

Asylum and Intermarriages

Anael Bitar

Universitat de Barcelona – UB School of Economics

Advisor: Judit Vall Castello

Universitat de Barcelona

Abstract

This paper estimates the effect of legal status acquisition motives on intermarriage decisions. The analysis exploits the situation of the Spanish asylum system, since it is saturated and failing to process the substantial inflow of the asylum claims. The limitations of the system raise concerns about whether the asylum applicants are seeking alternative ways to acquire their legal status in Spain, as marrying Spanish citizens, or Spanish residents. The number of asylum applications reflects the number of asylum seekers with legal status acquisition motives. We find that the number of submitted asylum applications has a positive and statistically significant impact on the number of registered intermarriages in Spain over the period 2008-2016. We estimate that for every 100 additional submitted applications, the number of intermarriages increases by 3.6%, on the provincial level. Thus, we show that intermarriages are driven by the legal status acquisition motives of the asylum seekers. The estimated impact is higher when we consider intermarriages with specifically foreign female partners relative to those with foreign males. Our baseline results hold across several robustness checks and a placebo test.

JEL Classification codes: H19, J12, J60.

Keywords: International protection, asylum seekers, legal status, intermarriages.

Acknowledgments: I would like to thank my advisor Dr. Judit Vall Castello, whose continuous support and guidance in every step of my work were fundamental. Also, I would like to thank my family for believing and investing in me.

1. Introduction

Most countries in the European Union (EU) have been dealing with a significant number of asylum seekers. According to the Spanish Refugee Aid Commission (CAER in Spanish), in 2017, more than 700,000 people left their home countries, searching for safety in Europe.¹ Asylum seekers or international protection applicants are individuals who escape their countries as a result of political conflicts, wars, violence, abuse, poverty, or human rights violations and apply for protection in others. After their accepted applications are processed, they can be granted international protection and thus, legal status in the host country, or they can be rejected and expected to leave.

Spain ranks the sixth EU member in the number of asylum applications received. This number has been increasing substantially over the years, reaching 55,750 claims in 2018 after it was 5,483 in 2014 (Eurostat, 2018).² However, the Spanish asylum system has been failing to adapt to this increasing trend, where it has been witnessing delays in the processing of the asylum applications. While the Spanish law states that the processing period and hence, the final decision on the claims must take a maximum of six months, it has been taking more than one year, on average (AIDA, 2018).³ Only 22% of the accepted asylum applicants received a final decision in 2018. The unprocessed, pending cases have been accumulating year after year, reaching 68,779 by the end of 2018 after they were 16,000 in 2015 (Eurostat, 2018). This situation has resulted in the saturation of the Spanish asylum system. Besides, the limitations of the system are not only restricted to the delay in the processing period, and thus, the accumulation of the pending cases. The rate of rejection on the processed asylum applications has been increasing too.

The failure of the asylum system in fulfilling its role effectively may incentivize the asylum seekers to search for alternative ways to acquire the legal status and start their new lives in Spain. This can be mainly attributed to the idea that the waiting period for the final decision could last for more than one year. During the waiting process, as they are recognized to be international protection applicants without legal status, asylum seekers face employment restrictions that prevent them from finding decent job opportunities. Hence, their lives in Spain are placed on hold until their applications are handled, and they are granted international protection.

An adequate alternative could be either marrying a Spanish citizen, or a Spanish resident (EU or a non-EU national) who has been living in Spain for at least two years.⁴ This type of intermarriage will grant the refugees the immediate right to live and work in the country. With the Spanish residency, they will have the privilege of benefiting from social services (education, healthcare, and housing) and social security. For asylum seekers, intermarriage can be the key to legal status acquisition hence

¹ The CAER is an NGO in Spain, founded in 1979. It aims to defend the migrants, the refugees, or stateless individuals.

² Yearly statistics on the decisions of the asylum applications in Spain are available at Eurostat (online code: migr_asydefsta).

³ Information and statistics on asylum in Spain is reported by the Asylum Information Database (AIDA) (available at <https://www.asylumineurope.org/reports/country/spain/>).

⁴ In Spain, marriages are legally registered, when at least one of the spouses is a citizen or has been legally residing in Spain for at least two years (more information on Spanish marriages is available at [/www.mjusticia.gob.es](http://www.mjusticia.gob.es)).

socioeconomic integration.

Our paper aims to study how legal status acquisition motives of the asylum seekers affect intermarriage decisions. We exploit the institutional setting of the Spanish asylum system to analyze this impact. Specifically, we estimate how the variation in asylum applications affects the number of intermarriages in Spain. The number of asylum applications reflects the number of refugees with the desire to obtain legal status in Spain. Given the limitations of the asylum system and its adverse consequences on the lives of the asylum seekers, we expect that there is a positive relationship between the number of submitted asylum applications and the number of intermarriages in Spain.

The existence of such an effect is a relevant issue for the policymakers. Intermarriage improves refugees' social and economic status, thus their living conditions. With the legal status acquisition, they benefit from the unrestricted access to the labor market and employment services. They become self-sufficient and contribute to public finances through income taxes. They can successfully integrate into society and the economy. Nonetheless, this type of intermarriage can be associated with social and psychological problems. It creates distortions in the marriage market since the spouses are overcoming the cultural differences between them and uniting for personal motives. Also, in those marriages, the asylum seekers most probably live under the despair and control of their spouses. Their legal status is directly linked to their partners, so they cannot risk losing them and accordingly, their right to live in Spain. Given this vulnerability and dependency, the refugees might also be subject to different types of abuses and domestic violence from their spouses, like behavioral control, emotional abuse (insult, criticism, or degradation), verbal abuse, or physical and sexual abuse (Amuedo-Durantes and Arenas- Arroyo, 2019).

This area of study is considerably neglected in the literature. While, there exist several papers which study the impact of legal status on labor market outcomes (as Amuedo-Dorantes et al., 2007; Lozano and Sorenson, 2011; Devillanova et al., 2017; Monras et al., 2018) and on criminal behavior (as Freedman et al., 2018; Mastrobuoni and Pinotti, 2015; Fasani, 2018) there are only two studies (Azzolini and Guetto, 2017; Adda et al., 2019) analyzing the effect of legal status acquisition on marriages. They estimate the impact of the EU citizenship acquisition of Italian immigrants on intermarriages in Italy. To our best knowledge, our paper is the first to study how the incentives to acquire the legal status affect intermarriage decisions while focusing particularly on the legal status motives of the asylum seekers.

For our analysis, we use data on asylum applications published by the Ministry of Interior. It provides information on the number of applications submitted, by each country of origin to the 52 Spanish provinces, over the period 2008-2016. We also obtain administrative data on all the marriages registered in Spain from the National Statistics Institute (Instituto Nacional de Estadística in Spanish, INE), which covers the number of all the marriages, registered in each province over the period 2008-2016. It also provides information on the country of nationality of the female and male spouses. Our sample is restricted to include only the intermarriages that might be driven by the legal status motives

of the asylum seekers. So, we exclude all those involving couples in which both spouses have a nationality from an EU country. Asylum seekers are generally non-EU nationals; they can marry Spanish citizens or Spanish residents (EU and non-EU nationals) to obtain their legal status in Spain. Besides, EU citizens have the right to live and work in Spain. Thus, our sample considers only the marriages in which at least one of the partners is not an EU national. It is worth mentioning that non-EU citizens are referred to as foreigners in this paper.

We estimate, based on the Poisson model, how the variation in the number of asylum applications submitted by the different countries of origin to the 52 Spanish provinces over the period 2008-2016 affect the number of intermarriages registered in each of these provinces. Hence, the study is performed on the province level. First, we estimate that 100 additional asylum applications increase the number of intermarriages by 3.6 %. Then, we further focus our analysis and show that 100 additional asylum applications increase the number of intermarriages in which specifically the male partners are foreigners by approximately 3%. The number of intermarriages in which the female partners are foreigners increases by 3.9%, for every 100 additional asylum applications. Our baseline results suggest that the legal status acquisition motives of the asylum seekers, translated through their asylum applications, has a positive and significant effect on intermarriages. The estimated effect is higher when considering specifically intermarriages with foreign female partners relative to those with foreign male partners. This suggests that foreign females tend to be more involved in intermarriages than foreign males.

We also conduct several robustness checks to examine the strength of our baseline results. First, we show that the effect on the number of intermarriages registered within a given year is a result of the variation in the number of asylum applications within this same year and not the year before. This result suggests that asylum applicants react immediately and seek intermarriage to acquire legal status. Second, we focus our analysis on only the provinces with a high concentration of asylum applications and show that our results are fully robust to the alternative sample restrictions. Finally, we analyze the relationship between legal status motives and intermarriages at the country level rather than the province level and find that the effect is also positive and significant, but the magnitude of the estimates is not different between foreign female partners and foreign male partners. We end our empirical strategy with a placebo test to show that our baseline results are not due to pure chance. We show that our strategy is reliable, and the estimated positive significant impact on intermarriages is driven by the increase in the asylum applications and not other random factors.

The rest of the paper is organized as follows. In Section 2, we summarize the previous literature, which analyzes the impact of legal status on different behavioral outcomes. Then, in section 3, we explain the institutional setting, focusing on the status of the asylum system and the intermarriages in Spain over the period of our study (2008-2016). In section 4, we describe the data that we used in our analysis. In section 5, we discuss our empirical strategy and the estimation results. Finally, our conclusion is in section 6.

2. Literature Review

Generally, asylum seekers apply for protection when they reach the ports or airports of the host country. While waiting for the decision on their applications, they find themselves restricted from integrating into the destination country. If the asylum claims are rejected and the asylum seekers decide to stay in the host country, then they will be considered as undocumented or illegal immigrants. Existing literature has examined the consequences of the legal status acquisition of undocumented immigrants on several outcomes. In General, the previous studies have relied on legalization programs or policies in the host countries as the source of exogenous variation in the legal status of the immigrants.

Most of the papers that analyze the impact of legal status on the labor market outcomes in the United States (US) rely on the 1986 Immigration Reform and Control Act (IRCA) that granted legalization and thus, legal status to illegal immigrants through two amnesty programs. The first program is the IRCA Legally Authorised Workers (LAW) that legalized the immigrants who arrived in the United States before the beginning of the year 1982. The second is the IRCA Special Agricultural Worker (SAW) program, which legalized farmers that worked at least 90 days within one year before the 1st of May 1986. The legalization occurred between the years 1989 and 1991 (Fasani, 2015).

