# Asylum Burden-Sharing within the EU Revisited: Are we Moving on the Right Track?

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# Abstract

The refugee crisis evidenced a myriad of flaws in the EU common asylum policy, especially the lack of fairness in asylum burden-sharing. This paper discloses that, despite some progress in terms of inequality, a bi-polarised distribution gained ground. Moreover, two novel convergence approaches in this field reveal that the message of previous articles on disparity reduction is incomplete; there was no pure convergence, as it was only achieved due to frontrunners, with no role for laggards. Consequently, urgent political action and greater leadership by European institutions are required to pave the way for distributive justice between states in asylum burdens. **Keywords:** asylum burden-sharing; convergence; polarisation; collective action failure; EU.

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#### Introduction

As stated by the United Nations High Commissioner for Refugees, Filippo Grandi, the refugee crisis "affects and involves us all, and what it needs is understanding, compassion and political will to come together and find real answers for the refugee plight. This has become a defining challenge of our times". In the European Union (EU) context, it has been considered one of the main geopolitical concerns in recent times (Henning 2020). Among the multiple dimensions of the problem, asylum responsibility-sharing stands out. Although institutions are called to advocate for the principle of solidarity and fair sharing of asylum responsibility enshrined in Article 80 of the Treaty on the Functioning of the EU (TFEU), the reality is rather different, as the system of allocation within the EU has systematically violated that principle. Already at their meeting on 15 and 16 October 1999 in Tampere, the European Council stressed the need for more convergence between the legal systems of the member states, agreeing on giving the green light for the creation of the Common European Asylum System (CEAS). Since differences between member states remained very high and protection standards were still not strong enough, the European Commission's Asylum Policy Plan emerged in 2008, laying the foundations for building a system of common and uniform standards of protection. Despite all the above advances, since then many voices have warned against the lack of Europeanisation of refugee policies (Staffans 2012). In 2010, the European Council on Refugees and Exiles (ECRE) went even further by stating that "the Common European Asylum System is still a myth rather than a reality" (ECRE 2010, 3).

In this setting, a sense of real political urgency emerged from the Syrian refugee crisis in 2011, just when the EU was dealing with one of the most acute economic and financial crises ever, the so-called "Great Recession" of 2008 (D'Erman, Schure and Verdun 2020). The Syrian conflict has been described as the largest refugee and humanitarian crisis since World War II, with over six

million people fleeing Syria because of the civil war (Byman and Speakman 2016). Given that the EU was one of the most coveted destinations, the unprecedented refugee pressure was the first warning sign, leading to a skyrocketing number of asylum applications. Another cause for concern was the existence of important differences between countries. On one hand, some of them were overexposed to large influxes of asylum seekers, mainly because of geographical proximity, resulting in a highly uneven distribution of applications. On the other hand, many countries were reluctant to share responsibilities, a problem further exacerbated by the political rise of anti-immigration parties.

Fully aware of the seriousness of the situation, the European institutions launched a number of harmonisation initiatives to rebalance existing asymmetries (the so-called second generation of the CEAS instruments). As Thielemann (2004) argued, the approximation of EU member states' national legislations on the conditions of admission and residence of third-country nationals is key to reaching a more equitable distribution of asylum burdens, as differences in the relative restrictiveness of countries' asylum regimes are seen as one of the main causes of burden-sharing<sup>1</sup> disparities and their evolution over time. This argument was also highlighted by the European Commission (2007) when stating that further approximation of national asylum procedures, legal standards and reception conditions would contribute to preventing unjustified secondary

<sup>&</sup>lt;sup>1</sup> Although the term "responsibility-sharing" is more widely used than "burden-sharing" in most policy debates, as it masks the pejorative connotation sometimes associated with burden, responsibility-sharing is a broader concept that encompasses not only the number of asylum seeker but also, as Betts, Costello and Zaun (2017, 20) explain, "all forms of state contribution to protect, assist, and find solutions for refugees". Since our discussion will focus primarily on asylum applications data, we will hereafter restrict our discussion to burden-sharing.

movements of asylum seekers after their entry into the EU, and could thus lead to a more equitable overall distribution of asylum applications.

Among the aforementioned initiatives, first and foremost the EU took a major and historic step forward to harmonise rules and criteria to process asylum applications and to determine who should qualify for refugee status. For it, the CEAS set forth common minimum standards for the qualification of third-country nationals as eligible for international protection, reception conditions, as well as on procedures for granting and withdrawing international protection (Qualifications Directive 2011/95/EU, Reception Conditions Directive 2013/33/EU, Asylum Procedures Directive 2013/32/EU). Other proposals included financial assistance to countries supporting higher pressure on their asylum systems (by the creation of the European Refugee Fund, replaced some years later by the Asylum, Migration and Integration Fund), and the establishment of a joint EU relocation program.

At any rate, during the refugee crisis there was a shared view that, in practice and despite the above measures, progress had fallen so far short of the goals (Hatton 2016; Fernández-Huertas and Rapoport 2015). The wide margin of discretion that EU countries enjoy as to comply with the above-mentioned Directives, the disproportionate pressure for processing asylum applications that the Dublin Regulation puts on external border countries,<sup>2</sup> as well as the lack of coordination and

<sup>&</sup>lt;sup>2</sup> The Dublin Regulation –backbone of the EU common asylum system– was created as a system for making only one member state responsible for examining an asylum application (in particular, the member state of first entry), thus preventing the so-called phenomenon of "asylum shopping" (Küçük 2016; Gray 2013). As such, it was not intended to safeguard the principle of solidarity and fair sharing, but rather to establish a criterion for determining responsibility for a claim. In fact, its potential for discouraging secondary movements has been very limited so far (Wagner, Perumadan and Baumgartner 2019).

solidarity within the EU in the governance of the refugee crisis, put further hurdles in the way. Regarding the latter, several uncoordinated positions led unilaterally by some countries during the crisis brought to light conflicting approaches to tackle the situation (Šelo Šabić and Boric 2015). It is the case of the German decision in September 2015 of temporarily suspending the Dublin regulations to facilitate refugees a safe transit across Central Europe, as well as of the noncollaborative actions of some countries building fences and enforcing controls at internal borders to halt the flood of refugees. Nor should we overlook the radical position of the Visegrad Group<sup>3</sup> and its decision of blocking the quota mechanism designed by the EU to relocate refugees and thus ease the pressure on Italy and Greece.

