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Applications for asylum in the developed world: Modelling asylum claims by origin and destination

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Introduction

Every year, hundreds of thousands of people apply for asylum, seeking sanctuary in the stable, safe and secure countries of the developed world. Most of them come from poor and middle-income countries in the grip of civil wars or international conflicts, where minorities are persecuted, or in which human rights abuses are commonplace. Those who manage to reach developed countries are a small minority of all who flee across national borders or who seek refuge elsewhere within their own country. Over the last 30 years, the number of asylum applications lodged in developed countries has soared and this has led to intense political controversy and what might be described as a policy backlash. Against this background, there has been examination of the motivations of asylum seekers and the effects of economic incentives and asylum policies on application rates.

In Australia, as elsewhere, asylum policy has been widely debated. Yet there is little quantitative analysis that places the Australian experience in a comparative context. This chapter provides an econometric analysis of the ebb and flow of asylum applications to Australia together with

18 other developed countries. Besides helping to identify the common factors that drive the application rates, this approach allows us to assess how and to what degree the Australian experience differs from that of other countries. One of the key issues is the deterrent effects of asylum policies, in particular the policy differences between countries. In order to assess these effects, we derive a quantitative index representing diverse elements of asylum policy and use this in our empirical analysis.

The approach followed here draws heavily on previous analysis by Hatton (2009, 2011) in terms of methodology and research design. It also draws on a wider literature on the determinants of international migration and a smaller literature that focuses specifically on modelling asylum applications. In the next section, we outline the trends in asylum applications to Australia in comparison with other developed countries. This is followed by a short survey of quantitative analysis of refugee movements and asylum applications. We then present a brief outline of the asylum policies in Australia and elsewhere, particularly in Europe. Our index of asylum policies in 19 Organisation for Economic Co-operation and Development (OECD) countries is then explained, before presenting fixed effects regression estimates of annual data on asylum applications by origin and destination. We then estimate the effects of asylum policies and explore differences between Australia and the other 18 destinations. Finally, we evaluate the effects of a few key variables and conclude with a brief discussion.

Comparative trends in asylum applications

The total number of asylum claims has fluctuated over the last two decades. Figure 9.1 shows total annual applications to what the United Nations High Commissioner for Refugees (UNHCR) defines as 'industrialized countries'. These are applications by asylum seekers who arrived spontaneously. They almost always applied for asylum within the destination country or at its border, having arrived by any mode of arrival (boat, air or by land). The total number of applications made in these countries peaked at over 850,000 in 1992; after some decline it reached a second peak of more than 600,000 between 2000 and 2002. Total applications declined to their lowest point of 300,000 in 2006 before rising again to 600,000 in 2013.

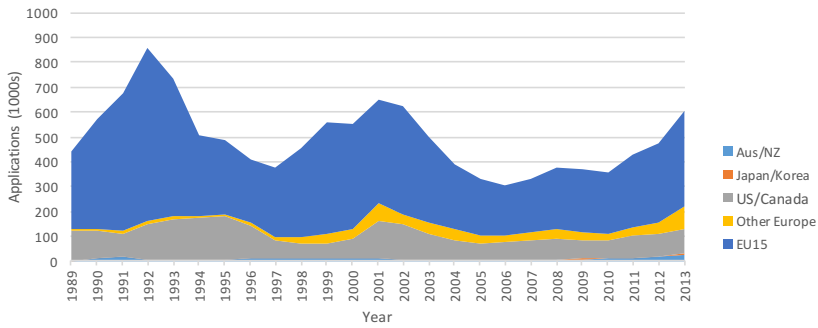

Figure 9.1: Asylum applications to 38 countries by region of asylum, 1989–2013

Sources: 1989–2000 from UNHCR, *Statistical yearbook* (2001), Table C1; 2001–13 from UNHCR, *Asylum levels and trends in industrialized countries* (2005; 2009; 2013), Table 1.

Note: The EU-15 is the pre-2004 membership: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the UK.