Kossoudji and Cobb-Clark (2002) study the effect of legal status on wages. They examine whether the wages of the newly legalized immigrants in the US changed after the IRCA amnesty reform. For their analysis, they use data on newly authorized Mexican and Central American immigrant men from the Legalized Population Survey (LPS).⁵ They also obtain data from the 1979 National Longitudinal Survey of Youth (NLYS79) on a sample of Latino men that entered the US labor market between 1979 and 1986.⁶ This sample serves as a comparison group, where the authors argue that the experience of the undocumented immigrants when they first enter the US labor market can be matched with the experience of other new entrants. The treatment group (LPS sample) and the comparison group (NLSY79 sample) are restricted to be comparable as much as possible in terms of different characteristics as age and cultural background. Kossoudji and Cobb-Clark (2002) perform separate regressions for the LPS sample and the NLSY79 sample for three different periods: when the unauthorized immigrants entered the labor market (1976-1985), when they were working under illegal conditions (1987-1988), and when they were working with legal status (1992). They find that legalization through IRCA is associated with a wage benefit of almost 6%.

⁵ The Legalized Population Survey (LPS) is a longitudinal survey on a sample of undocumented immigrants that were legalized by the IRCA amnesty programs. The first wave of the survey conducted in 1989 interviewed 6,193 randomly selected immigrants. It offers information on the labor market outcomes and socio-economic situation of immigrants at the time of entry to the US and amnesty application. The second wave of the survey offers information on two-thirds of the original sample, interviewed in 1992.

⁶ The 1979 National Longitudinal Survey of Youth (NLYS79) is a survey on a sample of 12,686 individuals who were 14 to 22 years old living in the US when they were interviewed in 1979.

Amuedo-Dorantes et al. (2007) follow the previously described study and estimate the differential effect of immigrant legalization on the labor market outcomes in the US. They add to the latter study and examine the differential impact of the IRCA amnesty reform on both the wages and the employment of the newly documented immigrants. They use the difference-in-differences strategy to compare the outcomes of the immigrants (treatment group) and the Hispanic natives (comparison group), before (1987) and after (1992) the amnesty reform. The authors follow the method of Kossoudji and Cobb-Clark (2002) and use data on newly legalized immigrants from the Legalized Population Survey (LPS) and the comparison group (Hispanic natives) from the 1979 National Longitudinal Survey of Youth (NLYS79). They portray the estimated impact separately for males and females. Like the previous study, the results show that legalization through IRCA has a positive impact on wages. Mainly, they estimate that the wage of the newly legalized immigrants has increased by 21% for females and 9% for males; while, the employment rate has decreased by 7 percentage points for females and 5 percentage points for males.

Compared to the two previously described papers, Lozano and Sorenson (2011) use a different source of data to estimate the impact of IRCA amnesty programs on the earnings of illegal immigrants. They estimate how the wages of the Mexican immigrants changed with the acquisition of legal status through IRCA. They combine data from the US Census, providing information on the labor market outcomes of the immigrants in the US with the Mexican Migration Project (MMP) survey. They use the MMP to estimate the illegal status of the Mexican immigrants, and then to identify the likelihood of a Mexican immigrant in the US census to be undocumented. The authors use the triple differences strategy and find that the earnings of the newly documented Mexican immigrants increased by 20 log points. So, relative to the previous papers, they also find that legal status has a significant positive impact on the earnings of the newly legalized immigrants.

Barcellos (2010) and Pan (2012) use the Regression Discontinuity Design (RDD) in their studies to estimate the impact of legal status acquired through IRCA on employment outcomes in the US setting. Barcellos (2010) uses data from the US Census, Current Population Survey (CPS), and the American Community Survey (ACS). She exploits the discontinuity occurring in the year 1982 that determines whether the immigrant is eligible for the IRCA reform or not. Using RDD, the author compares the outcomes of the immigrants who arrived a few years before 1982 with those who arrived a few years after. She finds that legalization increased the wages by almost 3%, but it did not affect the job quality and the workers' mobility. The estimated impact on wages is positive but lower than the ones found in the studies portrayed before.

Pan (2012) also uses the US census data and relies on the discontinuity occurring in 1982 as a result of the eligibility criteria of the IRCA amnesty program. Using RDD, the author compares between the male wages, females' employment probability, and males' English-speaking ability of Latino immigrants arriving in 1975-1981 with those of immigrants arriving in 1982-1986 to California. She finds that the 1975-1981 arrivals outperform the 1982-1986 arrivals. Legalization

increases the male wages by 4-5 %, female employment probability by 10-12 %, and the English speaking ability by 11%. The estimated impact on wages is close to the results of Kossoudji and Cobb-Clark (2002) and Amuedo-Dorantes et al. (2007).

The papers by Devillanova et al. (2017) and by Monras et al. (2018) also analyze the effect of amnesty programs on the labor market outcomes but in European countries. The previous studies mentioned estimate the impact of “acquiring” the legal status on the labor market outcome. However, Devillanova et al. (2017) aim to study how “the expectations” of becoming a legal immigrant affect the employment outcomes, even before the legal status is granted. They base their study on the Italian amnesty program that offered legalization for undocumented workers on the 9th of September 2002. This program provides a residence and a work permit renewable after two years only to immigrants who have been employed, for three months since the 11th of June 2002 (threshold day), in a job of a minimum one-year contract. So, the immigrants were required to enter Italy before the threshold day to be eligible for the amnesty program. The authors use the data set provided by Naga and estimate a difference-in-differences regression over the period 2000-2004.⁷ They compare the employment rate of the immigrants arriving in Italy before the threshold date to those arriving after. They show that the prospect of legal status significantly increased the employment rate of eligible illegal immigrants by 26 percentage points. They also illustrate that the causal effect is persistent for some years after the amnesty.

Monras et al. (2018) also examine the impact of a European legalization program on the labor market. Compared to the earlier papers mentioned, their study is the first to analyze the effect of immigrant legalization program on both the public revenue, particularly payroll-tax revenue, and on the labor market outcomes. The authors rely on the amnesty program applied in Spain in 2004, which granted work permits for almost 600,000 immigrants. They combine data on payroll taxes from the Ministry of Labor and Social Security with data on employment from the Spanish Labor Force Survey and with wage data from the administrative dataset Sample of Employment Histories. They use the difference-in-differences strategy. They estimate the impact of the amnesty program on the payroll tax revenue, employment, wage of the skilled and unskilled workers (natives and immigrants), and the location of newly legalized immigrants over the period 2002-2007. Monras et al. (2018) find that the payroll-tax revenue increased by 4,289 euros for each newly legalized immigrant in each province. They also show that the average wages of low-skilled immigrants slightly decreased while significantly increased for high-skilled immigrants. The average wage of all natives increased too. Concerning relocations, they find that for each newly legalized immigrant, 0.07 high-skilled immigrant move to locations with a high level of immigrants, while 0.43 low-skilled immigrants move to areas with low levels of immigrants.

⁷ Naga is an Italian NGO offering health care to undocumented immigrants. It offers data on social and economic situations of the undocumented immigrants.

Most of the existing literature addresses the impact of legal status on the labor market outcomes; nevertheless, there exist also papers studying the effect of legal status on criminal behavior. Baker (2015) estimates the impact of the 1986 Immigration Reform and Control Act (IRCA) on the number of crimes in the United States. Their analysis is performed on the county level over the period 1980-2000. They obtain data on legalized immigrants from Legalization Summary Tapes datasets, provided by the US Citizenship and Immigration service, and data on crime rates from the Uniform Crime Reports obtained from the Federal Bureau of Investigation (FBI) for the period of study. Using OLS strategy, the author shows that a 1% increase in the number of legalized immigrants in a specific county decreases the crime by 3 % to 5%, where the effect on property crimes is higher than the effect on violent crimes.

Freedman et al. (2018) also estimate the effect of IRCA on criminal behavior, but they restrict the analysis to only one county in Texas (Bexar County).⁸ They use data from the Bexar County District Court, on felony charges filed for the period 1985-1989. They rely on the triple differences strategy to compare the differences in criminal behavior before and after the legalization between Hispanics (treated) and non-Hispanics (control group). Contrary to the previously mentioned paper by Baker (2015), the authors find that the legalization did not affect criminal activity. However, the expiration of the first IRCA program (LAW) in May 1988 led to a significant increase in felony charges among Hispanics, while a decrease in charges among non-Hispanics. The expiration of the second IRCA (SAW) in November 1988 had no significant effect.⁹ The authors suggest that the employment restrictions that resulted after the expiration of the program caused this significant increase in criminal behavior.

Mastrobuoni and Pinotti (2015) and Fasani (2018) assess the impact of legal status on criminal outcomes too but in Italy. Mastrobuoni and Pinotti (2015) study the impact of the legal status acquisition on the immigrants' crime rate. Relative to the earlier mentioned studies on crimes, this paper does not rely on an amnesty program as a source of variation in the legal status of immigrants. It employs the 2007 European Union (EU) enlargement that added Bulgaria and Romania to the Union, as the treatment. After the EU enlargement, Bulgarians and Romanians acquired the legal right to reside and work in Italy as other EU nationals. The authors also exploit the Collective Clemency Bill, which took place a few months before the enlargement and released prisoners from the Italian prisons.¹⁰ Hence, they analyze the impact of the legal status acquisition on the probability of reconviction of released immigrant prisoners. They use difference-in-differences strategy to compare between the reincarceration rate of immigrants from the new EU countries (treated group) and of

⁸ Bexar County is at a driving distance of approximately two hours from Mexico and has a high concentration of Hispanics. The non-Hispanics in the 1980s living in Bexar County were unlikely immigrants.

⁹ When the Legally Authorized Workers (LAW) and the Special Agricultural Worker (SAW) amnesty programs expired, the undocumented immigrants who failed to acquire legal status through the IRCA were significantly affected. They experienced higher employment restrictions and a significant drop in their wages (see Freedman et al., 2018).

¹⁰ In July 2006, the Italian Parliament voted for Collective Clemency Bills, which was associated in the release of thousands of European immigrants including Romanian and Bulgarian from the prisons in Italy. The Collective Clemency Bills eliminate a certain number of years from the prisoners' sentences (2 or 3 years).

immigrants from EU candidate countries (non-treated group) before and after the 2007 EU enlargement.¹¹ The results show that legal status acquisition decreases the probability of recommitting a crime by 50%.

Fasani (2018) study the effect of four different amnesty programs implemented in 1990, 1995, 1998, and 2002 in Italy on the crime rates of non-EU immigrants. He estimates the impact of the number of legalized immigrants on the crime rates using Instrumental Variables (IV) strategy. The author uses data on immigrants' crimes from the record of the Italian Ministry of Justice for the period 1991- 2005. Relying on data from the Italian Ministry of Internal Affairs, he determines the number of legalized immigrants by each amnesty in each region. The results of the paper show that legalization had a significant diminishing impact on crime rates in the year of the amnesty. As the number of legalized immigrants in a region increased, the number of immigrants with criminal charges decreased in that region. The estimated effect is – 0.03%, which is comparably small in magnitude to the previously mentioned studies on criminal behavior.