In short, in the face of a crisis that exacerbated the refugee problem in Europe, there has been an attempt at collective action by the EU, but at the same time clear examples of "selfish behaviour" mainly from the political sphere. There is a vast literature on the topic stressing the importance of burden-sharing as an international public good, with expected global net benefits from public good provision under collaborative actions (for more details, see Thielemann 2018). In addition, we cannot forget the clear-cut legal obligation of the member states to bear refugee burden according to the TFEU. However, there have been obvious free-rider incentives such as those already outlined, boosted by the asymmetric impact and the dramatic magnitude of the refugee crisis (Fernández-Huertas and Rapoport 2015). As a result, some countries (unable or unwilling to act in a collaborative context) have tried to benefit from public good provision without contributing to it. If these non-coordinated actions predominated, they would be expected to cause, according to the game theory, a suboptimal outcome for all countries that would imply an unfair distribution of

<sup>&</sup>lt;sup>3</sup> Czech Republic, Hungary, Poland, and Slovakia.

refugee burden (Noll 2003). In this vein, Betts (2011) labels refugee protection as a clear paragon of collective action failure.

All the above considerations lead us to pose the following questions: did the policy initiatives launched by the EU, and in particular those launched to harmonise asylum policy, contribute to reducing the existing disparities in burden-sharing to the point of promoting convergence in asylum burden across countries, or did they only alleviate the symptoms of a long-standing problem? Or put in another way, is it possible that the unwanted side effects of a failure of collective action thwarted all EU efforts to tackle the problem of unfair refugee burden-sharing?

Faced with these questions, and as a consequence of the signs of fragmentation within the EU already noted which, especially during the refugee crisis, can potentially erode harmonisation and integration efforts at the institutional level, our hypothesis is as follows:

H0: Progress in the process of harmonising European asylum policy did not help achieve a significant improvement towards a fairer overall distribution of asylum burdens between countries.

In order to test it, this paper mainly applies several convergence approaches to asylum application data. To that respect, we want to highlight that, although the debate on burden-sharing, and the use of a convergence evaluation to address it, is far from new, the methods used to date have not been ambitious enough. This is because most of them have just resorted to conventional and simple approaches that do not provide a precise diagnosis of the issue at hand. We refer to the classical sigma convergence analysis, based on the simple inspection of the trend of a dispersion measure over time (e.g. Vink and Meijerink 2003; Thielemann 2004; Toshkov and De Haan 2013). This study aims to contribute to this research venue by providing an up-to-date and comprehensive investigation. Specifically, we use a set of well-thought-out econometric techniques: on the one

hand, a conditional  $\beta$  convergence approach and, on the other, an intra-distribution dynamics analysis, the last one being the most technically sophisticated.

Coupling this methodological approach with our topic, it is important to understand that the main reasoning behind convergence lies in the fact that countries that bear little burden (the so-called laggard countries) catch up with those that bear the brunt of the responsibility for processing asylum applications (frontrunner countries). If the existence of a convergence process were confirmed, it would imply that the burden assumed by laggards would have grown faster than that assumed by the frontrunners, so that some progress would be made towards a fairer burden-sharing distribution. Otherwise, it would imply the lack of convergence between member states and, therefore, that harmonisation efforts by the EU institutions to remove existing disparities would have not been enough to compensate for the negative side effects of non-collaborative actions. The two complementary approaches used, as explained later, will allow us to establish not only the presence but also the type of convergence that, if any, took place.

Besides, the convergence analysis is complemented in this work by an initial examination of the asylum-burden distribution. Specifically, an inequality study (levels and decomposition), along with a polarisation approach. Although descriptive in nature and limited in scope, they provide additional insights into the topic at hand. As a way of example, if an increasing polarisation were found, it would reveal a fragmented EU concerning burden-sharing and, therefore, the seed of conflict and non-cooperative actions in case of a new large influx of displaced persons to Europe in the future.

To accomplish the analysis, we use EUROSTAT data on first-time asylum applications for the EU-28 member states. It is necessary to note that the term "first-time" (as defined by Article 2 of Qualification Directive 2011/95/EU) refers to people who lodged an application for asylum for the first time in a given member state, irrespective of whether they have previously applied for asylum in another country of the EU. Consequently, a remarkable feature of EUROSTAT data lies in the fact that they capture at least part of the secondary movements, and as we have indicated, policy harmonisation seeks to achieve greater burden-sharing, inter alia, by reducing them.<sup>4</sup> In any case, as the use of an absolute indicator such as the raw number of applications can lead to misleading conclusions about the real burden borne by each country, there is a need for a relative asylum burden indicator that takes into account the differences between countries in terms of their absorption capacity. In this sense, we use population, as we will explain below, as the factor of absorption capacity.<sup>5</sup>

As for our sample period, it runs from 2008 to 2016. There are several reasons justifying this choice. Firstly, since our main focus is on the years marked by the outbreak and aftermath of the economic crisis (the Great Recession) and, some years later, by the Syrian civil war (the well-known refugee crisis), which started to lose intensity in 2016. Secondly, because, as EUROSTAT indicates, before the entry into force of Regulation (EC) 862/2007 in January 2008, asylum

<sup>&</sup>lt;sup>4</sup> Since the Eurodac system became operational in 2013, member states can crosscheck through fingerprints whether applicants for international protection in a country had already lodged an asylum application in another (usually the country of first entry) and, therefore, detect some secondary movements.

<sup>&</sup>lt;sup>5</sup> Although there is a broad range of economic and policy indicators to adjust raw numbers of asylum applications (for more details, see Toshkov and De Haan 2013), population is the most common adjustment criteria (UNCHR 2002).

statistics were collected on the basis of a Gentlemen's agreement and, therefore, concepts used by countries before and after this date may differ and critically affect the results.<sup>6</sup>

The remainder of the paper is structured as follows. In the first section, we present a detailed characterisation of the asylum-burden distribution in the EU-28 over the 2008-2016 period that may help provide some preliminary insights on the fulfilment or not of the main hypothesis of the paper (H0). Then, in the second section, we carry out two separate but complementary convergence analyses to specifically test our hypothesis. In the third section, we discuss the role of the EU in tackling the unequal distribution of asylum burden across countries. The final section presents the main conclusions and some remarks for political discussion.

#### 1. Characterising the EU Asylum-Burden Distribution

According to the Dublin Regulation, the first country of entry into the EU is responsible for registering and processing an asylum application. This undoubtedly entails costs for the host countries, traditionally referred to in the literature as asylum burden.<sup>7</sup> This term, though often linked to monetary costs (mainly, administrative costs of dealing with applications, sustenance of asylum seekers while their applications are processed, as well as socio-economic benefits provided once the refugee status is granted (Küçük 2016)), goes even further. There are also non-monetary

<sup>&</sup>lt;sup>6</sup> Another important feature of the year 2008 is that, in accordance with the principle of responsibility-sharing, a program (based on bilateral agreements) to transfer refugees from states with external borders to other participating European countries was initiated in the EU (Cassarino 2010).

<sup>&</sup>lt;sup>7</sup> As Fernández-Huertas and Rapoport (2015) indicate, high numbers of asylum applicants are widely seen among policymakers as a burden, overlooking the fact that they can also be beneficial for the country concerned, as well as providing positive externalities for other EU countries.

costs involved in the issue, such as potential threats that immigration may pose to national security and labour market opportunities of natives, or the ascent of far-right parties, among others (Vink and Meijerink 2003; Borjas and Monras 2017; Dustmann, Vasiljeva and Damm 2019; Roupakias 2020).

