because of false identity in 2013, a similar percentage of Syrian applications were rejected in 2016 for the same reason.

5. Empirical Specifications

This paper uses positive deviations in applications (application surges) in a specific EU country in a given year to approximate capacity constraints. To approximate social constraints, it uses a country's contemporaneous international migrant stock. The international migrant stock is measured as the percentage of a country's population that was not born in that country. More information on the specifics of these numbers and their sources can be found in the data section of this paper.

A correlation between surges in applications and changes in a country's acceptance rate for pre-identified "legitimate" cases would suggest that a country is changing its behavior due to the influx of asylum seekers. This change in acceptance rate could be positive or negative. As more and more asylum seekers arrive in a country, case workers may feel pressured to make decisions more quickly and err on either side. If they err on the side of caution, the burden of proof will be lower, and they will end up

accepting a higher percentage than they would on average. If instead quicker decision making leads workers to evaluate cases more stringently, they will accept a lower percentage than normally. This effect may be different for those coming from well-known crises, such as the crisis in Syria, and those coming from lesser known crises.

Similarly, an increasing percentage of migrants in a country may or may not reduce a country's willingness to accept all qualified applicants. As discussed earlier, many Europeans believe that asylum seekers are overburdening their country's social services. That mindset could translate to the stricter evaluation of applications, as case workers may incorporate a country's limited capacity to integrate refugees into their decision-making. Alternatively, an increasing percentage of migrants could lead to greater acceptance rates. It is possible that the fear of migrants taking advantage of that country's social services is quelled as a country integrates a greater percentage of migrants. If a country successfully integrates a wave of refugees, the people in that country may feel more confident when the next wave of migrants arrives. This mindset, then, could lead workers to err on the side of caution and accept a greater percentage of applicants, all else equal. Overall, analyzing changes in acceptance rates that correspond with changes in the percentage of migrants in a country measures whether a country's changing attitudes towards migrants impacts its acceptance rate.

To estimate whether capacity and social constraints are impacting the likelihood of being granted asylum, the following regression is run:

$$(3)\ \hat{P}_{jkt} = \beta_1 lnA_{jkt} + \beta_2 M_{kt} + K_i + \epsilon_{it}$$

The dependent variable probability of acceptance $\hat{P}$ for pre-identified "legitimate" cases in country *k* from country of origin *j* in year *t* is regressed on the log of total number of applications *A* in country *k* and international migrant stock *M* in country *k* all in year *t*. Note that the hat on the *P* indicates

the probability is only for pre-identified "legitimate" cases. Applications includes all applications – not just pre-identified "legitimate" applications. Capacity constraints stem from total applications, not a subset of applications. Thus, β_1 measures the impact of surges in total applications on the acceptance rate of pre-identified "legitimate" cases, while β_2 measures the impact of increases in the international migrant stock on the acceptance rate of pre-identified "legitimate" cases. If capacity and social constraints do not impact the acceptance rate of pre-identified "legitimate" cases, then the coefficients should not be statistically significant. The regression also includes application country *K* random effects to control for the average applications a country receives over time and approximate the base cultural factors that stay constant over time.

The dependent variable acceptance rate corresponds to applications on a bi-national and temporal level, not individual applications (i.e. applications from country x to country y in year t). This is due to the fact that the data from UNHCR are not structured in a way that allow for analysis of individual applications and the corresponding decisions for those specific applications. It is not possible to follow the eventual acceptance of an individual. Additionally, note that using deviations in applications in each EU country is only part of a country's capacity to process applications. The resources a country has to process applications also matter. However, this paper assumes that each country – with the assistance of UNHCR if necessary – structures its operations so that it has the infrastructure and labor hours available to handle the average number of applications that arrive in a given year. This seems like a reasonable assumption, as a country cannot predict a significant deviation in applications ex-ante. Given that the deviations in applications analyzed here are on a per-country basis and assuming that country capacity does not change significantly over the time period analyzed, surges are a reasonable proxy for capacity constraints.