Other than the impact on the labor market and criminal activity, existing studies argue that legal status may affect health outcomes (see, e.g., Baker, 2010), educational outcomes (see, e.g., Bean et al., 2011), as well as consumption. Dustman et al. (2017) assess the effect of legal status on consumption behavior in Italy. They use data on immigrants' consumption (documented and undocumented immigrants) over 2004-2007 from a survey performed by the Institute for Multiethnic Studies (ISMU). The authors rely on the Instrumental Variables (IV) strategy to estimate how exogenous variation in the legal status of immigrants affects consumption. The results show that illegal immigrants consume 30% - 40 % less than legal immigrants.

Previous studies have also analyzed the impact of the legal status acquisition on marriages. However, this area of study has been significantly neglected in the literature. To our best knowledge, there are only two papers by Azzolini and Guetto (2017) and by Adda et al. (2019) analyzing this issue.

Azzolini and Guetto (2017) study the impact of the legal status acquisition on intermarriages. They exploit the 2004 and 2007 EU enlargements as the exogenous source of variation in the legal status of Italian immigrants.¹² The authors apply the synthetic control method to data on marriages acquired from the Italian Register of Marriages (IR) and analyze the impact of EU citizenship acquisition of Italian immigrants on intermarriages in Italy over the period 1997-2008. They consider only the marriages between Italian males and immigrant females. The results show that citizenship acquisition has a significant negative impact on intermarriages. The 2004 and 2007 EU enlargements were associated with a considerable decrease in intermarriage between men from Italy and foreign women from the new EU members. The causal impact ranges from 30 % to 80% depending on the countries of origin of the newly legalized female immigrants. The higher effects were on the

¹¹ The EU candidate countries are Albania, Bosnia, Croatia, Herzegovina, Kosovo, Macedonia, Montenegro, Serbia, and Turkey.

¹² In 2004, the 8 countries, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia, entered the European Union. In 2007, Romania and Bulgaria also became EU members. As a result, the citizens of those countries acquired EU citizenship.

intermarriages involving immigrant women from countries that are relatively less integrated and have comparably less socioeconomic advantages.

Adda et al. (2019) also rely on the 2004 and 2007 EU enlargements to analyze the impact of the legal status acquisition in the Italian setting. They add to the previous study of Azolini and Guetto (2017) by estimating this impact on both: the rate of intermarriage and separation between Italian natives and foreigners. They obtain data on marriages and separations from ISTAT by its Laboratory for Elementary Data Analysis (ADELE) for the period 1998-2012. First, they rely on the difference-in-differences strategy to estimate the causal impact of legal status. They find that after the EU enlargements, the probability of intermarriage between native males and immigrant females (from new EU member countries) and between native females and immigrant males (from the new EU countries) decreased by 51 % and 75% respectively. This suggests that foreign females tend to intermarry more than foreign males. They also show that after the EU enlargements, the separation rate between native males and immigrant females (from new EU countries) significantly increased by 23%. However, the effect is not significant for the native females and immigrant males (from new EU countries). The authors then develop and estimate a multidimensional equilibrium model for marriages and separations that accounts for marriage sorting. This approach specifies the value of legal status. They find that when the legal status is absent, the intermarriage probability decrease by 70% - 80%. With couples where one partner can grant legal status to the other, the probability of intermarriage is relatively higher. These results support the notion that legal status is a significant factor in intermarriages.

While existing literature has examined the impact of the legal status acquisition of immigrants on several behavioral outcomes in different settings, to our best knowledge, our paper is the first to study how the incentives to acquire the legal status affect intermarriage decisions while focusing specifically on the legal status motives of the asylum seekers.

Next, we proceed to describe the institutional setting of the Spanish asylum system that we exploit for our analysis.

3. Institutional Setting

3.1. Asylum System in Spain

According to the Spanish Refugee Aid Commission (CAER in Spanish), asylum seekers are individuals who flee their countries because of danger and search for protection and safety in others. The reasons behind their escape are most likely related to political conflicts, wars, violence, poverty and hunger, gender and sexual orientation abuse, or human rights violations.

In Spain, asylum applications are submitted to the Spanish border controls at the ports and airports, and within the Spanish territory at the Office of Asylum and Refuge (OAR), at any immigrant

center, or any police station. After the applications are accepted and admitted to the processing phase, the asylum seekers would be considered as international protection applicants and would be entitled to remain in Spain until the final decision on their asylum claims is declared (Ministry of Interior, 2018).¹³ The OAR is responsible for examining the submitted asylum claims, while the Inter-Ministerial Commission of Asylum and Refugee (CIAR in Spanish) within the Ministry of Interior declares the final decisions on the applications. The final decision could be granting refugee status, subsidiary protection, residence permit, or rejecting the applicant. Subsidiary protection is provided to individuals who would face serious threats, like a death penalty, execution, or torture, if they return to their country of origin.

Based on Spanish law, processing the requests must take up to a maximum of six months. For this period, the government offers assistance fostered by different social organizations (like Acem, Red Cross, and CAER) to help in covering the applicants' basic needs, accommodations, and social care. If the processing period took longer than six months, the applicants might be granted the right to work while waiting for the final decision, especially that they will no longer receive any assistance from the government.

Once international protection is granted, the individuals would be entitled to reside and work in Spain legally. They obtain a document of identification, and those with refugee status can apply for Spanish nationality within only five years of stay. Protected individuals have unrestricted access to the labor market and employment services. Also, they are eligible for social services (housing, healthcare, education), social security, and integration programs (Ministry of Interior, 2018). Accordingly, they are entitled to achieve the same academic and career titles, like the Spanish nationals.

3.1.1. The Status of the Spanish Asylum System

The total number of asylum applications, submitted to Spain, has been increasing significantly over the years. We use data on asylum applications from the Ministry of Interior, available for the period 2008-2016, to examine how this number has been changing. Table 1 lists the total number of claims that the Spanish asylum system received for each year over 2008-2016, and Figure 1 graphs the evolution of this number over these years. Spain witnessed a total of 56,164 asylum claims over this period. The applications increased from 4,168 in 2008 to 16,481 applications in 2016. Figure 1 portrays that the number of applications was roughly the same until the year 2014. Then, there was a substantial jump from 5,483 applications in 2014 to 14,560 applications in 2015.

In 2015, the world encountered the most severe refugee crisis, where millions of refugees escaped their countries to seek safety (CAER, 2016). This significant flow was stimulated by the never-ending political armed conflicts, wars, violence, and oppression of human rights occurring in several countries as, Palestine, Iraq, Iran, and Syria. For instance, 5,700 Syrians applied for asylum in

¹³ Information on the process of international protection is available at <http://www.interior.gob.es>.

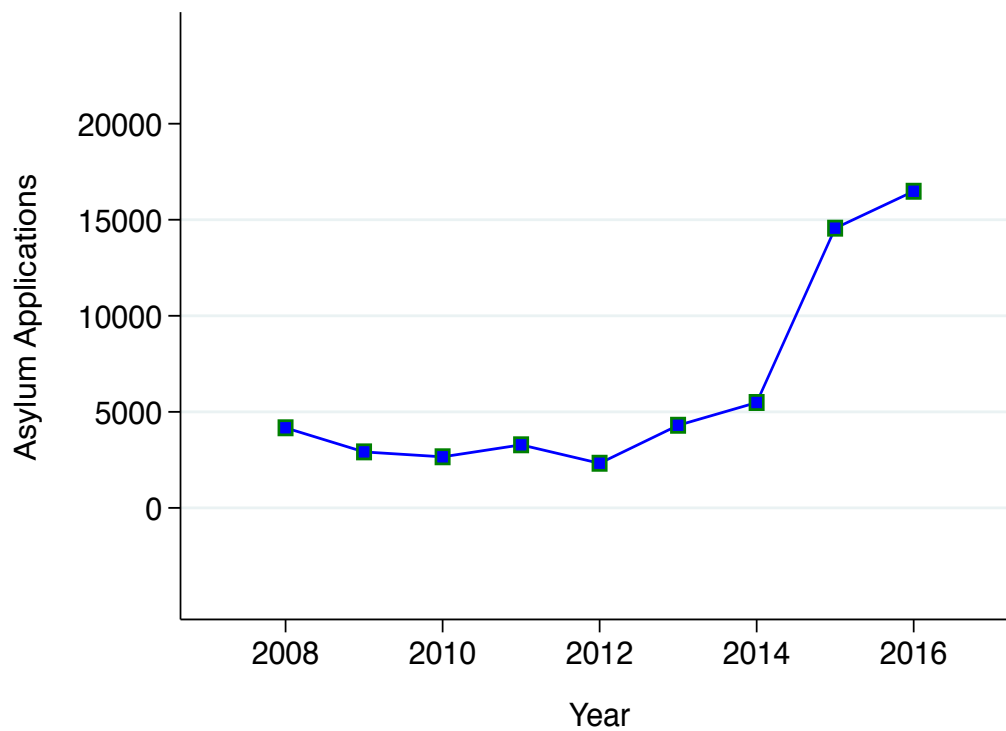
Spain in 2015. The country also witnessed forced escapes from conflicts occurring in countries outside of the Middle East, as the African countries.

Table 1: Yearly Asylum Applications submitted to Spain (2008-2016)

Year	Total number of asylum applications
2008	4,168
2009	2,913
2010	2,657
2011	3,281
2012	2,322
2013	4,299
2014	5,483
2015	14,560
2016	16,481

Source: The numbers are based on the asylum applications data from the Ministry of Interior in Spain, available for the period 2008-2016.