Consequently, it is clear that asylum burden is a difficult concept to define and, then, to measure. In the absence of a direct metric of asylum burden, the literature has resorted to indirect measures, the most widely used being that based on data on first-time asylum applications received by host countries (UNHCR 2002). As indicated in the Introduction, for the sake of comparison, the raw numbers of applications must be adjusted by some country-specific absorption capacity factor, thus providing a relative indicator of asylum burden. In this respect, we think population is not only the most widely used but also the most aseptic absorption capacity factor to normalise raw numbers of asylum applications, as by employing it no assumptions are being made about what is fair regarding burden-sharing (for further discussion, see Toshkov and De Haan 2013).<sup>8</sup> Accordingly,

<sup>&</sup>lt;sup>8</sup> Yet it must be recognised that this measure may be limited and imperfect for several reasons. On the one side, the fact that asylum application data do no capture the enormous human and economic costs incurred by some countries in rescuing refugees crossing the Mediterranean Sea. On the other side, the impact on data of the decision of some first entry countries, such as Greece and Italy, not to strictly apply the Dublin Regulation by eluding their obligation to take fingerprints, thus allowing refugees to move on to other member states (Bauböck 2018). Nor can we ignore, moreover, another problem that poses a challenge for policy-makers, namely that of the mixed nature of migratory flows not captured by data (Crawley and Skleparis 2018). The development of a more comprehensive measure of asylum burden remains a challenge for future research.

our basic indicator is the asylum application rate, defined as the number of applications per million inhabitants.<sup>9</sup>

Table 1 depicts the evolution of both absolute and relative asylum burden figures over the 2008-2016 period. As we can see, 225,150 refugee seekers lodged an application in the EU in 2008, which implies a relative asylum burden of 518.3. After moderate increases from 2008 to 2012, both the absolute and relative asylum burdens experienced unprecedented growth until 2015. In 2016, nevertheless, they slightly diminished. A likely explanation for this drop is the signing of the EU-Turkey return agreement (Thielemann 2018).<sup>10</sup> The re-introduction of additional intra-Schengen border controls by some countries, such as Austria, Norway and Denmark, and the closure of the Balkan route (following the decision of Macedonia, Slovenia, Croatia and Serbia to introduce border restrictions) also help explain the fall in both absolute and relative asylum burdens in 2016.

#### [TABLE 1]

Apart from these two sets of figures, it is also interesting to look at the asylum recognition rates, which are defined as the shares of positive decisions out of the total number of applications. As also reported in Table 1, this rate is generally quite low, revealing thereby a high risk of applications being rejected and, in consequence, low levels of solidarity within the EU. Although national asylum rules are nowadays more closely aligned than in the past, there is no doubt that the low minimum standards of international protection have left too much room for different

<sup>&</sup>lt;sup>9</sup> A typical example of the different conclusions than can derived from the use of absolute and relative figures is the case of Germany. With the highest burden in absolute terms during the first years of our sample period, Germany was a country with a relative asylum burden below the EU average.

<sup>&</sup>lt;sup>10</sup> This agreement has been strongly criticised by some EU countries and human rights organisations as it implicitly recognised Turkey as a safe third country for asylum seekers.

interpretations at the national level (Dustmann et al. 2017). Nevertheless, it is worth noting that the recognition rate increased greatly over the sample period, mainly due to the very high numbers of Syrians granted refugee status.

In endeavouring to understand the distribution of the relative asylum burden, it is useful to examine the different paths that countries follow. To do this, we broke down our sample into four quartiles according to their values in 2008. Table 2 indicates the thresholds/border values and the countries that make up the groups.<sup>11</sup> It should be made clear that we opted for a quantile-based approach because we believe that it provides an accurate picture of which countries initially bore low levels of burden and which mainly took the brunt of it, as well as of the evolution of the groups. In fact, we think this criterion is the most consistent with the convergence analysis carried out later in Section 2. Regarding the four sub-groups considered, we refer to them as low, medium-low, medium-high, and high relative asylum burden groups. Table 2 illustrates that there were large differences between the low and high relative burden groups in 2008. The first one, which, as in Vink and Meijerink (2003), we could call laggard countries due to their little experience in managing flows of asylum seekers, includes Bulgaria, Estonia, Latvia, Portugal, Romania, Slovenia, and Spain. All of these laggards progressed slowly. The last group, referred to as frontrunner countries, includes the traditional destinations for asylum applicants, as well as small countries that share some of the highest burdens relative to their population size: namely, Austria, Belgium, Cyprus, Greece, Luxembourg, Malta, and Sweden. Two countries are particularly noteworthy in this last group. We refer to Malta and Cyprus, some of the smallest EU Members in

<sup>&</sup>lt;sup>11</sup> As data for Croatia is only available since 2013, this country was classified in 2008 according to its relative asylum burden in 2013.

size but experiencing some of the highest relative asylum burdens. As Thielemann (2010) states, this situation represents a considerable challenge for these countries, not only because they are small but also because they initially had little experience in managing large numbers of asylum seekers.

## [TABLE 2]

Surprisingly enough, when comparing the evolution of the average relative burden of these two groups between 2008 and 2016, we observe that the burden faced by laggard countries increased more than the EU average as a whole and more than three times that of the frontrunners.<sup>12</sup> This seems to be the first sign of a process of convergence in asylum burden in the EU.

When looking at the medium-low group (i.e. Croatia, the Czech Republic, Germany, Hungary, Lithuania, Poland, and Slovakia), the signs of convergence seem to be confirmed as the effort made was even more noticeable than that of the laggards: its relative burden in 2016 was, on average, 18.5 times higher than in 2008. Within this group, Germany is the most striking case. As it is well known, Germany decided to accept one million refugees by temporally suspending the Dublin Regulation on the return of asylum seekers to first entry countries in September 2015. In addition to Germany, some other countries, such as Hungary, which nearly doubled the EU average increase, also played a significant role.

It should be noted that both the low and medium-low relative burden groups include countries along the eastern EU border. They became transit countries for irregular migrants fleeing the conflicts in Afghanistan, Iraq and Syria who wished to move further north and west in Europe via the eastern-central European corridor (Ukraine, Slovakia, the Czech Republic, and Austria) or the

<sup>&</sup>lt;sup>12</sup> A positive exception in the group of frontrunners is Sweden.

Black Sea route (through Turkey to Romania). According to Junker (2006), the fact that countries along the EU's eastern border are the least prepared to cope with the provision of services and opportunities to a huge number of asylum seekers has posed a serious challenge in terms of cooperation and burden-sharing. The extent of the challenge is also evidenced by the existing cultural reluctance among most eastern EU countries to the integration of Muslim communities into their societies.