In the initial analysis, only pre-identified "legitimate" applications are considered. Later, all applications are considered to approximate the differential impact of social and capacity constraints on pre-identified "legitimate" applications relative to all other applications. The following regression is run:

$$(4)\ P_{jkt} = \beta_1 lnA_{jkt} + \beta_2 M_{kt} + \beta_3\left(L * lnA_{jkt}\right) + \beta_4(L * M_{kt}) + L_{jkt} + K_i + \epsilon_{it}$$

The dependent variable probability of acceptance *P* in country *k* from country *j* in year *t* is regressed on the log of total number of applications *A*, international migrant stock *M*, the interaction between pre-identified "legitimate" cases, *L*, and the log of total number of applications, *A*, and the interaction between pre-identified "legitimate" cases, *L*, and the international migrant stock, *M*. β_1 measures the impact of a surges in applications on the acceptance rate of all cases, and β_2 measures the impact of increases in the international migrant stock on the acceptance rate of all cases. β_3 measures the differential impact of surges in applications on the acceptance rate of pre-identified "legitimate" cases. Similarly, β_4 measures the differential impact of the international migrant stock on the acceptance rate of pre-identified "legitimate" cases. Again, the regression includes application country *K* random effects to control for the average applications a country receives over time and approximate the base cultural factors that stay constant over time.

6. Data

The asylum application and decision data used in this paper come from the United Nations High Commissioner for Refugees (UNHCR) Population Statistics Reference Database. UNHCR provides

public data for total number of applications, decisions, and types of decision on a country-specific and temporal level for 223 countries of origin and 188 destination countries – including each country in the European Union. Given that this paper analyzes the impact of surges in applications within the European Union, the structure of this data provided by the UN Refugee Agency is well-suited to analyzing changes in types of decisions and applications. Asylum data from 2000-2016 are included in this analysis, and countries that joined the European Union during this time period are treated as part of the European Union for the whole time period analyzed.[9]

International migrant stock data come from the World Bank. Defined as "the number of people born in a country other than that in which they live,"[10] a country's international migrant stock is calculated every five years using population censuses and foreign-born and foreign population data from the United Nations. The World Bank uses models and rates of change in the migrant stock to estimate migrants for countries without data. Though these data are only released every five years, they are the most accurate data available. Calculating the migrant stock each year for this paper using population censuses would not be as accurate because of the amount of missing data. To fill in the missing data, I interpolate values between the five-year intervals. The total dataset spans 2000-2016, and international migrant stock data are available for 2000, 2005, and 2015. I calculate the average annual change between the five-year intervals and filled in the data accordingly. To estimate 2016 data, I calculate the average annual change between 2010-2015 and assume the same average growth rate from 2015 to 2016.

[9] 2017 and 2018 data were not available at the time of writing.
[10] International migrant stocks (2019), Paragraph 6

7. Findings

Below are the results from the following two random-effects logit models:

$$(3)\ \hat{P}_{jkt} = \beta_1 lnA_{jkt} + \beta_2 M_{kt} + K_i + \epsilon_{it}\ \text{, and}$$

$$(4)\ P_{jkt} = \beta_1 lnA_{jkt} + \beta_2 M_{kt} + \beta_3\left(L * lnA_{jkt}\right) + \beta_4(L * M_{kt}) + L_{jkt} + K_i + \epsilon_{it}\ .$$

Table 2: Random Effects Logit Models for the Acceptance Rate of Pre-identified "Legitimate" Applications and All Applications

Variables	(3) Pre-Ident. Legitimate Only	(4) All Applications
ln(Applications)	0.251***	0.204***
	(0.0799)	(0.00350)
Pre-Identified Legitimate Cases		2.958***
		(0.427)
Pre-Identified Legitimate x ln(Applications)		0.0129
		(0.0645)
International Migrant Stock	-0.0951**	-0.0780***
	(0.0467)	(0.00638)
Pre-Identified Legitimate x International Migrant Stock		-0.0587**
		(0.0237)
Constant	3.108***	0.241
	(0.914)	(0.194)
Observations	190	45,276
Number of Application Countries	28	28
Number of Countries of Origin	1	223
Years	4	17
Number of Applications	892,564	9,200,170

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

These results from equation (3) show that surges in applications are associated with higher and statistically significant acceptance rates for pre-identified "legitimate" cases. Surges do not lead to lower acceptance rates as one might expect. Rather, they are associated with higher acceptance rates. This suggests that case workers might ease the burden of proof for pre-identified "legitimate" applications when total applications in a year deviate positively from the average level of applications. When a country has to handle a surge in applications, case workers might not be able to spend as much time on each case. Workers might not have the chance to interview each applicant in as much depth as usual; therefore, contextual factors like country of origin might be more influential in asylum determination than individual factors during surges in total applications in a year. Because of the severity of the Syrian crisis over this time period, it is then possible that originating from Syria on its own holds greater weight in decisions than it did previously. Thus, the necessity of demonstrating personal persecution may not be as stringent as usual for those arriving from Syria.