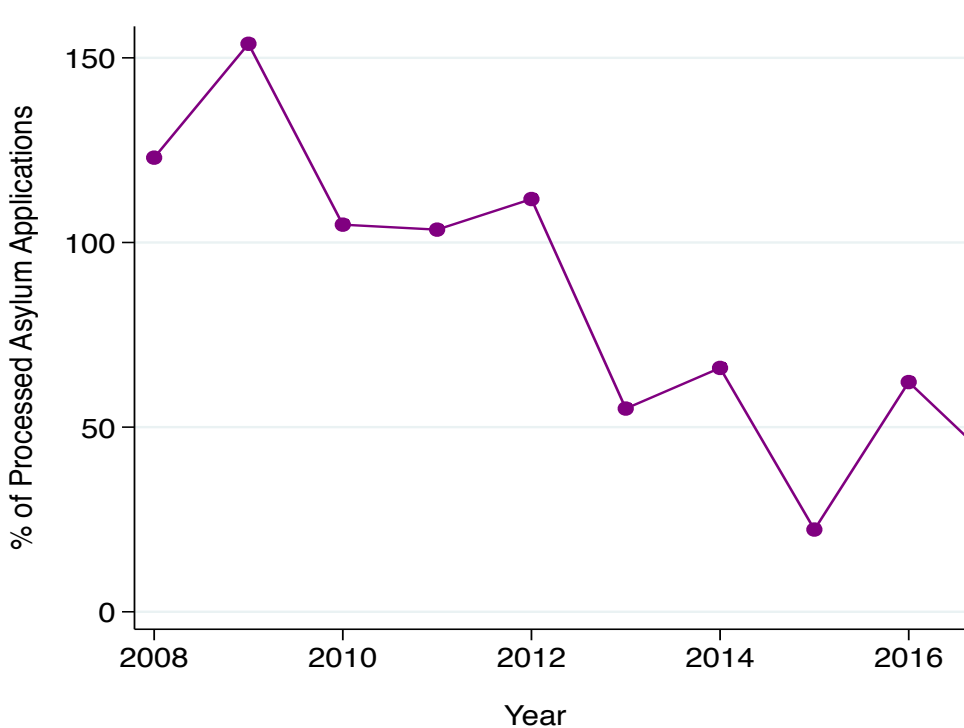
Figure 1: The Evolution of Asylum Applications in Spain over the Period 2008-2016



Source: The graph is generated based on asylum applications data from the Ministry of Interior in Spain, available for the period 2008-2016.

While the number of international protection applications has been increasing in Spain, the Spanish asylum system has been failing to adapt to this substantial variation. The Spanish law specifies that the processing period of the asylum applications must take a maximum of six months, but the asylum system is unable to conform to the policies and has been witnessing delays in the processing of the asylum claims. Figure 2 plots the percentage of the processed applications out of the total number of accepted applications for 2008-2016.¹⁴ The graph displays a decreasing trend in the percentage of processed applications across this period. Specifically, this percentage had decreased from 122% in 2008 to 62% in 2016. It is worth noting that in 2015, only 22% of the accepted asylum applications were processed, although this year witnessed the highest jump in the number of submitted claims (from 5,483 to 14,560), as discussed earlier. A percentage higher than 100% indicates that the processed applications in a given year also include some of the pending applications from the previous years. The numbers portrayed in Figure 2 suggests that the processing period and thus, the final decision on the applications has been taking more than one year, on average.

Figure 2: The Evolution of the Percentage of Processed Asylum Applications over the Period 2008-2016



Source: The graph is generated based on statistics obtained from Eurostat for the period 2008-2016.

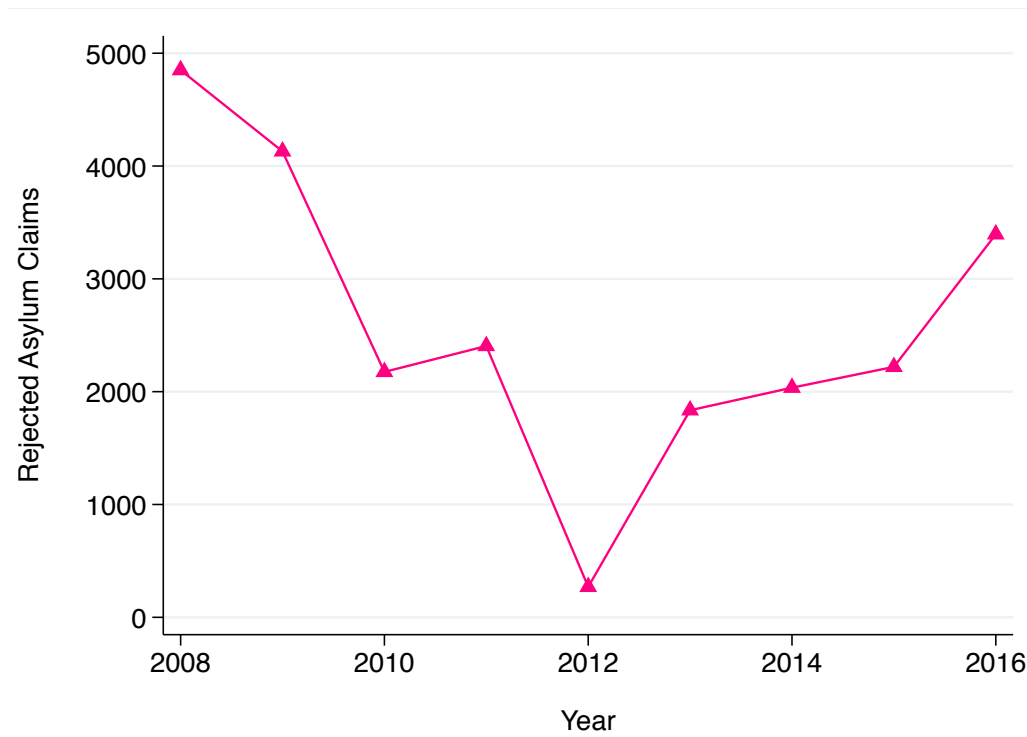
The considerable increase in the number of asylum applications and the delay in their processing are the main reasons behind the accumulation of the pending cases and hence, the

¹⁴ Yearly statistics on the decisions of the asylum applications in Spain are available at Eurostat. These statistics include the number of total decisions, the number of positive decisions, and the negative decisions in each year over the period (2008-2018) (online code: migr_asydcfst). We use the statistics from 2008-2016, which is the period of our study to plot the Figure 2 and 3.

saturation of the Spanish asylum system year after year. In 2015, there were 16,000 pending cases, which increased to 20,000 by 2016 and reached 68,779 by the end of 2018 (Eurostat, 2018).

The limitations of the Spanish asylum system extend beyond its congestion with the asylum claims. The rate of rejection on the processed applications has been increasing too. Figure 3 plots the total number of processed asylum claims that were rejected and not granted international protection. The graph shows how this number changed over the period 2008-2016. It can be seen that there was a decreasing trend in the total number of rejected claims until the year 2012. In that year, 270 applicants were denied, and this number has been rising since then. In 2015, out of the 3,200 claims processed (22% of the accepted applications), 2,220 applicants were not granted international protection. While in 2016, 3,395 refugees were rejected and expected to leave Spain. Applicants with a denied international protection status will be considered illegal immigrants if they stay in the country.

Figure 3: The Evolution of the Number of Rejected Asylum Claims over the Period 2008-2016



Source: The graph is generated based on statistics obtained from Eurostat for the period 2008-2016.

3.2. The Relationship between Asylum Seeking and Intermarriage Decisions in Spain

The features and the drawbacks of the asylum system in Spain provide the framework that allows us to study the impact of legal status acquisition motives on intermarriages. The saturation of the asylum system, the delay in the processing of the applications, and the high rate of rejection on the processed claims most likely motivate the asylum seekers to search for other faster and more guaranteed alternatives to acquire their legal status. While waiting for the final decision on their accepted

applications, the refugees are left on their own for a period that could last for years, where the government support is only provided for six months. Regardless of the work permit that might be acquired, asylum seekers are recognized as international protection applicants without legal status, so they face employment restrictions. This prevents them from finding job opportunities and thus, from being self-sufficient. Therefore, their lives and their integration into the society and the economy are placed on hold until their applications are processed, and they are granted international protection.

As a matter of fact, the longer the asylum seekers are waiting for the final decision, the more difficult it is for them to start their new lives in Spain successfully in the future. The time that the individuals spend unemployed has significant effects on their skills and their productivity. The longer the unemployment periods, the lower is the chance of the refugees to find future employment opportunities, and the higher are the constraints to their labor market entry (Hainmueller et al., 2016). Nonetheless, previous studies have shown that even when international protection is granted, the economic assimilation of the protected individuals remains limited. They face relatively worst labor market outcomes than comparable immigrants and natives with similar characteristics. They are less likely to be employed and more likely to be unemployed. Their wages are also relatively less (Fasani et al., 2017).

Given the limitations of the Spanish asylum system and the deteriorated living conditions of the asylum seekers, marriage can be an adequate alternative for legal status acquisition in Spain.

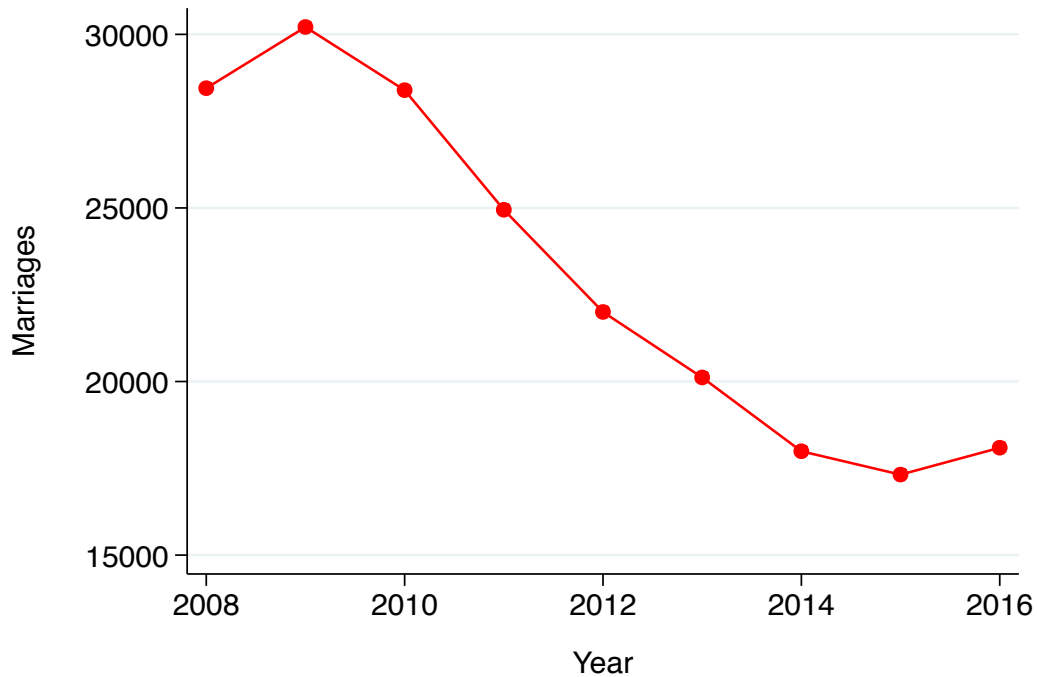
Marriages in Spain are registered in the Civil Registry if at least one of the partners is a Spanish citizen or is not a citizen but a legal resident for at least two years in Spain. When foreign individuals, as asylum seekers, intermarry with Spanish nationals or Spanish residents (EU or non-EU nationals), they will be recognized as legal residents by the Spanish authority. They will acquire the rights of the documented immigrants; hence, the applicants can live, work, and benefit from social services (housing, healthcare, and education) and social security in Spain. These privileges will improve their living conditions, health, and education. Besides, the Spanish residency introduces asylum applicants to more labor market opportunities and grant them access to better quality jobs. Thus, this type of intermarriage is a key to successful socioeconomic integration of the asylum seekers.