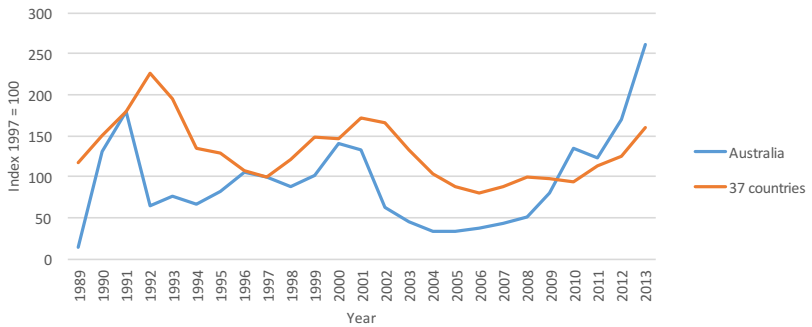

Figure 9.2: Asylum applications to Australia and 37 industrialised countries (1997 = 100)

Sources: As Figure 9.1.

Figure 9.1 also shows that the overwhelming majority claimed asylum in Europe. More than half of all applications in Europe were lodged in Germany (28 per cent), the UK (12 per cent) and France (11 per cent). It is difficult to see in Figure 9.1 how fluctuations in applications to Oceania compare with Europe and North America. Over the whole period the number of spontaneous applications (or onshore applications) in Australia amounted to 2 per cent of the 38-country total. Figure 9.2 displays an index of asylum applications to Australia, where 1997=100, comparing this with the total for the other 37 countries. Over much of the period, fluctuations in asylum applications to Australia are largely mirrored by

the number of applications received elsewhere. However, applications to Australia gradually increased after 1992, while the total for the 37 other countries fell. And after 2001, Australian applications fell faster to the middle of the decade and then increased more steeply to 2013.

Table 9.1: Asylum applications to Australia and 18 other destination countries (total), 2004–12

Applications to Australia, 2004–12			
Top 40 origin countries			
China	18,157	Nigeria	524
Afghanistan	8,046	Thailand	455
India	6,539	P N Guinea	448
Sri Lanka	6,263	Libya	442
Iran	5,701	Syria	409
Pakistan	4,664	Palestinian	402
Iraq	3,395	Serbia	392
Malaysia	2,940	Ethiopia	384
Indonesia	2,867	Colombia	376
Fiji	2,574	Tonga	350
Egypt	2,185	Jordan	325
Bangladesh	2,014	Mongolia	322
Lebanon	1,906	Kenya	305
Zimbabwe	1,745	Albania	252
Nepal	1,637	Russia	240
Korea	1,231	El Salvador	236
Philippines	894	Ghana	235
Turkey	873	S. Africa	198
Vietnam	816	Israel	174
Myanmar	684	Ukraine	152
% of total	86.3	% of total	7.6

Applications to 18 other countries, 2004–12			
Top 40 origin countries			
Serbia	277,554	Algeria	47,590
Russia	222,424	India	47,056
Iraq	193,980	Colombia	41,550
China	183,977	C. d'Ivoire	33,973
Afghanistan	159,695	Zimbabwe	32,247
Somalia	126,462	Ethiopia	31,389
Turkey	112,404	Bosnia	30,415
Nigeria	108,295	El Salvador	30,193
Iran	101,003	Sudan	29,491
Sri Lanka	89,311	Azerbaijan	28,666
Pakistan	87,964	Albania	28,557
D.R. Congo	85,277	Cameroon	26,245
Eritrea	84,487	Mauritania	24,314
Mexico	74,434	Guatemala	22,677
Haiti	72,917	Vietnam	22,469
Armenia	61,122	Mongolia	21,903
Syria	60,174	Moldova	21,776
Georgia	58,898	Ukraine	20,656
Bangladesh	53,465	Congo	20,152
Guinea	48,914	Angola	20,104
% of total	66.7	% of total	17.1

Source: UNHCR (2014). Has since been replaced online by UNHCR population statistics, retrieved from popstats.unhcr.org/en/asylum_seekers.

Notes: Serbia includes Montenegro, Kosovo and Macedonia; Sudan includes South Sudan. Stateless and unknown citizenships are included in total but not listed.

Part of the difference in the trends may be due to asylum policies and economic performance in Australia as compared with other destinations. But it may also be due to differences in the origin-country composition due

to Australia's unique location. To examine the origin-country composition of applications, we focus on 19 major destination countries, which are also those used for the econometric analysis presented below.[1] Table 9.1 shows the origin-country composition of total applications from 2004 to 2012 for Australia and for the aggregate of 18 other destination countries. Over this period, total applications to Australia numbered 87,000, as compared with 3.4 million for the other 18 destination countries. Five of the top 10 countries of origin are the same for Australia as for the 18-country total, and this is likely to account for some of the similarity in the year-to-year movements. Not surprisingly, origin countries in the Asia–Pacific region are much more prominent for applications to Australia than for the other countries.