Finally, the medium-high group (made up of Denmark, Finland, France, Ireland, Italy, the Netherlands, and the UK) made by far the least progress over the period. Its relative burden was just twice as high in 2016 as in 2008. Ireland is a striking case within this group since it even decreased. The Italian case also stands out because, while narrative media often portrays Italy as a country facing one of the highest burdens in the EU, the figures do not seem to convey that idea: except in 2011, its relative asylum burden was below the EU average. Anyway, as previously indicated, it is clear that figures for asylum applications fall short of the real burden that the more exposed countries, such as Greece and Italy, have to shoulder.

## Inequality

For a more thorough picture of the distribution, we now look at inequality levels and their evolution over time, for which we use the Theil index (T). As displayed in Figure 1, despite the sharp rise in inequality at the height of the refugee crisis in 2015, a downward trend can be observed over the sample period; overall, inequality fell by 21 per cent between 2008 and 2016.

## [FIGURE 1]

To delve deeper into the causes of this decrease in inequality, we split the sample into the four aforementioned groups (low, medium-low, medium-high and high relative asylum-burden

countries) and decompose the Theil index into two components: the between-group inequality component  $(T_b)$  and the within-group inequality component  $(T_w)$ . As noted in Figure 1, the between-group inequality was the main factor behind overall inequalities up to the year 2013 but, from that year on, inequality within groups rose markedly, its contribution to total inequality exceeding that of the inter-groups. As stressed later, the German leadership in alleviating the burden caused by the Syrian crisis played a significant role in this new trend.

Figure 2 depicts the breakdown of within-group inequality. At the beginning of the sample period, the highest levels of within-group inequality mainly came from the low and high relative burden groups (54.8 and 34 per cent, respectively). In contrast, medium-high and medium-low groups were fairly homogeneous, with an intra-group inequality below 10 per cent in both cases. This picture, however, changed drastically over time, as within-inequality in the medium-low group was gaining prominence. Interestingly enough, the explanation as to the high increase in intra-group inequality in this group (from 6.4 in 2008 to 62.9 per cent in 2016) comes from the outstanding relative effort assumed by one single country, namely Germany (multiplied it by almost 28 times). It is also interesting the performance of the low relative burden group, where two countries, Bulgaria and Estonia, sharply stood out. Although less markedly, the increase in other countries of the group led eventually to a decrease of the within-inequality from 54.8 to 30.7 per cent.

# [FIGURE 2]

As a word of caution, it is important to stress that cases such as the German government's emergency open-door initiative in 2015 might have unintended spillover effects on neighbouring countries (in particular, transit countries for refugees heading to Germany), as they might be tempted to shift the asylum burden to others. In other words, becoming a leader by taking on

excessive responsibility, i.e. a disproportionate burden, although praiseworthy because the goal is to save a critical humanitarian and political situation, may backfire and cause some unwanted side effects. On the one side, as Thielemann (2018) explains through the lens of the public goods theory and the free-rider hypothesis, small countries would have incentives to take advantage of the provision of the larger ones and, therefore, to refuse burden-sharing schemes. On the other side, we should be aware that the existence of an area of free movement of people within the borders of the EU makes "the decision to grant asylum stops being a decision that affects the granting state only and becomes the common concern of all states within the area" (Küçük 2016, 449). In this vein, Facchini, Lorz, and Willmann (2006) stress the benefits of policy coordination, compared to the dangers that non-cooperative actions may cause through cross-country transfers.

#### **Polarisation**

Another important feature of the distribution, closely related to the above, refers to its level of polarisation. That is, the degree to which countries cluster around a set of poles (in our case, intervals of asylum application rates). This is quite a relevant issue as polarisation indicators are a proper way of appraising potential conflict in international negotiations. To evaluate the degree of polarisation in our distribution, we resort to the measure (*EGR*) proposed by Esteban, Gradín and Ray (2007), that is:

$$EGR(\alpha,\beta) = \sum_{i=1}^{n} \sum_{j=1}^{n} p_i^{1+\alpha} \cdot p_j \cdot \left| \frac{y_i}{\mu} - \frac{y_j}{\mu} \right| - \beta(G - G_S)$$
(1)

where  $\alpha$  is a parameter denoting the degree of sensibility of the index to polarisation – by construction it takes on values between 1 and 1.6 –;  $p_i$  and  $p_j$  are the relative population sizes of

groups *i* and *j*;  $y_i$  and  $y_j$  are the average asylum application rate of *i* and *j*, respectively;  $\mu$  is the EU average asylum application rate;  $\beta$  is a parameter reflecting the sensitivity of the index to the groups' level of cohesion; *G* and  $G_S$  are the Gini coefficients of the original and grouped distributions, respectively; and *n* is the number of groups, or poles, considered.

For interpretation purposes, the *EGR* measure can be broken down into two components. The simple polarisation component  $ER = \sum_{i=1}^{n} \sum_{j=1}^{n} p_i^{1+\alpha} \cdot p_j \cdot \left| \frac{y_i}{\mu} - \frac{y_j}{\mu} \right|$ , which reflects the heterogeneity between groups or poles is derived from differences in terms of relative asylum burden between extreme groups, and the specification error component  $\varepsilon = G - G_S$ , which reflects the degree of homogeneity within groups. The latter component, modulated by the parameter  $\beta$ , is also referred to as intra-group dispersion, so that the higher the degree of homogeneity the lower the value of  $\varepsilon$ .

Taking the above considerations on board, Table 3 summarises the polarisation results. At this point, it should be clarified that we consider 2 and 3 groups/poles (i.e. n = 2, 3), and that for its demarcation we use the algorithm proposed by Davies and Shorrocks (1989). We choose a standard value of  $\alpha = 1$  and a value of  $\beta = 0.8$ .<sup>13</sup> The value of the *EGR* reveals that there was a noticeable increase in the degree of polarisation between 2008 and 2016. The decomposition of the indicator uncovers that groups of countries became internally more identified, while increasingly heterogeneous between them.

#### [TABLE 3]

Finally, it is important to know what level of polarisation is predominant. To answer this question, we compared the value of the *EGR* measure for the case of bi-polarisation against that

<sup>&</sup>lt;sup>13</sup> There is general agreement that the  $\beta$  parameter should be close to one (Esteban, Gradín and Ray 2007).

obtained for tri-polarisation (Duró and Padilla 2008). Accordingly, we see that while tripolarisation portrayed the asylum-burden distribution both at the beginning and at the middle of the sample period, bi-polarisation becomes a better representation at the end of the period. By way of illustration, Figure 3a displays countries that make up each of the three poles in the initial year whereas Figure 3b illustrates the same information for the two poles in the final year of the sample. The darker the area the higher the relative asylum burden. Figure 3b accurately portraits the existence of two blocks of countries in the current refugee burden-sharing pattern. On the one side, a more un-committed group comprising Slovakia, Romania, Estonia, the Czech Republic, Portugal, Lithuania, Latvia, Poland, Spain, Ireland, Croatia, the UK, Slovenia, Finland, Denmark, the Netherlands, France, Belgium, and Italy. On the other hand, a truly committed group with countries such as Germany, Austria, Greece, Malta, Luxembourg, Cyprus, Hungary, Sweden, and Bulgaria.