Given the status of the asylum system, it is most likely that the desire of asylum seekers to acquire legal status in Spain is driving the intermarriages. Since the number of the submitted asylum applications reflects the number of seekers with legal status acquisition motives, we expect that there is a positive relationship between the number of asylum applications and the registered intermarriages in Spain.

To examine how the number of intermarriages has been changing over the period of our study (2008-2016), we use data on all the marriages registered in Spain from the National Statistics Institute (Instituto Nacional de Estadística in Spanish, INE). We exclude from the sample the marriages occurring between two EU nationals, to eliminate the marriages that are probably not affected by legal status motives of the asylum seekers. Generally, asylum seekers are non-EU nationals, where EU

nationals are entitled to live and work in Spain. Therefore, we consider only the intermarriages in which at least one of the spouses is not an EU citizen. We generate Figure 4, which portrays the change in the level of intermarriages in Spain over the period 2008-2016. It shows that overall this number was decreasing until the year 2015, and then it started to increase, reaching 18,000 intermarriages in 2016.

Figure 4: **The Evolution of Intermarriages in Spain over the Period 2008-2016**



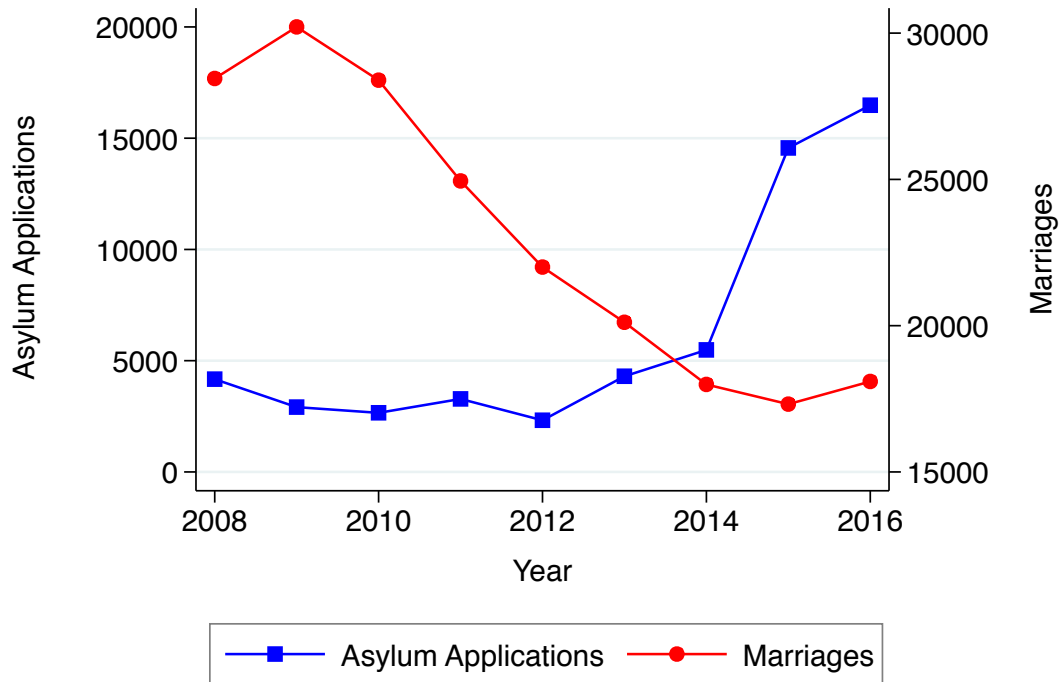
Note: The numbers in the figure excludes all the marriages in which both partners are EU nationals.

Source: The graph is generated based on the Spanish marriage data from the National Statistics Institute (INE) for the period 2008-2016.

Figure 5 combines the graphs of the evolution of asylum applications (Figure 1) and the evolution of intermarriages (Figure 4) over the period 2008-2016. This graph allows us to visualize whether there exists a similar trend between the change in intermarriages and asylum applications over the years. The figure displays that during the period where the number of asylum applications was roughly the same, the number of intermarriages was decreasing. In 2015, as the asylum system witnessed the highest jump in the claims (from 5,483 to 14,560), the number of marriages started to increase. This illustration suggests that the increase in the number of asylum applications might be affecting the number of intermarriages. This relationship would be further analyzed throughout our empirical analysis.

In the next section, we describe the data that we use in the empirical analysis. It is also used to generate some of the graphs of the previous section (Figure 1, 4, 5), but now we will explain it in more details.

Figure 5: **The Evolution of Asylum Applications and the Evolution of Marriages in Spain over the Period 2008-2016**



Note: The graph combines between Figure 1 (The Evolution of Asylum Applications in Spain over the Period 2008-2016) and Figure 4 (The Evolution of Inter-marriages in Spain over the Period 2008-2016).
Source: Asylum applications data is obtained from the Ministry of Interior and marriage data from the National Statistics Institute (INE) for the period 2008-2016.

4. Data

We combine several data sets from different sources to empirically examine the relationship between legal status acquisition motives, expressed in terms of the asylum applications, and intermarriages in Spain. Our study is performed on the province level, where we consider the 52 Spanish provinces.

4.1. Data on Asylum Applications

We use data on asylum applications, published by the Ministry of Interior in Spain. The Office of Asylum and Refugees (OAR) within the Ministry of Interior examines all the submitted asylum applications. So, the Ministry has access to all the necessary information on the asylum seekers. It provides data on the number of asylum applications submitted, by each country of origin, to the 52 Spanish provinces. The data is available for each year over the period 2008-2016.

4.2. Data on Intermarriages

We use administrative data on all the registered marriages in Spain over the period 2008-2016, obtained from the National Statistics Institute (Instituto Nacional de Estadística in Spanish, INE). INE is an institute appointed to the Ministry of Economy and Business, where it handles the statistical role.

It collects marriage statistics from the Statistical Bulletin of Marriage that the married couples submit as they are registering in the Civil Registry in Spain. The INE data provide information on the year, province, and municipality of the marriages. Also, it reports information on the spouses' characteristics as their date of birth, country of birth, country of nationality, country of residence, and educational level, separately for male and female partners. To serve the aim of our paper and analyze whether the incentives of the asylum seekers to acquire the legal status is driving the intermarriages in Spain, we restrict the marriage data set. We exclude all the marriages in which both spouses have a nationality from an EU country, and not just from Spain. Table 2 shows the total number of EU couples married in Spain each year over 2008- 2016.

Table 2: The number of Marriages in Spain with EU national Spouses (2008-2016)

Year	Marriages
2008	168,276
2009	146,602
2010	141,734
2011	137,960
2012	146,225
2013	136,009
2014	144,225
2015	151,374
2016	157,100

Source: The numbers are based on the Spanish marriage data from the INE for the period 2008-2016.

The idea behind this data restriction is related to what we discussed earlier in section 3. To obtain the legal status, asylum seekers can marry Spanish citizens and EU nationals or non-EU nationals residing in Spain for at least two years. Generally, asylum seekers are not EU citizens. By excluding the marriages of EU couples from the dataset, we know that we eliminated almost all the marriages, which are probably not driven by the legal status motives of the asylum seekers. Besides, EU nationals have the right to live and work in Spain. We obtain a data set on marriages that include all the intermarriages with at least one partner not from an EU country, over the period 2008-2016.

4.3. The Sample

We harmonize the asylum applications data set with the intermarriage data set and merge them to obtain a panel of provinces, countries of nationality, and years. Our sample excludes all the countries

with information on marriages but not on asylum applications. Those countries are Australia, New Zealand, and some other European countries. Thus, it includes the provinces and countries of origin with information on both asylum applications and intermarriages over the period 2008-2016. Table 3 reports the descriptive statistics and show that the sample is of 59,436 observations. Over the period 2008-2016, the minimum number of submitted asylum applications by a particular country of origin in a given year was 0, and the maximum number was 5312. For registered marriages, the highest number was 421 marriages, and the lowest number was 0.

Table 3: **Descriptive Statistics**

Variables	Observations	Min	Max
Asylum Applications	59,436	0	5312
Marriages	59,436	0	421

5. Empirical Analysis

In this section, we empirically examine whether the legal status acquisition motives of the asylum seekers affects intermarriage decisions. The number of the submitted asylum applications reflects the number of refugees that have the incentives to acquire the legal status. Accordingly, we estimate the following baseline specification (1) that captures the impact of the variation in the number of asylum applications submitted by the different countries of origin to the 52 Spanish provinces over the period 2008-2016 on the number of intermarriages registered in each of these provinces:

$$Marriages_{cpt} = \alpha + \beta Applications_{cpt} + \gamma_c + \delta_p + \mu_t + \varepsilon_{cpt} \quad (1)$$

where $Marriages_{cpt}$ represents the number of intermarriages between males and females from the country of nationality c , registered in province p , in year t . The explanatory variable $Applications_{cpt}$ is the number of asylum applications from the country of origin c , submitted to the province p , in year t . Our model also includes fixed effects that account for the unobserved heterogeneity present across the countries, provinces, and years that might impact the number of intermarriages. Thus, it isolates the variation in the number of intermarriages associated only with the variation in the number of asylum applications. γ_c is a set of country of origin fixed effects accounting for the differences in the levels of intermarriages within the same year specific to the countries of origin. While, δ_p is a set of province fixed effects, capturing the potential differences in the number of intermarriages across the 52 Spanish provinces within the same year, related to unobserved province characteristics. μ_t is a set of year fixed

effects, controlling for all the possible time trends, common to the provinces and countries of nationality, that might affect the intermarriages in Spain, and ε_{cpt} is the error term.

The dependent variable, which is the number of intermarriages registered in Spanish provinces yearly, is a count variable, so we use the Poisson model in all the empirical analysis. Our study is performed on the province level. In the regressions, the standard errors are clustered at the province level to account for the shocks that might have an impact on the number of intermarriages. The coefficient β is our coefficient of interest, which captures the effect of the change in asylum applications on the number of intermarriages. A positive and significant estimated β indicates that legal status motives positively affect marriage decisions.

5.1. Baseline Results

As described previously, to account for the marriages that are most likely not driven by legal status motives of the asylum seekers, the sample excludes all the marriages that occurred between two EU nationals over the period 2008-2016. Asylum seekers are generally not EU citizens, where EU citizens are entitled to live in Spain. Thus, in our analysis, we consider only the intermarriages in which at least one partner is not an EU national. We refer to non-EU nationals as foreigners in this paper.