Analysing refugee and asylum seeker movements

A number of studies have used econometric analysis to explain the number of refugees emanating from a wide range of origin countries, focusing on the origin-country causes of displacement. In a pioneering paper, Schmeidl (1997) analysed the stock of refugees from over 100 countries during the 1970s. She found that the most significant variables were those representing armed conflict, especially genocide and politicide. These variables overshadowed others such as political rights, civil liberties and ethnic tensions. Intervening factors (those that facilitate or impede flight) appeared less important than has sometimes been suggested. Analysing changes over time in the stock of refugees, Davenport, Moore, and Poe (2003) and Moore and Shellman (2004) largely confirmed these findings. Subsequent research has elaborated on these themes. Moore and Shellman (2007) focus on the direction of refugee flights, finding that refugees move to places that are free of conflict, where incomes are higher and where the costs of transit are lower. Melander and Öberg (2006) analyse the persistence in displacements, arguing that the flows tend to decrease when those most able or willing to move have left. They also found that outflows are reduced by regime transition in the origin country but increased by regime collapse.

1 These are: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, France, Germany, Hungary, Ireland, Italy, the Netherlands, Norway, Poland, Spain, Sweden, the UK and the US.

A major theme emerging from these studies is that refugee flights can be understood as depending on the balance between the costs and benefits of leaving as compared with those of staying. This also helps to explain the distinction between cross-border flight and internal displacement. Moore and Shellman (2006) find that civil war, dissident terror and government violence increases the number of refugees relative to the number of internally displaced. This is also consistent with the finding that the wider the spread of violence, the more likely it will generate refugees (Melander & Öberg, 2007). A second generation of studies analyses displacement at the local level. Adhikari (2012) finds that migration from districts in Nepal depends positively on violence and opportunity but negatively on the solidarity of local networks. Studies of Columbia also highlight the individual- and community-level complexities in the choice of whether to leave and where to go (Engel & Ibáñez, 2007; Steele, 2009). Analysing individual-level data for four other Latin American countries, Alvarado and Massey (2010) find that emigration was less likely for those with higher wealth and education but more likely for those with family in the US. These studies serve as a reminder that (a) conditions in origin countries are heterogeneous and may not be well captured by country-wide aggregates, and (b) that some variables may influence both the costs and the benefits of flight.

Several studies have analysed panel data on asylum applications to countries in the developed world. Neumayer (2004) took as the dependent variable the shares for each destination of applicants from each origin country over the years 1982–99. This method nets out common origin-country effects. He found significant positive effects for the level and growth rate of gross domestic product (GDP) per capita in the destination, but a negative influence for the presence of right-wing populist governments. Bilateral links were also found to be highly significant, in the form either of the stock of migrants from the origin country, or deeper drivers such as colonial links, common language and distance. The only policy variable used was the overall recognition rate for the destination. The effect was positive, as expected, but small. Using a similar estimating framework, Thielemann (2006) analysed asylum applications to 20 destination countries for 1985–99. He found that a country's unemployment rate negatively influenced its share of asylum applications, while its foreign-born population had a positive effect. He also used an index of policy, made up of five components, which overall had a negative effect. Examining the

individual components of policy, he found that the impact of refugee integration policies was weak compared with the effects of variables representing refugee status-determination procedures.[2]

Using panel data for 14 destinations for the years 1981–99 and disaggregating applications by origin continent, Hatton (2004) found that relative income, destination unemployment and the cumulative stock of applications were important influences. A composite index of asylum policy toughness based on 11 components gave a significant negative coefficient. This implies that the tightening of policy that occurred over the two decades to 1999 reduced asylum claims in the EU by about 150,000. Hatton (2009) examined the effects of policy on asylum flows from 56 origin countries to 19 destination countries from 1997 to 2009. The overall effect of the round of policy tightening between 2001 and 2006 was to reduce annual asylum applications to these 19 countries by 108,000, or about one third of the total decrease.

Focusing on Australia, Hatton and Lim (2005) made an econometric assessment of asylum applications to Australia together with six other countries: New Zealand, Canada, the US, the UK, France and Germany. They found that the destination country's unemployment rate had no significant effect. The change in Australian asylum policies in 2001 had a larger negative effect than was found for major policy packages in other countries, such as the UK in 2003 and Germany in 2002. Hatton and Lim argued that this was partly because the policy package itself was tougher both in terms of the scope of the changes and their enforcement. It was also partly due to the publicity that was generated, both nationally and internationally, by the Tampa incident. This may have produced a reputation effect that was not reversed by the subsequent easing of policy until the change of government in 2008 (Crock & Ghezelbash, 2010; Hatton, 2011, Ch. 9).