Equation (3) also shows the larger the current international migrant stock living in a country, the lower the acceptance rate for pre-identified "legitimate" cases. This suggests that increasing percentages of migrants in EU countries negatively impacts pre-identified "legitimate" applicants. Social concerns about refugees of EU citizens expressed through public opinion polls and politics appear to translate to lower acceptance rates even for pre-identified "legitimate" applicants. It is possible that case workers implicitly or explicitly share these concerns, and this mindset may affect the evaluation of cases as their country's current international migrant stock increases.

Note that it is likely that surges in applications are correlated with surges in pre-identified applications. However, since the dependent variable in this logit model is the acceptance rate for these pre-identified applicants, one would not expect any increase in pre-identified applications or total applications to change the acceptance rate for pre-identified applications if capacity and social

constraints played no role. Since all the applicants in this pre-identified group are similarly qualified in terms of their validity to receive asylum (i.e. they all can demonstrate a well-founded fear of persecution), the acceptance rate for pre-identified "legitimate" applications should still be constant over time, regardless of surges. All asylum seekers in the pre-identified group are coming from the same significant crisis over a short period of time.

It is more challenging to interpret equation (4). The coefficient on the log of applications represents the average for all pre-identified and non-pre-identified applications. It is still positive and statistically significant. The interaction between pre-identified "legitimate" applications and the log of applications then shows the marginal impact for applications from Syria during the crisis relative to the average. This marginal impact is not significant in either direction, which suggests that the correlation between surges in applications and acceptance rates is similar between the groups. Surges are associated with higher acceptance rates for all applications. As expected, the coefficient on pre-identified "legitimate" applications is positive and significant. As the number of pre-identified applications increases, the acceptance rate for all applications increases. Because pre-identified applications are humanitarian-crisis driven and make up a significant percentage of total applications from 2013-2016, one would expect these applications to correspond with higher acceptance rates.

Due to the endogeneity problem discussed at length earlier in the paper, the positive coefficient on the log of applications in equation (4) could be a result of a number of factors. For example, the correlation could be due to the burden of proof being easier during application surges, as equation (3) suggests it is for pre-identified "legitimate" cases. Alternatively, it could also be due to a greater percentage of qualified applicants applying for asylum. Unlike pre-identified "legitimate" applications, there is no reason to believe surges in applications are comprised of similarly qualified applicants in terms of their ability to demonstrate a well-founded fear of persecution. As Missirian and Schlenker

(2018) suggest, surges as a whole are likely due to a greater percentage of humanitarian crisis-driven – and therefore qualified – applicants. Thus, the positive coefficient could indicate an easier burden of proof for applicants or a greater percentage of qualified applicants. It is worth noting that increased economic distress could also cause surges in applications. However, in that case, the coefficient on the log of applications would be negative or biased downwards.

Similarly, the coefficient on the international migrant stock in equation (4) represents the average for all pre-identified and non-pre-identified applications. It is still negative and statistically significant. The interaction between pre-identified "legitimate" applications and the international migrant stock then shows the marginal impact relative to the average. Here it is negative and statistically significant. This suggests higher international migrant stocks impact pre-identified "legitimate" cases even more negatively than average. It seems that the social constraints associated with migrants translate negatively to case workers' evaluation of applications. Furthermore, though the social constraints negatively impact all applications, they negatively impact pre-identified "legitimate" applications more than average. Perhaps the severity and publicity of the Syrian crisis make Syrians more "representative" of a narrative of refugees entering a country and exacerbating existing social strains. This narrative could potentially explain the differential negative impact for Syrian applications from 2013-2016.

It would be interesting to conduct this analysis on the level of the individual applicant rather than the group of applicants from a certain country applying to a specific country in the EU. Then, one could look at the probability of eventual acceptance for an individual. This analysis looks at the acceptance rate for pre-identified applications, but there is no guarantee that those pre-identified applicants received an asylum decision in that year. It is not a major concern because waiting times for decisions do not usually last over a year. However, following an individual would a more robust way to conduct this analysis. Other demographic breakdowns such as gender and age could also then be analyzed.

Unfortunately, the aggregate data provided by the United Nations are not suited to analysis of this kind. My analysis shows how an influx in applications in a year affects the acceptance rate for groups of people that same year. Surges likely impact decision waiting times, but that is not the focus of this paper. The impact of influxes is not realized when asylum decisions are made for those that are a part of the influx. The impact is realized when the influx itself happens, whether or not the decisions are made for those arriving with the influx at that moment.