It is unquestionable that the growing importance of bi-polarization, with one group of countries relatively free of asylum pressure and another one overwhelmed by it, represents a setback for any future negotiation on solidarity mechanisms to achieve a fair-sharing agreement. Moreover, the general atmosphere of distrust and uncertainty among most European countries regarding immigration and asylum issues seems, for the time being, to throw more shade than light to a problem that, apart from being difficult to cope with, is politically sensitive. We should also warn that if nothing is done to deal with the high values of polarisation, it might be the seed for new struggles and non-collaborative actions in the future. We are likely at a point where we could avoid it.

# [FIGURE 3]

#### 2. Relative Asylum Burden: A Convergence Analysis

Although the previous analysis provided a comprehensive picture of inequality and polarisation in the distribution of asylum burden within the EU, it cannot by itself provide an answer to the fulfilment or not of our hypothesis H0. It must be complemented with a convergence analysis which, in our case study, should imply that countries that initially carried little relative burden would catch up, over time, with those that shouldered most of the burden. In order to test for the existence of a convergence process in asylum burden, in this paper we resort to two approaches: (1) the conditional  $\beta$  convergence analysis and (2) the intra-distribution dynamics approach. While the first one is useful to confirm (or not) the presence of convergence, the second technique allows disentangling the way in which convergence (or divergence if this were the case) has happened, since it addresses the changes that occurred within the asylum-burden distribution.

Accordingly, first we use panel data to estimate a conditional  $\beta$  convergence equation. That is, we assume that countries do not necessarily share the same initial conditions so they are expected to converge towards different steady-state relative asylum burdens; i.e. total convergence would not imply the same burden in all countries. Thus, the annual growth in the relative asylum burden in a country *i* during a period t ( $\Delta lnA_{i,t}$ ) is regressed on the relative burden in that country during the previous year ( $lnA_{i,t-1}$ ) and, to allow for the possibility of persistent country differences in the rate of reception of asylum applications, on a vector of independent variables. Regarding these conditioning variables, we include:

(1) Two classical structural pull factors. First, the average stock of refugees for country *i*, defined over the period 2000-2007 to control for potential problems of endogeneity (*Stock*<sub>*i*,2000-2007</sub>, data from the UNHCR database). We then capture the influence of refugee

networks. Second, the per capita Gross Domestic Product of country *i* ( $GDP_{i,t-1}$ , data from EUROSTAT) to assess the influence of countries' prosperity on their relative asylum burden. (2) Two policy-related factors to capture the effect of national asylum legislation in the evolution of countries' relative attractiveness for asylum seekers (Thielemann 2004). The first one concerns countries' criteria for determining refugee status and is proxied by the recognition rate ( $Recog_{i,t-1}$ , data from EUROSTAT). The second factor refers to integration, proxied by official development assistance as a percentage of gross national income ( $ODA_{i,t-1}$ , data from the OECD database). This variable may capture the fact that countries that traditionally spend a high share of their gross national income on development assistance are considered to be more prone to assisting refugees (Thielemann 2004).

(3) Finally, we include a time dummy ( $\mu_t$ ) to control for time-specific effects, as the Syrian crisis over the 2013-2015 period.

Accordingly, the equation reads as follows:

$$\Delta \ln A_{i,t} = \beta \ln A_{i,t-1} + \gamma_1 Stock_{i,2000-2007} + \gamma_2 GDP_{i,t-1} + \gamma_3 Recog_{i,t-1} + \gamma_4 ODA_{i,t-1} + \mu_t + u_{it}$$
(2)

The error component is expressed as a series of disturbances:  $u_{i,t} = c_i + v_{it}$ , where  $c_i$  represents country-specific effects and  $v_{it}$  represents all other effects. The inclusion of countrydependent effects ( $c_i$ ) in equation (2) is supported by the Hausman test (for fixed effects) and the Breusch-Pagan Lagrangian multiplier test (for random effects). Both tests point to the existence of fixed effects in the model specification (p-values of 0.00 and 0.44, respectively). In addition, we computed the Modified Wald test for heteroscedasticity, the results proving that the null hypothesis of heteroscedasticity is rejected (p-value of 0.00). The Wooldridge test for autocorrelation and the Pesaran's test of cross-sectional independence point, however, to the existence of problems of autocorrelation and cross-sectional dependence, respectively (p-values of 0.00). Based on this variety of tests, we decided to conduct a Prais-Winsten regression with panel corrected standard errors (PCSEs).<sup>14</sup>

## [TABLE 4]

As can be seen (Table 4), results reveal the presence of convergence:  $\beta$  coefficient was negative (-0.297) and statistically significant at 5 per cent, confirming the existence of a conditional  $\beta$  convergence process across the EU countries between 2008 and 2016. In terms of conditional variables, we see that, unsurprisingly, there are other factors leading to different steady-state levels and, thus, affecting the growth rate in the relative asylum burden. To be precise, the effect of the stock of refugees was, as expected, positive and statistically significant. As is well known, social networks are widely accepted as an underpinning factor to explain the destination choice of forced migration. Our findings for the other variables of the model are as follows: contrary to expectations, the recognition rate does not seem to exert any influence on the growth of the relative asylum burden, and the coefficients linked to both income and development assistance variables turned out to be negative and statistically significant. An important lesson can be drawn from these last findings: high-income countries, as well as those offering generous assistance to development aid, were the ones that initially presented the highest relative burden, so that the results obtained are in line with our evidence about the existence of an ongoing convergence process.

<sup>&</sup>lt;sup>14</sup> This method delivers consistent estimates when disturbances are heteroscedastic in presence of common AR(1) autocorrelation and cross-sectional dependence (see, e.g., Hardin [1995] for more details).

These results, although attractive, mask some potentially interesting features of the dynamics of the distribution. In particular, they tell us nothing about changes in countries' position regarding relative asylum burden, nor about which ones have contributed (and which not) to the convergence process. Therefore, we now turn to the study of the intra-distribution dynamics, for which we draw on the so-called highest conditional density approach proposed by Hyndman, Bashtannyk and Grunwald (1996). It has several important advantages over the traditional way of addressing intra-distribution dynamics. First, it uses a different smoothing parameter (or bandwidth) in the *x* and *y* directions.<sup>15</sup> Second, it does not treat conditional probability as a simple bivariate density function. Third, it has better statistical properties than standard stochastic kernel estimators do and provides more clear-cut results.