Other studies have focused on individual countries and on specific policies. Controlling for a variety of origin-country variables, Rotte, Vogler, and Zimmermann (1997) found that German policy reform of 1987 and the revision of the Basic Law in 1993 both had large negative effects (see also Vogler & Rotte, 2000). For Switzerland, Holzer, Schneider, and Widmer (2000a, 2000b) also found that policy reform in 1990 had a significant negative effect on applications.

2 See also Thielemann (2004) and Neumayer (2005).

While the studies of European countries have focused on changes in the criteria for asylum and the refugee status determination procedures, another line of enquiry examines the effects of border controls on irregular migration, particularly along the US border with Mexico. Such studies have typically found that greater effort and expenditure on border control had discernible but fairly modest effects on the number of apprehensions and by inference the number of crossings (see for example Hanson & Spilimbergo, 1999; Orrenius, 2006; Cornelius & Salehyan, 2007; Bohn & Pugatch, 2013). Other studies have assessed the impact of visa policies. Cziaka and Hobolth (2014) found that imposing visa requirements reduced asylum applications from an origin to a destination by around half—a similar effect to that found by Neumayer (2010) for all migration. Overall, these studies suggest that policy effects are likely to differ both across countries and between types of policy.

Asylum policy in Australia and other developed countries

Asylum policy in Australia is governed internationally by the 1951 Refugee Convention and in domestic legislation by the *Migration Act 1958* and subsequent acts and amendments. Australia has long operated a refugee settlement program, under which refugees are resettled from refugee populations in the Middle East, Asia and Africa. Since 1991, the quota for the Humanitarian Programme has fluctuated between 12,000 and 20,000 per annum. Spontaneous asylum seekers arriving by sea and by air (the onshore program) were few in number until the 1980s. The policy of mandatory detention for unauthorised boat arrivals (included in the *Migration Act 1958*) was increasingly enforced and extended to all unlawful arrivals in the *Migration Reform Act 1992*. From 1996–97 onwards, onshore grants of asylum were included in the overall target, so that they would effectively reduce the number accepted through the offshore program. A surge of arrivals led to the creation in 1999 of three-year temporary protection visas (TPVs), with much-reduced rights for unauthorised arrivals who qualified for protection.[3] The introduction

3 TPVs provided the right to work and to certain benefits, including Medicare, but they did not confer the right to re-enter Australia once having left, or the right to family reunification. TPV holders were eligible to apply for permanent protection after 30 months, a status that could only be granted if the need for protection was ongoing.

of TPVs was followed by legislation that imposed sanctions on people smugglers and provided for the boarding, search and detention of ships suspected of carrying unauthorised asylum seekers.[4]

Dramatic events followed in September 2001 with the arrival off Christmas Island of a Norwegian freighter the MV Tampa, which had taken on board 433 asylum seekers when their vessel the KM Palapa 1 had got into distress in the open seas. The Tampa was initially refused permission to land the asylum seekers, and there followed a week-long standoff until an agreement was reached by which a third of the passengers were taken to New Zealand and the remainder to Nauru, the latter in exchange for financial support from the Australian Government. A month later, the Australian Government passed six new bills into law. The first two involved the excision of Christmas Island, Ashmore Reef and some other small islands from Australian territory for the purposes of establishing claims to asylum in Australia, and they provided for such arrivals to be processed offshore in Nauru and Papua New Guinea. Applicants who had spent at least seven days in a 'safe' country while in transit were denied eligibility for a permanent protection visa. Another act significantly narrowed the definition of a refugee used in the procedure for determining status.[5] Further measures included harsher penalties for people smuggling offences and limitation of the grounds for judicial review of status determination decisions.

2001 witnessed a severe tightening of asylum policy, although some of the elements were later relaxed, including softening of TPV policy in 2004, and in 2005, time limits were introduced on the processing of asylum claims. In 2007, offshore processing on Nauru and Manus Island was terminated by the incoming government. The detention regime was partially and gradually relaxed, and from 2009, it was used only as a last resort. A further step came in 2008 with the abolition of TPVs so that all those granted protection received permanent visas. Taken together, these measures represent a substantial reversal of the key elements of the 2001 policy framework.[6]

4 Summaries of policy development and timelines are provided by York (2003), Karlsen, Phillips, and Koleth (2010) and Phillips and Spinks (2013).