8. Conclusion

The influx of migrants over the last two decades has clearly stretched the EU socially and logistically. Even at a cursory level, it seems like these constraints impact the acceptance rates for asylum seekers arriving in the EU. The key insight of this paper is that application surges and international migrant stocks as a percentage of population differently impact asylum acceptance rates.

For a group of pre-identified applicants, surges in applications are positively correlated with acceptance rates, while high international migrant stocks as a percentage of population are negatively correlated with acceptance rates. This suggests that surges are associated with a lower burden of proof for those seeking asylum. The negative correlation between international migrant stocks and acceptance rates suggests that social concerns about refugees are affecting acceptance rates. If wealthier, more educated refugees are applying in the earliest waves of a crisis, later waves may be seen as less socially desirable both because of the composition of the group applying for asylum and the additional stretch on social services. Legally, however, there should be no distinction. This analysis suggests that a distinction of this kind exists.

Addressing the normative and policy implications of the correlations found in this analysis is beyond the scope of this paper. Rather, this paper presents initial empirical analysis on asylum

applicants to provide a framework to begin to analyze these decisions in a more robust way and explore how factors other than an individual's qualifications impact asylum acceptance rates. This paper also tries to creatively account for the endogeneity inherent in asylum decisions. Explicitly outlining the cost-benefit analysis decision for an asylum seeker demonstrates this endogeneity and grounds my efforts to mitigate its impact.

The empirical approach deals with this endogeneity by choosing a subset of similarly qualified applicants. Surges in total applications then do not represent a fundamentally different composition of pre-identified applicants, which would complicate any interpretation of the coefficient on a variable measuring surges in applications. Syrians from 2013-2016 are chosen as a clean pre-identified group because of the extreme humanitarian crisis resulting from the ongoing civil war in Syria.

Stronger analysis in the future would find a way to identify more similarly qualified applicants from other crises. To avoid comparing qualifications across crises, this paper only focuses on pre-identified applicants from a single but significant crisis. It would be useful, however, to know whether these correlations hold over a larger stretch of time and for other groups escaping large humanitarian crises. Future research should also look deeper into issues related to the international migrant stock. The population density of a country, as well as the homogeneity of the immigrant group, may further impact public opinion about refugees. Since these numbers are only released every five years, people in a country likely use other statistics and personal experiences to form their opinion about the ability of their country to accommodate more refugees.

This paper will hopefully spur much needed empirical research into refugees and the migration crisis. Empirical research should ground any proposed solution to this crisis or the structures that govern the distribution of applicants and responsibility-sharing in the EU. The intersection of country politics, the Dublin III Regulation, and the Schengen Agreement have created nightmares for developing

solutions from a public policy perspective. Perhaps more robust empirical work can lead the way in understanding how these structures interact and how they are impacting asylum seeker decision-making and their ability to receive equitable, timely judgments.

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Appendix

Tables A1-A3 describe the data used in this paper in greater depth. They include a breakdown of all applications and pre-identified applications by year and application country.

Table A1: Asylum Applications by Country 2000-2008

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008
Austria	18284	30127	39354	32359	24634	22461	13349	11921	12841
Belgium	42691	26028	22305	21177	20373	22850	16973	15529	17115
Bulgaria	1755	2428	2888	1549	1127	822	639	975	746
Croatia	24	217	169	136	209	193	105	235	182
Cyprus	651	1766	1343	5073	10844	10205	7172	8925	6933
Czech Republic	10198	21091	10769	11410	5476	4160	5132	3347	2719
Denmark	10347	8336	6068	4593	3235	2260	1918	1852	2360
Estonia	3	12	9	14	14	11	7	14	14
Finland	3170	1651	3443	3221	3861	3574	2331	1434	4016
France	59899	74800	84379	106194	117321	97784	69809	58196	64235
Germany	117648	118306	91471	67848	50152	42908	30100	30303	28018
Greece	3083	5499	5664	8178	4469	9050	12267	42185	33252
Hungary	7801	9554	6412	2401	1983	2211	2117	3425	3118
Ireland	14638	14517	16931	13194	9842	8551	7486	6623	6756
Italy	15564	9620	16015	13455	9722	9548	10348	14053	30324
Latvia	4	14	30	5	7	20	8	34	51
Lithuania	199	256	294	183	167	118	139	125	215
Luxembourg	628	686	1043	1550	1577	802	1051	764	809
Malta	71	121	551	737	997	1166	1272	1672	3518
Netherlands	43895	32579	18667	13402	9782	12347	14465	7102	13399
Poland	4589	6806	7421	8017	8766	8282	11315	13248	7745
Portugal	224	232	245	88	113	114	128	224	161
Romania	1366	2431	1151	1077	662	594	460	659	1172
Slovakia	1556	8151	9700	10358	11391	3549	2871	2643	910
Slovenia	9244	1511	702	1100	1278	1834	518	425	238
Spain	7926	9489	6309	5918	5535	5254	5297	7662	4517
Sweden	16303	23515	33016	31348	23161	17530	24317	36370	40490
United Kingdom	128425	147425	138905	108347	77103	57996	46031	45349	44423