We estimate the model specified in equation (1), and the results are reported in Table 4. Column (1) shows the estimated impact on the number of intermarriages in general. Column (2) shows the estimated effect on the number of intermarriages, in which specifically the male partners are foreigners. Whereas, column (3) presents the effect on intermarriages in which specifically the female partners are foreigners. The purpose of also estimating the impact separately on intermarriages with foreign male partners and on those with foreign female partners is to analyze whether the estimated effect differs between these two groups. For instance, Adda et al., (2019) estimate the effect of the legal status acquisition of immigrants on intermarriages in Italy (marriages of Italian natives with foreigners) and show that foreign females tend to intermarry more than foreign males.

All the estimates in Table 4 are positive and statistically significant at 1% level. These results suggest that as the number of submitted asylum applications to a given province in a given year increases, the number of intermarriages registered in this province and year increases too. Column (1) shows that 100 additional asylum applications increase the number of intermarriages by 3.6%. Column (2) depicts that for every 100 additional asylum applications, the number of intermarriages with foreign male partners increases by 3.4%. Column (3) portrays that for every 100 additional asylum applications, the number of intermarriages with foreign female partners increases by 3.9%.

These baseline results suggest that intermarriages are driven by the legal status acquisition motives of the asylum seekers. Also, consistent with the previous literature, we find that foreign females tend to be more involved in intermarriages than foreign males.

Table 4: **The impact of Legal Status Acquisition Motives on the Number of Intermarriages**

Variable	Number of intermarriages		
	<i>One partner is not from EU</i>	<i>Male is not from EU</i>	<i>Female is not from EU</i>
	(1)	(2)	(3)
Number of asylum applications	0.00036*** (0.00013)	0.00034*** (0.00013)	0.00039*** (0.00010)
Observations	59,436	59,436	59,436
Province FE	YES	YES	YES
Country of origin FE	YES	YES	YES
Year FE	YES	YES	YES

Note: This table shows the impact of asylum applications on the number of intermarriages, estimated based on the specification in equation (1), using the Poisson model. Regressions account for the province, country of origin, and year fixed effects. The standard errors are clustered at the province level. *** significant at 1% level ($p < 0.01$), ** significant at 5% level ($p < 0.05$), * significant at 10% level ($p < 0.1$).

5.1.1. Additional Baseline Results: Sample Restrictions

Now, we want to examine the impact of legal status acquisition motives of the asylum seekers on intermarriages, while further narrowing our study and considering particular countries of origin.

First, we focus on the countries with citizens that might be relatively more involved in intermarriages in Spain. So we estimate the specification in equation (1) while considering the countries that are comparably more present in Spain and thus, have a high concentration of residents. We restrict the sample to include only the countries of nationality that have more than 5000 individuals residing in Spain, in any year over the period 2008-2016.¹⁵ We obtain a sample size of 29,484 observations. The impact is estimated separately for intermarriages with specifically foreign male partners and foreign female partners, and the results of the estimations are reported in panel A of Table 5.

For the second analysis, we focus on the countries that have witnessed significant outflow of asylum applications to Spain. Probably the asylum seekers from those countries have relatively higher incentives to seek alternative ways to acquire their legal status. Thus, they are most likely more involved in intermarriages driven by legal status acquisition motives. The reason for this is that those applicants have a comparably higher probability of having delayed final decisions on their claims and higher chances of not being granted international protection. This results from the congestion in applications originating from the countries of those asylum seekers. For this analysis, we estimate the specification in equation (1) again, while excluding from the original sample the countries whose more than 75% of their total number of submitted asylum applications and intermarriages in Spain over the

¹⁵ Statistics on the Spanish population is obtained from the National Statistics Institute (Instituto Nacional de Estadística in Spanish, INE).

entire period of analysis (2008-2016) is zero. In this way, we are considering the countries that have a high concentration of asylum applications and also are highly involved in intermarriages (see Table A.1 of the Appendix). We obtain a sample size of 14,976 observations. The impact is also estimated separately for intermarriages with specifically foreign male partners and foreign female partners, and the results of these estimations are shown in panel B of Table 5.

Table 5: The impact of Legal Status Acquisition Motives on the Number of Intermarriages with Further Sample Restrictions

Variable	Number of intermarriages	
Panel A. Countries of origin with a high concentration of residents in Spain		
	<i>Male is not from EU</i>	<i>Female is not from EU</i>
	(1)	(2)
Number of asylum applications	0.00035*** (0.00013)	0.00039*** (0.00010)
Observations	29,484	29,484
Province FE	YES	YES
Country of Origin FE	YES	YES
Year FE	YES	YES
Panel B. Countries of origin that have a high concentration of asylum applications and are significantly involved in intermarriages in Spain		
	<i>Male is not from EU</i>	<i>Female is not from EU</i>
	(1)	(2)
Number of asylum applications	0.00033*** (0.00012)	0.00039*** (0.00011)
Observations	14,976	14,976
Province FE	YES	YES
Country of Origin FE	YES	YES
Year FE	YES	YES

Note: This table shows the impact of asylum applications on the number of intermarriages, estimated based on the specification in equation (1), using the Poisson model. In panel A, the sample used in the estimations of columns (1) and (2) includes only the countries that have a high concentration of residents in Spain. In panel B, the sample used in the estimations of columns (1) and (2) includes the countries that have a high concentration of submitted asylum applications and are significantly involved in intermarriages in Spain. The estimations account for the province, country of origin, and year fixed effects. The standard errors are clustered at the province level. *** significant at 1% level ($p < 0.01$), ** significant at 5% level ($p < 0.05$), * significant at 10% level ($p < 0.1$).

In each panel, columns (1) and (2) corresponds to the estimated impact on intermarriages in

which specifically the male spouses are not EU nationals and on those in which the female spouses are not EU nationals, respectively. As it is evident, the estimated coefficients of Table 5 are positive and statistically significant at 1% level, indicating that with both sample restrictions, an increase in the submitted asylum applications to a particular province in a given year is associated with an increase in the registered intermarriages in this province and year. In Panel A, column (1) shows that for every 100 additional asylum applications, the number of intermarriages with foreign male partners increases by 3.5 %. Column (2) indicates that the number of intermarriages with foreign female partners increases by 3.9 % for 100 additional asylum applications. Hence, the impact is higher when considering intermarriages with specifically foreign females relative to foreign males. In Panel B, column (1) reports that 100 additional asylum applications increase the number of intermarriages with foreign husbands by 3.3 %. Column (2) portrays that 100 additional asylum applications increase the number of intermarriages with foreign wives by 3.9%. Relative to Panel A, the impact is also higher when considering foreign female partners.

It can be noted that these estimates are generally the same across panels A and B. Additionally, regardless of which group of countries of origin is considered, we find that the estimated coefficients are quite similar in the magnitude and significance relative to the first baseline results reported in columns (2) and (3) of Table 4. These findings indicate that the effect of legal status acquisition motives of the asylum seekers on the number of intermarriages persist even if we focus on the countries that might be relatively more involved in intermarriages and have asylum applicants with comparably higher intermarriage incentives.

5.2. Robustness Checks

Now that we estimated the main results, we want to check for their robustness; thus, we run several other estimations.

5.2.1. Using the Lag of the Explanatory Variable

First, we want to analyze whether the number of intermarriages is also affected by the lag of the number of asylum applications. We rely on our original sample that only excludes the marriages occurring between two EU spouses. We re-estimate the specification in equation (1), but we use the lag of the number of asylum applications as the explanatory variable. The results of the estimations are reported in columns (1) to (3) of Table 6. Column (1) shows the estimated impact on the number of intermarriages in general. Column (2) portrays the estimated effect on intermarriages in which specifically the husband is a foreigner. The effect on intermarriages in which specifically the wife is a foreigner is presented in Column (3).

As Table 6 shows, the estimated coefficients in the three specifications are statistically insignificant, supporting the idea that the impact on the number of intermarriages in a given year is a

result of the variation in the number of asylum applications occurring within this same year and not the year before. These results suggest that the response of the asylum applicants is fast; they immediately seek intermarriage to acquire their legal status.

Table 6: The Impact of Intermarriages Estimated by the Lag of the Asylum Applications

Variable	Number of intermarriages		
	<i>One partner is not from EU</i>	<i>Male is not from EU</i>	<i>Female is not from EU</i>
	(1)	(2)	(3)
Number of asylum applications (lagged)	-0.00019 (0.00039)	-0.00022 (0.00039)	0.00016 (0.00029)
Observations	59,435	59,435	59,435
Province FE	YES	YES	YES
Country of Origin FE	YES	YES	YES
Year FE	YES	YES	YES

Note: This table shows the impact of lagged asylum applications on the number of intermarriages, estimated based on the specification in equation (1) while using the lag of the number of asylum applications as the explanatory variable. The estimations rely on the Poisson model, and account for the province, country of origin, and year fixed effects. The standard errors are clustered at the province level. *** significant at 1% level ($p < 0.01$), ** significant at 5% level ($p < 0.05$), * significant at 10% level ($p < 0.1$).

5.2.2. Excluding Specific Provinces and Countries

The second set of robustness checks are performed to verify that the baseline results are not affected by the fact that for some provinces, the total number of submitted asylum applications in a given year over the period 2008-2016 is relatively low. First, we estimate the baseline specification in equation (1), while restricting our sample to the provinces, which account for 80% or more of the total number of submitted asylum applications in a given year. These are the Spanish provinces that have witnessed a total of 100 or more application in a given year over the period 2008-2016 (see Table A.2 in the Appendix). We obtain a sample size of 21,717 observations. The impact is estimated separately for intermarriages with specifically foreign male spouses and intermarriages with foreign female spouses, and Panel A of Table 7 reports the results.

Column (1) shows that 100 additional asylum applications increase the number of intermarriages with foreign husbands by 3.2%. The coefficient is statistically significant at 5% level. The estimated coefficient in column (2) is significant at 1% level. It shows that for every 100 additional submitted asylum applications, the number of intermarriages with a foreign wife increases by 3.6%. These estimates indicate that foreign females are significantly more involved than foreign males in intermarriages. These results are compatible with our baseline results, although the impact on intermarriages with foreign males is less significant.