5 In particular by restricting the interpretation of 'persecution' and of 'particular social groups' membership of which could give rise to a claim for protection.

6 Asylum seekers arriving in Christmas Island or other excised places were only permitted to enter the status determination procedure at the discretion of the Minister and they faced restricted rights of review or appeal.

Unauthorised boat arrivals resumed in 2009 and rose steeply thereafter. In 2010, processing was suspended for boat arrivals from Afghanistan and Sri Lanka, origin countries for a majority of arrivals at Christmas Island. In August 2011, a plan to transfer asylum seekers to Malaysia for processing was rejected by the High Court. In late 2011, some of the unauthorised arrivals were issued with bridging visas and released into community centres. In response to the mounting numbers, the government appointed an Expert Panel on Asylum Seekers, which reported in August 2012. It recommended offshore processing centres on Nauru and Manus Island be reopened. The new government of 2013 embarked on a policy to toughen border controls and to 'push back the boats', to reintroduce TPVs along the lines of the 1999 model, and to introduce a fast track status determination procedure. With this, the policy stance largely reverted to that of 2001.[7]

Since the late 1990s, asylum policies in Europe and North America have been influenced by two developments. The first relates to the broader issue of the securitisation of migration, following the 9/11 attacks. The USA PATRIOT Act, for example, dramatically increased the number of border control agents. An act of May 2002 further strengthened border controls by establishing an integrated database system for arrivals and departures linked to fingerprinting and biometric monitoring. Canada also tightened its border security and an act of 2001 introduced reforms that included detention of asylum seekers without documents.

The second development related to asylum policies in the EU, stemming from the Treaty of Amsterdam (effective 1999), which shifted asylum policies from the level of intergovernmental cooperation to that of community integration.[8] It marked the beginning of the establishment by stages of a common European asylum system (CEAS). The so-called Dublin II Regulation embodied a new mechanism for determining the state responsible for an asylum claim and providing for transfers. The Qualification Directive established a common set of criteria to be used in the refugee status determination procedure, and the Asylum Procedures Directive covered issues such as the treatment of manifestly unfounded claims, rights to interviews, to legal assistance and to appeals as well as common rules for granting subsidiary protection.

7 In some respects, such as offshore processing, recent policies go further than 2001. For example, those on Nauru and Manus Island have no right to resettlement in Australia, even if they are recognised as refugees (see Warbrooke, 2014). On the other hand, families with children who would otherwise be in detention in Australia are now released on bridging visas.

8 Further details on policy developments in Europe are provided in Hatton (2011, Ch. 6, 2012).

While the first stage of the CEAS fell far short of complete harmonisation, it did create some convergence in policy and practice (Thielemann & El-Enany, 2009). The second stage of the CEAS involved deeper cooperation in several areas, in particular the establishment in 2003 of the European Dactyloscopy (EURODAC) fingerprint database of asylum applicants, and in 2005 of the European Agency for the Management of Operational Coordination at the External Borders of the Member States of the European Union (Frontex), to strengthen the EU's external border. These initiatives were carried forward under the third stage of the CEAS from 2009, which also saw, among other things, the establishment of the European Asylum Support Office to support and promote further harmonisation and policy integration.

Despite EU harmonisation, the trends in policy differed widely among individual EU countries. One reason was that most EU regulations set minimum standards that were, initially at least, not binding on most countries. This left room for a considerable tightening of policy from the early 2000s at the national level. The Netherlands, for example, introduced a range of new border controls in 1998 and an act of 2001 restricted the scope of subsidiary protection and limited the right to appeal. A number of EU countries further tightened the processing of manifestly unfounded claims. But not all policy changes were restrictive. For example, a number of countries introduced proactive integration policies, and some, such as Finland in 2006 and Germany in 2007, expanded eligibility for employment.

A quantitative index of asylum policies

A number of attempts have been made to represent asylum policy in one or more quantitative indicators or in the form of a composite index (for a review, see Czaika & de Haas, 2013). Here, we apply a revised and updated version of the policy index used previously by Hatton (2009, 2011). The index includes 15 indicators of asylum policy, divided into three groups. The first group relates to policies that limit access to the destination country's asylum procedures, mainly by preventing potential asylum seekers from reaching the territory. The second relates to the status determination procedure and is intended to capture the likelihood that an applicant gains some form of residency status. The third relates to welfare conditions during and immediately after processing.