Explicitly, and after normalising to the EU average, we display the stacked conditional density and highest conditional density region plots of the asylum application rates between two consecutive years (Figure 4). Starting with the stacked conditional density plot, which exhibits one conditional probability density for each value of the rate in year *t*, the results clearly suggest persistence in the distribution, since the peaks of density functions follow the diagonal. According to Figure 4a, it seems that countries with low initial levels essentially maintained their relative positions, although some signs of mobility appear in the middle and upper end of the distribution.

# [FIGURE 4]

A more informative way to represent (and detect) the intra-distribution changes is by looking at the highest conditional density region plot (HDR), which represents the highest density regions

<sup>&</sup>lt;sup>15</sup> In our case the optimum bandwidths in the x and y directions have been computed according to rules laid out by Bashtannyk and Hyndman (2001).

defined as "the smallest region of the sample space containing a given probability" (Hyndman, Bashtannyk and Grunwald 1996, 327). Here, each vertical strip in Figure 4b portraits the highestdensity portion of the probability distribution for a given asylum application rate in every year t. The three shadings in each bar represent total probabilities of 25, 50 and 75 per cent respectively (from darker to lighter shades). In addition, a bullet (•) indicates the mode of each conditional probability distribution.

Figure 4b shows that mobility within the distribution was generally small for countries with an asylum application rate below 200. This is reflected by the fact that all the HDRs representing a probability of 25 per cent touch the diagonal and the bullets are near to it. Conversely, those with high rates changed their position significantly: most HDRs do not cross the diagonal, being the modes mostly located below it.

Therefore, the intra-distribution approach allows us to go further, as it is especially enlightening by shedding light on the role of laggard and frontrunner countries in convergence. To be more precise, it reveals that only frontrunners with very high asylum application rates (in particular those with initial rates being at least three times as high as the EU average) played an active role in the disparities-reduction process,<sup>16</sup> while the contribution of laggards (for which persistence was the dominant tonic) was almost negligible. It is clear, then, that we cannot refer to a convergence process in asylum burden in a strict sense (i.e., pure convergence), as it was reached

<sup>&</sup>lt;sup>16</sup> This does not necessarily mean (in cases such as Greece, Austria and Belgium) that their relative asylum burden decreased; it increased but to a lesser extent than that of the others. Unfortunately, the active role played by Germany was partially offset by the seemingly passive attitude of some laggard-countries (especially the Czech Republic, Lithuania, Slovakia and Poland).

basically by the role played by frontrunners in a socially undesirable "race to the bottom",<sup>17</sup> but without the contribution of the laggards. This evidence adds an important nuance to our previous finding of the existence of a convergence process, showing that a standard analysis is not sufficient to draw precise conclusions about the progress made in terms of fairness/solidarity. From this perspective, the desired convergence should have been characterised, at least to a large extent, by an increase in the relative effort of the countries with lower initial burdens with respect to the remaining ones.

Based on all the above evidence in hand, what can we finally express about the fulfilment (or not) of our hypothesis H0? Despite some advances in burden convergence in the EU, we cannot speak of sufficient progress in achieving the overall objective of burden-sharing from the point of view of the laggards. This result, together with the increasing levels of bi-polarisation, leads us to conclude that our hypothesis (H0: Progress in the process of harmonising European asylum policy did not help achieve a significant improvement towards a fairer overall distribution of asylum burdens between countries) must be accepted.

#### 3. Challenges to Asylum Burden-Sharing in the EU

Had we learned anything from the recent refugee crisis, it would be that the EU should commit itself to designing a well-functioning and fairer asylum system. That being said, it is also evident that this is not a trivial challenge. Firstly, because we are dealing with a highly sensitive political issue, in which many countries feel that, in any scenario involving a joint European solution, they

<sup>&</sup>lt;sup>17</sup> This term is frequently used in the refugee literature to describe a situation in which countries compete to discourage asylum seekers knocking at their door, thus passing on the problem of an excess of asylum burden to their neighbours (Toshkov and De Haan 2013).

can only lose. And, secondly, because although the EU has left behind the hardest part of the crisis, the current deadlock and the tendencies to the denationalisation of immigration policies after the crisis (Brekke 2018) add uncertainty and difficulty to the situation.

Even though one of the goals of the EU common asylum system is to promote solidarity and fair-sharing responsibility on immigration and asylum issues between member states, it relies upon the voluntary compliance by each Member State. In this regard, the long-standing conflict between the EU's general principle of solidarity and fair sharing and individual countries' self-interested objectives is, on practical grounds, a clear obstacle to reaching a consensus on how to equalise burdens over time.

The inability of European institutions to build bridges between national asylum systems at the height of the refugee crisis forced the EU to implement a series of exceptional and emergency actions. The most relevant one was the temporary relocation system, in 2015, of about 160,000 asylum seekers from Hungary, Greece and Italy to the other member states according to a capacity-based distribution.<sup>18</sup> The initiative, however, was a complete failure as it resulted in the transfer of less than one-third of the agreed relocations. A second strategy to deal with the crisis was to externalise the boundaries of responsibility to some non-EU countries. In this case, the controversial EU-Turkey agreement (18 March 2016), which made Turkey the new guardian of the EU, clearly stands out.<sup>19</sup> Although it is unquestionable that this agreement significantly reduced the entry of irregular migrants into Greece from Turkey, it did not solve the problem of burdensharing (Fernández-Arribas 2016). Moreover, it violates the principle of *non-refoulement* of

<sup>&</sup>lt;sup>18</sup> This distribution was based on GDP (40 per cent), population size (40 per cent), number of asylum seekers already hosted (10 per cent) and unemployment (10 per cent).

<sup>&</sup>lt;sup>19</sup> This sort of agreement was extended to Libya.

refugees and creates incentives for them to seek other routes of entry, with Morocco-Spain and Libya-Italy routes in the spotlight. A third noteworthy action was the EU's Hotspot approach developed by the European Commission in 2015 to assist countries on the external border, such as Italy and Greece, in managing migration or increasing the financial allocation of funds. As noted above, these actions did not live up to expectations of equalising inequalities in burden-sharing.

Furthermore, it is fair to stress the advocacy of the so-called external dimension of the immigration and asylum policy to reduce migration pressure on EU's Mediterranean countries through cooperation with the sending ones (Boswell 2003). A good example of this approach is the launching of the 2015-20 EU Emergency Trust Fund to prevent irregular migration and displaced people from Africa. The main goal of this emergency initiative is to create suitable conditions for economic activity and employment opportunities in Africa. Nevertheless, the lack of evidence on the link between development cooperation and irregular migration, and the fact that the goals of the Fund have probably been too ambitious for such a short period of time, have called into question the effectiveness of the Fund itself (Herrero and Knoll 2016).