Table 7: **The Impact on the Number of Intermarriages, Excluding Specific Provinces and Countries of Origin**

Variable	Number of intermarriages	
Panel A. Provinces with a high concentration of asylum applications		
	<i>Male is not from EU</i>	<i>Female is not from EU</i>
	(1)	(2)
Number of asylum applications	0.00032** (0.00016)	0.00036*** (0.00011)
Observations	21,717	21,717
Province FE	YES	YES
Country of Origin FE	YES	YES
Year FE	YES	YES
Panel B. Provinces with a high concentration of applications and countries of origin with a high concentration of applications and intermarriages		
	<i>Male is not from EU</i>	<i>Female is not from EU</i>
	(1)	(2)
Number of asylum applications	0.00030** (0.00015)	0.00037*** (0.00011)
Observations	5,472	5,472
Province FE	YES	YES
Country of Origin FE	YES	YES
Year FE	YES	YES

Note: This table shows the impact of asylum applications on the number of intermarriages, estimated based on the specification in equation (1), using the Poisson model. In panel A, the sample used in the estimations of columns (1) and (2) includes only the Spanish provinces with a high concentration of asylum applications. In panel B, the sample used in the estimations of columns (1) and (2) includes the provinces with a high concentration of asylum applications in addition to the countries that have a high concentration of asylum applications and are significantly involved in intermarriages in Spain. The regressions account for the province, country of origin, and year fixed effects. The standard errors are clustered at the province level. *** significant at 1% level ($p < 0.01$), ** significant at 5% level ($p < 0.05$), * significant at 10% level ($p < 0.1$).

Second, we re-estimate the specification in equation (1), but with further restrictions to our sample. In addition to focusing on the provinces with a high concentration of asylum applications, we exclude the countries of origin whose more than 75% of their total number of submitted asylum applications and intermarriages over the entire period of analysis (2008-2016) is zero. This additional restriction is similar to the one applied in our baseline estimations, described in Panel B of Table 5 in subsection 5.1.1. As previously described, this restriction allows us to focus on the countries with asylum applicants that might have relatively higher incentives for intermarriage since it is comparably more difficult for them to be granted international protection and thus, legal status. The sample size becomes of 5,472 observations. The impact is also estimated separately for intermarriages with foreign

male partners and foreign female partners, and Panel B of Table 7 reports the results of the estimations.

Column (1) of Panel B shows that 100 additional asylum applications increase the number of intermarriages with foreign male partners, by 3 %. The estimate is statistically significant at 5% level. The estimated coefficient in column (2) is statistically significant at 1% level. It indicates that for every 100 additional asylum applications, the number of intermarriages with foreign female partners increases by 3.7 %. The impact is higher for foreign female partners relative to foreign male partners. These results are consistent with our baseline result, though the estimated impact on intermarriages with foreign males is relatively less significant.

Generally, the estimates of Table 7 (Panel A and B) match our baseline results and show that our main estimates hold across all the alternative sample restrictions. Hence, it can be noted that the presence of some provinces having relatively low submitted asylum applications in a given year over the period 2008-2016 is not affecting the main estimated impact on intermarriages.

5.2.3. Performing the Analysis on the Country Level

For our third set of robustness check, we want to analyze whether the legal status motives significantly affect the number of intermarriages on the country level and not only on the province level. So, we estimate the following specification:

$$Marriages_{ct} = \alpha_2 + \beta_2 Applications_{ct} + \omega_c + \rho_t + \varepsilon_{ct} \quad (2)$$

where the dependent variable $Marriages_{ct}$ represents the number of marriages between males and females from the country of nationality c , registered in Spain in year t . The explanatory variable $Applications_{ct}$ is the number of asylum applications from the country of origin c submitted to Spain in year t . This specification also includes fixed effects that account for the unobserved heterogeneity present across countries and years. ω_c is a set of country of origin fixed effects, accounting for the differences in the number of intermarriages within the same year specific to the countries of origin; ρ_t is a set of year fixed effects, controlling for all the time trends, common across all countries, that might change the number of marriages in Spain; and ε_{ct} is the error term. The coefficient of interest, capturing the impact of legal status motives on the number of intermarriages, is β_2 .

We estimate the specification in equation (2) based on three different data specifications using the Poisson model. The standard errors are clustered at the country level to account for the shocks that might have an impact on the number of intermarriages. The results are reported in columns (1) to (6) of Table 8. Columns (1), (2), and (3) estimate the impact on the number of intermarriages, in which specifically the male partners are foreigners, using the three different data specifications. Whereas, column (4), (5), and (6) estimate the impact on the number of intermarriages, in which the female

partners are foreigners, also using the same three data specifications.

As it is evident, all the reported estimates are positive and statistically significant at 1% level, indicating that as the number of asylum applications submitted by a given country of origin to Spain in a given year increases, the number of intermarriages in Spain increases in this year. Columns (1) and (4) show the results of the estimations using our original sample, that excludes the marriages of EU couples. The estimated coefficients reported in these columns are the same for intermarriages with foreign male partners and foreign female partners. They indicate that at the country level, 100 additional asylum applications in a given year increase the number of intermarriages by 1.4 %.

In columns (2) and (5), the estimations focus only on the countries of origin with a high concentration of residents in Spain. So, similarly to our baseline results portrayed in Panel A of Table 5 in subsection 5.1.1, we estimate equation (2) while restricting the original sample to the countries that have more than 5000 individuals residing in Spain, in any given year over the period 2008-2016. The results indicate that 100 additional asylum applications increase the number of intermarriages by 1.4 %. The estimated impact is also the same when considering the intermarriages with foreign male or foreign female partners.

Table 8: The Impact on the Number of Intermarriages, Analysis on the Country Level

Variable	Number of marriages					
	<i>Male is not from EU</i>			<i>Female is not from EU</i>		
	(1)	(2)	(3)	(4)	(5)	(6)
Number of asylum applications	0.00014*** (0.00004)	0.00014*** (0.00004)	0.00014*** (0.00004)	0.00014*** (0.00003)	0.00014*** (0.00003)	0.00014*** (0.00003)
Observations	1,116	549	288	1,116	549	288
Country of Origin FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES

Note: This table shows the impact of asylum applications on the number of intermarriages, estimated based on the specification in equation (2), using the Poisson model. The estimations account for the country of origin, and year fixed effects. In column (1) and (4), our sample is used, without additional restrictions. In columns (2) and (5), the sample used include only the countries of origin with a high concentration of residents in Spain. In columns (3) and (6), the sample include the countries that have a high concentration of submitted asylum applications and are significantly involved in intermarriages. The standard errors are clustered at the country level. *** significant at 1% level ($p < 0.01$), ** significant at 5% level ($p < 0.05$), * significant at 10% level ($p < 0.1$).

Concerning the results of the analysis reported in columns (3) and (6), we estimate equation (2) while focusing on the countries of origin that have a high concentration of asylum applications and are significantly involved in intermarriages. So, as the analysis reported in Panel B of Table 5 in subsection 5.1.1, we exclude from our original sample the countries of origin whose more than 75% of their total number of asylum applications and intermarriages is zero. The estimated coefficients are also 0.0014 similar to all the previously interpreted estimates of Table 8.

Based on these results, we find that legal status acquisition motives of the asylum seekers have a

significant positive impact on the number of intermarriages on the country level. However, the magnitude of the estimated effect is smaller than the one estimated in the analysis at the province level. All the estimates in Table 8 have the same magnitude and statistical significance; thus, we do not find evidence consistent with the idea that foreign females tend to intermarry more than foreign males, at the country level.

5.3. Placebo test

Our baseline results suggest that an increase in the number of asylum applications has a positive and significant impact on the number of intermarriage in Spain. Generally, we find that for every 100 additional asylum applications submitted to a particular province in a given year, the number of intermarriages increases by 3.6% in that province and year. We show that the estimated impact is higher for intermarriages with specifically foreign female partners (3.9%) relative to those with specifically foreign male partners (approximately 3%).

Table 9: **Placebo Test**

Variable	Number of intermarriages		
	<i>One partner is not from EU</i>	<i>Male is not from EU</i>	<i>Female is not from EU</i>
	(1)	(2)	(3)
Number of asylum applications	0.00084 (0.00083)	0.00085 (0.00082)	0.00072 (0.00087)
Observations	59,436	59,436	59,436
Province FE	YES	YES	YES
Country of Origin FE	YES	YES	YES
Year FE	YES	YES	YES

Note: This table shows our placebo test, estimated based on the specification in equation (1) with the shuffled asylum applications as the explanatory variable. The estimations rely on the Poisson model and account for the province, country of origin, and year fixed effects. The standard errors are clustered at the province level. *** significant at 1% level ($p < 0.01$), ** significant at 5% level ($p < 0.05$), * significant at 10% level ($p < 0.1$).

Now, we want to verify that these main results are not driven by pure chance, so we perform a placebo test. To do so, first, we shuffled the number of asylum applications across the countries of origin, so that the number of submitted applications by a given country to a particular province in a specific year becomes random. Then, we estimate our baseline specification in equation (1) using the shuffled asylum applications as the explanatory variable. The results of the estimations are reported in Table 9. Column (1) shows the estimated impact on the number of intermarriages in general. The estimated effect on the number of intermarriages in which specifically the male partners are foreigners is reported in column (2). Column (3) presents the effect on intermarriages, in which the female partners are foreigners.

Since the numbers of submitted applications are randomly assigned across the countries of origin, we do not expect to find an impact on the number of intermarriages. Columns 1,2, and 3 of Table 9 show that all the coefficients are statistically insignificant, indicating that our strategy is reliable. They signify that the significant positive impact on intermarriages, estimated in our baseline results, is due to the increase in the asylum applications and not other random factors.

6. Conclusion

The substantial flow of asylum seekers to Spain in the recent years and the failure of the international protection system to conform to this situation raise concerns about the alternative ways that the applicants would seek to acquire their legal status. A quick and guaranteed alternative is for the asylum seeker to marry a Spanish citizen or a Spanish resident (EU or a non-EU national) who has been living in Spain for at least two years. This type of intermarriage will grant the asylum seekers the Spanish residency; thus, entitles them to work and live in the country. In light of this situation, we analyze how the legal status acquisition motives of the asylum applicants affect the number of intermarriages. To do so, we combine data obtained from the Ministry of Interior on the number of asylum applications submitted by each country of origin to the 52 Spanish provinces, with administrative data on all the marriages registered in Spain from the National Statistics Institute (INE) over the period 2008-2016. The sample used in the analysis excludes all the marriages, in which both spouses are EU nationals since, in general, these are not driven by the legal status acquisition motives of the asylum seekers.

Our results support our expectations and show that the incentives of the asylum applicants to immediately acquire the legal status has a positive and significant impact on their marriage decisions. Generally, we estimate that 100 additional asylum applications submitted to a particular province in a given year increase the number of intermarriages in that province and year by 3.6 %. We show that this estimated impact is higher when considering specifically the intermarriages with foreign female partners relative to intermarriages with foreign male partners. For every 100 additional submitted asylum applications, the number of intermarriages with foreign female spouses increases by approximately 3.9% while the number of intermarriages with foreign males increases by approximately 3%. These findings indicate that foreign females tend to be more involved than foreign males in intermarriages. We present different sets of robustness checks and show that our baseline results are stable and hold across these different sets of estimations. The placebo test suggests that our estimated impact on the number of intermarriages is driven by the change in the number of asylum applications and not other random factors.