Table A2: Asylum Applications by Country 2009-2016 and Total Applications by Country

Country	2009	2010	2011	2012	2013	2014	2015	2016	Total
Austria	15821	11012	14416	17413	17503	28064	89900	39905	390953
Belgium	22277	33140	41152	38570	29311	28844	49250	23540	402406
Bulgaria	853	1025	893	1387	7144	11355	20392	19336	71131
Croatia	205	356	858	1241	1191	581	312	2060	8033
Cyprus	6920	6446	4167	2892	2704	2418	2823	3779	82644
Czech Republic	1832	1401	756	753	707	1156	1525	1478	52621
Denmark	4562	4965	3811	7529	9536	16556	22713	8913	100871
Estonia	36	30	67	77	97	143	207	62	802
Finland	5910	4018	3086	2922	3238	3651	29452	5651	79808
France	72726	80207	89320	97643	100776	101895	118469	125682	1384636
Germany	33033	48589	53347	77651	127023	202834	476649	745545	2105471
Greece	28023	11921	15292	17338	14399	17557	17211	58294	295100
Hungary	4672	2104	1693	2157	18900	42778	177340	29432	300743
Ireland	5260	4857	3337	2256	2222	2705	4874	4595	99489
Italy	17603	10052	40356	17352	26620	64623	83243	122972	486286
Latvia	52	61	335	189	185	364	328	344	2013
Lithuania	211	373	406	526	275	406	291	425	4154
Luxembourg	642	815	2375	2146	1606	2043	3123	2688	23034
Malta	3216	306	2547	2211	2203	1775	1986	1966	26123
Netherlands	14905	15148	14631	13102	17189	24533	45101	21306	255079
Poland	10587	6534	6887	12266	14976	7379	12242	11039	146704
Portugal	139	160	275	299	507	442	896	1463	5254
Romania	835	887	2061	2511	1753	1660	1372	1992	18846
Slovakia	822	541	491	732	438	331	329	146	45252
Slovenia	183	246	373	305	274	389	280	1308	9453
Spain	3007	2744	3414	2579	4513	5947	14881	16544	94121
Sweden	37897	45114	43759	43876	68855	95578	173845	53710	768866
United Kingdom	46023	40536	36872	37066	39333	40329	53345	51265	862923

Table A3: Pre-identified "Legitimate" Applications by Country by Year

Country	2013	2014	2015	2016	Total
Austria	1991	7730	24547	8642	42910
Belgium	1090	2633	10438	2808	16969
Bulgaria	4516	6299	5983	2617	19415
Croatia	196	59	24	317	596
Cyprus	831	1292	1129	1316	4568
Czech Republic	69	108	134	78	389
Denmark	1835	7226	8723	1372	19156
Estonia	17	7	9	0	33
Finland	149	149	837	602	1737
France	1394	3298	5425	6629	16746
Germany	12863	41100	162510	268866	485339
Greece	523	934	3497	27840	32794
Hungary	977	6857	64587	4979	77400
Ireland	45	28	77	253	403
Italy	635	507	506	981	2629
Latvia	15	34	6	149	204
Lithuania	11	8	6	165	190
Luxembourg	24	98	640	304	1066
Malta	247	327	415	311	1300
Netherlands	2706	8789	18731	2617	32843
Poland	248	101	295	48	692
Portugal	146	18	22	433	619
Romania	1055	626	546	823	3050
Slovakia	18	40	8	14	80
Slovenia	56	91	17	282	446
Spain	725	1679	5724	3069	11197
Sweden	18229	31525	52035	8602	110391
United Kingdom	2132	2504	3042	1724	9402