Following the failed attempt to reform the Dublin Regulation on May 4, 2016, to move from exceptional or emergency mechanisms to new permanent quota-based relocation ones to equalise burdens, we are witnessing a deadlock in the EU in which the voluntary assumption of responsibilities and the trend towards renationalization of immigration policies have gained ground. The Aquarius case in 2018, which shocked the world, set a negative precedent, as it made clear the climate of indifference and inaction on the part of some countries in reallocating asylum seekers crossing the Mediterranean Sea and the implementation of temporary solutions founded on the countries' goodwill, particularly those directly affected. Obviously, this cannot lead to long-lasting solutions to the problem of burden-sharing. On the contrary, the current system dominated

by voluntary actions only deepens the current imbalances and, as highlighted by Gray (2013), provides lower levels of protection for refugees. The solution is clear. Europe must leave its current short-term view and be determined for a durable joint solution. Although this can be difficult in practice, it is indisputable that any long-term solution should involve exploring new permanent quota-based initiatives for refugee relocation and expanding refugee-hosting capacity in less experienced countries through enhanced financial compensation and other non-financial-sharing initiatives.

## 4. Conclusions and Policy Remarks

Although the numbers of asylum seekers in Europe have diminished substantially in recent years, the unfair allocation of asylum burden within the EU remains an extremely sensitive issue pending to be solved. In this paper, we hypothesised that recent developments in the harmonisation of European asylum policy did not contribute significantly to ensuring a fairer overall distribution of asylum burdens between member states. To the best of our knowledge, this is the first paper that delves into it by employing a set of sophisticated econometric techniques introduced in the empirical literature on convergence.

As a starting point, we examine the distribution of the asylum application rates within the EU-28 over the period 2008-2016. The analysis confirmed that, despite some little progress in terms of inequality, levels of polarisation increased significantly. Regarding this last point, since polarisation measures are commonly accepted as a proper way of appraising potential conflict in international negotiations, we can conclude that there is a growing risk of conflict between two clearly differentiated blocks of countries: one not committed to the issue and the other overwhelmed by high refugee pressure. The 2019 Malta Summit is a clear example of this conflict situation. Although initially promising as a call for a fairer and more efficient system for managing emergency rescues of immigrants crossing the Mediterranean Sea, it highlighted the lack of unity in the European Community, as some countries directly involved in this type of emergency (Spain and Greece) were not even invited to attend the meeting. Morocco's recent diplomatic row with Spain over Western Sahara, and the collateral effect of thousands of irregular migrants crossing into the Spanish City of Ceuta in just two days, made it even clearer that asylum/immigration issues are everybody's business and that no European country can deal with them alone.

Further analysis of convergence in asylum burden, using first a conditional beta convergence equation and then the intra-distribution dynamics approach, additionally unveiled that there was no pure convergence –i.e. no convergence in a strict sense– since it was achieved only because of the role played by the countries with the highest burden. In other words, we would dare to warn that the current trend leads to a "race to the bottom", where concern about asylum burden, at the very least, does not rise enough in laggards. Based on the above evidence, our hypothesis was accepted, thus revealing that there is still a long way to go if we are to achieve a truly fair asylum burden-sharing in the EU.

In the light of all this evidence, what can we state about the future? First and foremost, that, although the influx of refugees has decreased markedly since the EU-Turkey agreement of March 2016, the EU is now at a crossroads with many challenges ahead. That is to say, the EU should not be blinded by the decline in the number of asylum applications, waiting relaxed until a new refugee crisis arrives in Europe. In the current sensitive political context, temporary agreements based on the goodwill or 'charity' of countries closely affected by a large flow of refugees (as in the well-known Aquarius case) are more likely to succeed than any negotiated instrument of relocation within the distribution involving commitments by all countries (Hatton 2016; Gray 2013).

However, as Gray (2013) stresses, any sharing instrument based on the voluntary assumption of responsibilities not only infringes the principle of solidarity cemented in Article 80 of the TFEU, but also provides, as we tend to forget in the general debate, lower standards of protection for asylum seekers. On the other hand, unilateral actions in the response to large influxes, while commendable in critical situations to alleviate unduly heavy burdens on the most exposed countries, may have a destabilising effect on neighbouring ones whether, because of the call effect of the leader, they become transit countries. They could, therefore, have a free-rider incentive; in other words, to deny the acceptance of refugees and accelerate their transit to the leader. This may foster tensions and even breed political distrust among the Schengen countries, as witnessed during the Syrian crisis.

For this reason, the European Commission should, in a consistent and orderly manner, take the lead in developing a fair, efficient and sustainable system to ensure a more equitable distribution of burdens regarding asylum. The possibility for all member states to jointly assume responsibility for refugee burden-sharing, so that each country feels that its neighbours are making efforts commensurate with their resources and capacities, should foster a climate of understanding and tolerance to balance the various interests between countries and resolve conflicts. It might even help cut down large-scale influxes of refugees illegally making hazardous maritime or overland crossings at the hands of organised criminals (Robins 2019), as well as secondary movements within the Schengen area.

The necessary basis for agreement on this issue is the awareness among EU countries that, when we use the term asylum burden we are not only alluding to figures but also, and mainly, to people fleeing from conflict and persecution, so it is of the utmost importance to seek a reasonable balance between financial, security and humanitarian issues. It would also be important to convey a message about the benefits linked to refugee integration in European societies; as Juliet Stevenson asserted, "Throughout history, those people have enriched our society". There is no doubt that refugees can ensure lasting contributions to host economies' finances, so the effective integration of asylum seekers into the labour market, although fiscally costly in the short term, could be financially rewarding in the long term. If so, it would also help cushion the demographic dilemma that remains open in European societies. It would be a serious mistake, in our view, to think that the solution to the long-lasting problem of asylum burden-sharing should involve transferring responsibility to non-European third countries. Using a colloquial expression, "the ball is really in our court"; i.e. it is time for us to work together. Cooperation and solidarity between countries must be the way forward towards a fairer distribution of the asylum burden in the EU. Hence, both as a consideration and as a challenge from many perspectives, we would like to end by paraphrasing Anne Frank: "How wonderful it is that no one has to wait, but can start right now to gradually change the world! How wonderful it is that everyone, great and small, can immediately help bring about justice by giving of themselves".

All the above conclusions invite us to one final reflection about some policy implications in other areas of EU cooperation. We believe that the European institutions must imperatively strive to ensure that the recent and sounded failure of collective action in the refugee sphere does not undermine other areas of cooperation in the future, such as internal security, terrorism, justice or health, to mention only a few; right now, in COVID-19 time, this would be catastrophic.<sup>20</sup> It seems clear that the mere existence of political institutions does not constitute a sufficient guarantee to

<sup>&</sup>lt;sup>20</sup> An interesting special issue on "Economic and Financial Governance in the European Union after a decade of Economic and Political Crises", focused (in part) on the heath crisis and its consequences, has been just published in Journal of Economic Policy Reform (D'Erman, Schure, and Verdun 2020).

avoid non-collaborative actions. Because of countries' divergent interests, a problem of leadership is often hidden behind the failure of collective action. The logic of collective action must rely on the real determination of the institutions to encourage countries to act as a rational collective pursuing the same objectives at the global level. According to Betts (2011), committed action by international institutions through active and uninterrupted interaction between states, monitoring of potential free-rider attempts and institutionalisation of cooperation may be some of the keys to achieving it.