Nevertheless, one can argue that our analysis is strictly performed over the period 2008-2016. If panel data were available, it would be of interest to extend our period of analysis to the most recent years. As we discussed before in section 3, Spain witnessed the most significant jump in the total

number of asylum applicants in 2015 (from 5,483 to 14,560 applications), and since then this number has been rapidly increasing. According to recent statistics issued by Eurostat, the total number of applications was reported to be 31,738 applicants in 2017 after it was 16,481 in 2016. In 2018, this number increased to 55,750 applications. In parallel, the number of pending applications has been increasing too, from 16,000 pending cases in 2015, to 20,000 by 2016, reaching 68,779 by the end of 2018. Hence, the asylum system is becoming extensively saturated with the applications year after year, but our analysis cannot capture the impact of those substantial increases that are occurring recently, due to the lack of panel data.

It is a relevant issue for policymakers to address the consequences that can arise from the failure of the asylum system and the subsequent positive impact on the number of intermarriages, associated with the legal status motives of the asylum seekers. While the unprocessed applications are accumulating in the Spanish asylum system over the years, intermarriage is playing an essential role in helping the refugees to transition from the asylum life to a normal life. This type of marriage is acknowledged in the literature as a way to improve foreigners' economic and social status (Wang and Wang, 2012). It entitles the refugees to acquire the legal status; accordingly, they will have unrestricted access to the labor market and employment services; thus, they can work in high-quality jobs. Being self-sufficient elevates their standards of living, health conditions, as well as educational level. Consequently, intermarriage can promote the successful integration of the asylum seekers into society as well as their contribution to the public finances and the economy.

Nonetheless, this type of intermarriage is most likely associated with social and psychological issues (Srensen and Danneskiold-Samsøe, 2013). It creates distortions in the marriage market since the couples are overcoming the cultural differences between them for practical reasons, related to their interests. Also, it is likely that refugees live under the despair and mercy of their spouses since they cannot risk getting a divorce before three years of marriage and lose their right to reside in Spain. Their legal status is directly linked to their marriages. Hence, the spouses can take advantage of this situation and use it to pressure and control their foreign partners (Amuedo-Durantes and Arenas-Arroyo, 2019). Given the vulnerability and the dependency status of the refugee partners, they can be subject to different forms of abuses and domestic violence from their spouses, like behavioral or action control, emotional abuse (insult, criticism, or degradation), verbal abuse, or physical and sexual abuse.

Policy reforms, imposing regulatory changes that improve the international protection system, can amend this situation and limit its negative consequences. The government can adopt action plans that improve the management of the system to be able to encompass the significant number of applicants arriving at the borders each year. It can implement policies, which control the delays occurring in the applications' processing. Consequently, the urge of the refugees to seek alternative ways to acquire their legal status would decrease. The adverse effects that generally rise from postponing the decisions on the asylum cases, like the delay in the labor market entry and the

socioeconomic integration, would reduce (Hainmueller et al., 2016). Thus, the burden of the international protection applicants on the economy and the society would be controlled.

References

- Adda, J., P., Pinotti, and G., Tura (2019). “There's More to Marriage than Love: The Effect of Legal Status and Cultural Distance on Intermarriages and Separations”. *Working Paper*
- AIDA (2018). “Country Report: Spain”. Available at: <https://www.asylumineurope.org/reports/country/spain/>
- Amuedo-Dorantes, C., C. Bansak and S. Raphael (2007). “Gender Differences in the Labor Market: Impact of Irca’s Amnesty Provisions”. *American Economic Review* 97, 412–16.
- Amuedo-Dorantes, C., and E., Arenas-Arroyo, (2019). “Immigration Enforcement, Police Trust and Domestic Violence”.
- Azzolini, D. and R. Guetto (2017). “The Impact of Citizenship on Intermarriage: Quasi- Experimental Evidence From Two European Union Eastern Enlargements”. *Demographic Research* 36, 1299–1336. DOI:10.4054/DemRes.2017.36.43
- Baker, S. (2010). “Effects of Legal Status and Health Service Availability on Mortality”. *Discussion Papers, Stanford Institute for Economic Policy Research* 09-018, *Stanford Institute for Economic Policy Research*.
- Baker, S. (2015). “Effects of Immigrant Legalization on Crime”. *The American Economic Review* 105, 210-213. DOI: 10.1257/aer.p20151041
- Bean, F. D., M. A. Leach, S. K. Brown, J. D. Bachmeier and J. R. Hipp (2011), “The Educational Legacy of Unauthorized Migration: Comparisons Across U.S.-immigrant Groups in How Parents Status Affects their Offspring”, *International Migration Review* 45, 348–85. DOI:10.1111/j.1747-7379.2011.00851.x
- Barcellos, S. H. (2010), “Legalization and the Economic Status of Immigrants”, *Working Papers, RAND Corporation Publications Department* 754, *RAND Corporation Publications Department*.
- CAER (2016). “Situation of Refugees in Spain and Europe”. Available at: https://www.cear.es/wp-content/uploads/2016/01/Executive-Summary-2015-Report_ok_b.pdf.
- CAER (2018) “Refugees in Spain and Europe”. *The sixteenth Annual Report*. Available at: https://www.cear.es/wp-content/uploads/2018/11/EXECUTIVE-REPORT_2018.pdf.
- Devillanova, C., F. Fasani, and T. Frattini (2017). “Employment of Undocumented Immigrants and the Prospect of Legal Status: Evidence from an Amnesty Program.” *Industrial and Labor Relations Review* 71(4), 853-881. DOI:10.1177/0019793917743246
- Dustmann, C., F. Fasani, and B. Speciale (2017). “ILLEGAL MIGRATION AND CONSUMPTION BEHAVIOR OF IMMIGRANT HOUSEHOLDS”. *Journal of European Economic Association* 15(3), 654–691. DOI:10.1093/jeea/jvw017

- Fasani, F. (2015). “ Understanding the Role of Immigrants’ Legal Status: Evidence from Policy Experiments”. *CESifo Economic Studies* 61, 722–763. DOI:10.1093/cesifo/ifv006
- Fasani, F. (2018). “ Immigrant crime and legal status: evidence from repeated amnesty programs”. *Journal of Economic Georgraphy* 18, 887-914. DOI: 10.1093/jeg/lby028
- Fasani, F., T.,Frattini, and L., Minale (2017). “ (The struggle for) Refugee Integration into the Labour Market: Evidence from Europe.” *IZA Discussion Papers* 11333. *Institute for the Study of Labor (IZA)*
- Freedman, M., E. Owens, and S. Bohn (2018). “Immigration, Employment Opportunities, and Criminal Behavior”. *American Economic Journal: Economic Policy* 10(2), 117-151. DOI: 10.1257/pol.20150165
- Hainmueller, J., D., Hangartner, and D., Lawrence (2016). “When lives are put on hold: Lengthy asylum processes decrease employment among refugees”. *Science Advances* 2, e1600432. DOI: 10.1126/sciadv.1600432
- Kossoudji, S. A., and D. A. Cobb-Clark (2002). “Coming Out of the Shadows: Learning about Legal Status and Wages from the Legalized Population”, *Journal of Labor Economics* 20, 598–628. DOI: 10.1086/339611
- Lozano, F. A., and T. A. Sorensen (2011). “The Labor Market Value to Legal Status”. *IZA Discussion Papers* 5492, *Institute for the Study of Labor (IZA)*
- Mastrobuoni, G. and P. Pinotti (2015). “Legal Status and The Criminal Activity of Immigrants.” *American Economic Journal: Applied Economics* 7(2), 175–206. DOI: 10.1257/app.20140039
- Monras, J., J. Vázquez-Grenno, and F. Elias (2018). "Understanding the Effects of Legalizing Undocumented Immigrants." *Upjohn Institute Working Paper* 18-283. *Kalamazoo, MI: W.E. Upjohn Institute for Employment Research*. DOI: 10.17848/wp18-283
- Pan, Y. (2012). “The Impact of Legal Status on Immigrants Earnings and Human Capital: Evidence from the IRCA 1986”. *Journal of Labor Research* 33, 119–42.
- Sørensen, B. W., and P., Danneskiold-Samsøe (2013). “Women Victims of Violence on a Scale of Vulnerability”.
- Wang, C. and Wang, L. (2012). “The effects of 9/11 on intermarriage between natives and immigrants to the US. *Review of Economics of the Household* 10(2): 171– 192”. DOI:10.1007/s11150-011-9136-3.

Appendix

Table A.1

Countries of origin that have a high concentration of submitted asylum applications and are significantly involved in intermarriages

UKRAIN
RUSSIA
ARGELIA
CAMERUN
COSTA DEL MARFIL
GAMBIA
GHANA
GUINEA
MALI
MARRUECOS
NIGERIA
SENEGAL
DEMOCRATIC REPUBLIC OF CONGO
UNITED STATES OF AMERICA
MEXICO
CUBA
EL SALVADOR
HONDURAS
NICARAGUA
DOMINICAN REPUBLIC
ARGENTINA
BOLIVIA
BRASIL
COLOMBIA
CHILE
ECUADOR
PARAGUAY
PERU
URUGUAY
VENEZUELA
INDIA
SYRIA

Note: This table shows the list of countries that have a high concentration of asylum applicants and of citizens involved in intermarriages registered in Spain over the period 2008-2016. We restrict our sample to those countries when focusing our analysis on the countries with asylum applicants of relatively high incentives for intermarriages to acquire their legal status.

Table A.2

Provinces with a high concentration of asylum applications

ALAVA
ALICANTE
ALMERIA
BALEARES
BARCELONA
BURGOS
CADIZ
CASTELLON DE LA PLANA
CIUDAD REAL
CORDOBA
GIRONA
GRANADA
GUADALAJARA
GUIPUZCOA
HUELVA
LEON
LLEIDA
MADRID
MALAGA
MURCIA
NAVARRA
ASTURIAS
PALMAS (LAS)
PONTEVEDRA
SALAMANCA
SANTA CRUZ DE TENERIFE
CANTABRIA
SEGOVIA
SEVILLA
TARRAGONA
TOLEDO
VALENCIA
VALLADOLID
VIZCAYA
ZARAGOZA
CEUTA
MELILLA

Note: This table shows the list of provinces that have high concentrations of total asylum applications in a given year; these are the provinces with a total of 100 and more applications in a given year over the period 2008-2016. We restrict our sample to those provinces in one of our robustness checks (subsection 5.2.2).