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Table 1: Absolute and relative asylum burdens in the EU

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Asylum applications	225,150	263,835	261,353	309,040	335,290	431,090	626,960	1,322,825	1,260,910
Application rates*	518.3	530.0	520.0	617.8	670.9	853.4	1,236.9	2,603.0	2,471.0
Recognition rates**	27.1	27.2	25.0	25.1	31.5	33.3	44.8	51.9	60.8

Notes: \*Per million inhabitants, \*\*percentage.

Table 2: Relative asylum burden (per million inhabitants) in the EU by quartiles of relative asylum burden in 2008

Medium-low278.0Medium-high629.0High1,945.0	572.5	514.0 2,054.8	671.0	593.1 2,499.8	1,077.8 667.4 2,514.3	1,685.4 921.7 3,457.1	4,392.2 1,342.1 7,459.1	5,169.9 1,249.1 3,470.2
					,	,	,	- )
Medium-low 278.	5 559.0	393.9	427.4	028.5	1,077.8	1,083.4	4,392.2	5,109.9
	2206	395.9	427.4	628.3	1 077 0	1 695 1	1 202 2	5 160 0
Low 77.	58.2	57,0	78.3	81.3	157.7	218.9	427.3	453.1
Quartile/Group 200	3 2009	2010	2011	2012	2013	2014	2015	2016

*Note:* Low relative burden group (threshold/border value of 134.9): Estonia, Portugal, Latvia, Romania, Spain, Bulgaria, Slovenia; Medium-low relative burden group (threshold/border value of 377.8): the Czech Republic, Lithuania, Slovakia, Poland, Hungary, Germany, Croatia; Medium-high relative burden group (threshold/border value of 937.7): the UK, Denmark, Italy, France, Finland, Ireland, the Netherlands; High relative burden group (threshold/border value of 6,387.4): Luxembourg, Belgium, Austria, Greece, Sweden, Cyprus, Malta.

Table 3: Polarisation between EU countries

	Bi	-polarisation		Tri-	polarisation	
-	ER	ε	EGR	ER	ε	EGR
2008	0.309	0.277	0.032	0.262	0.211	0.051
2012	0.364	0.218	0.146	0.327	0.162	0.165
2016	0.477	0.075	0.402	0.353	0.165	0.289

Dependent variable: $\Delta \ln A_{i,t}$					
	Coefficients	Standard errors			
$\ln A_{i,t-1}$	-0.297**	(0.128)			
$Stock_{i,2000-2007}$	1.449***	(0.514)			
$Recog_{i,t-1}$	0.011	(0.207)			
$GDP_{i,t-1}$	-1.089**	(0.467)			
$ODA_{i,t-1}$	-0.794**	(0.341)			
Dummy 2010	-0.168***	(0.033)			
Dummy 2011	0.118***	(0.033))			
Dummy 2012	0.043	(0.029)			
Dummy 2013	0.129***	(0.032)			
Dummy 2014	0.283***	(0.044)			
Dummy 2015	0.628***	(0.080)			
Dummy 2016	0.131	(0.144)			
$R^2$		0.376			

Table 4: PCSE estimation of conditional beta convergence, 2008-16

Notes: \*\*\* (\*\*) (\*) Significant at 1 per cent (5 per cent) (10 per cent), respectively.

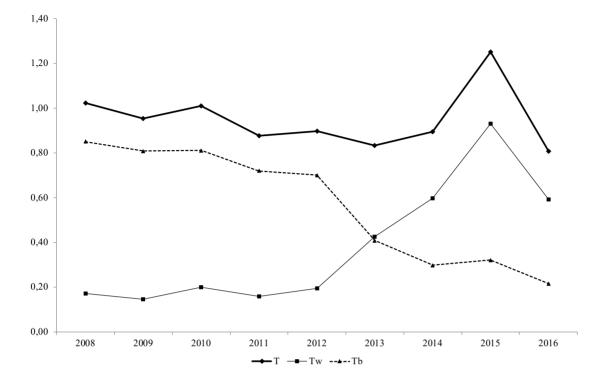


Figure 1: Inequality in relative asylum burden across EU countries

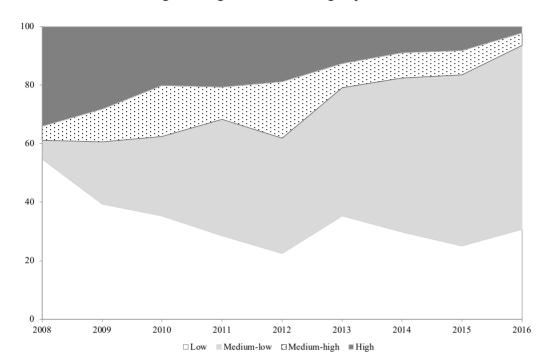
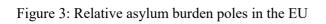
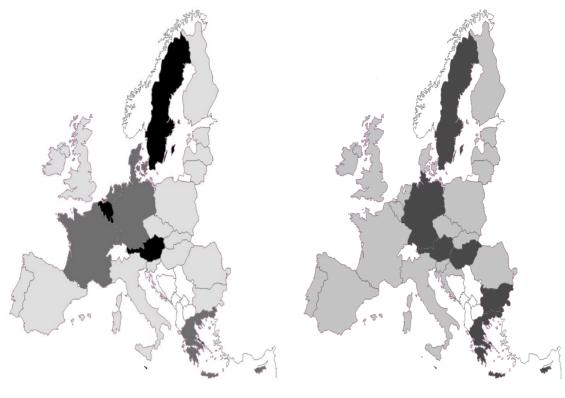


Figure 2: Breakdown of the within-group inequality component of the Theil index: Contribution of low, medium-low, medium-high and high relative burden groups

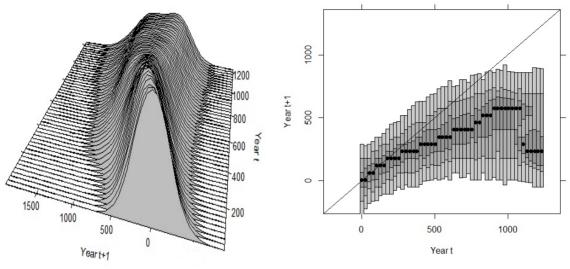




a) 2008

b) 2016

Figure 4: Intra-distribution dynamics



a) Stacked conditional density plot

b) Highest conditional density plot