Access policies	*Processing polices*	*Welfare policies*
Visa requirements	Definition of a refugee	Permission to work
Border control/security	Humanitarian category	Access to welfare benefits
Trafficking regulations	Manifestly unfounded claims	Detention policy
Carrier sanctions	Expedited procedures	Deportation policy
Application outside country	Scope for appeals	Family reunification

The idea is to capture changes in a country's laws, regulations or practice under each of the 15 categories. These are intended to reflect 'major' changes in policy, i.e. those that amount to significant changes in the conditions facing a substantial share of asylum seekers. In each of the 15 categories, the index increases by one unit when policy becomes significantly tougher, i.e. less advantageous to asylum seekers. If policy becomes significantly more favourable towards asylum seekers, then the index decreases by one unit. As far as can be ascertained, the change is dated as the quarter that it took effect rather than when it was announced or when the legislation was first passed. Inevitably, the policy index developed here is a crude representation of policy developments in Australia and overseas. It takes no account of the differences in the scope and restrictiveness of specific Australian policies in comparison with those of other countries and neither does it account for differences in the way that policy is enforced.

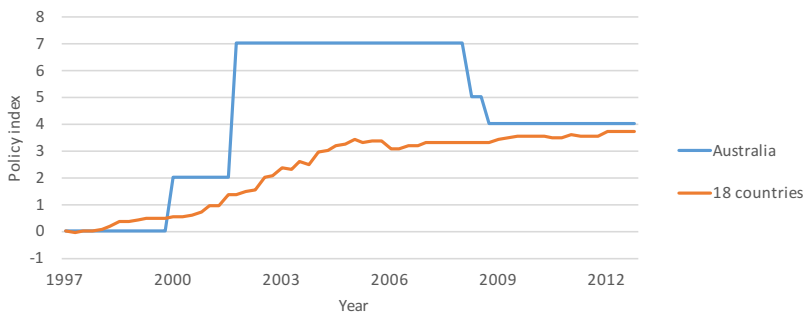

Figure 9.3: Composite policy index, Australia and 18-country average

Source: Authors' calculations, see text.

This 15-component quarterly index starts at zero for each component in the first quarter of 1997 and runs to the last quarter of 2012. Figure 9.3 shows the composite index for Australia compared with the unweighted average for the 18 other countries in the dataset. In keeping with the qualitative account of policy, it shows the steep increase in policy toughness from 1999 to 2001 followed by a partial reversal in 2008–09. The average index for 18 countries shows a fairly steep increase between 2000 and 2006, followed by a levelling off. However, this is an average of very diverse trajectories across different countries. Over the period as a whole there was a dramatic tightening of policy in the UK and Denmark and to a lesser extent Norway, Ireland, Switzerland and the Netherlands. By contrast, policy eased in Sweden and the Czech Republic and was little changed in Poland, Spain, Canada and Germany (see Hatton & Moloney, 2015).

Econometric analysis of asylum applications by origin and destination

We create an annual dataset of asylum applications from 48 origin countries to the 19 OECD destinations. The origin countries are those that feature in the top 40 of asylum applications to the 18 destination countries over the period 2004–12, as listed in Table 9.1 (right-hand panel). In addition, we include any others that appear in the top 20 origin countries for applications to Australia (left-hand column of Table 9.1) over the same period (excluding Myanmar which we are forced to drop for lack of key explanatory variables). The data on the number of first instance asylum applications from each origin to each destination are taken from the UNHCR's online database. These are supplemented from the UNHCR's annual report, *Asylum levels and trends in industrialized countries*, in order to extend the series back to 1997. The origin and destination countries included in the analysis are listed in Hatton and Moloney (2015). The particular origin–destination dyads that are included for analysis are those that involve at least 300 applications over the 16 years included in our analysis, 1997–2012. This avoids cases in which there are a large number of dyad-years where the number of applications is zero. This leaves us with 626 origin–destination country pairs out of a possible 48×19=912. We also lose some observations in cases where we are unable to obtain the data for the full period, notably for the years 1997–99, so that the average number of observations per dyad is 15.4.

Apart from the policy index, the other explanatory variables have been widely used in other studies. To capture terror and human rights abuses in origin countries we use the political terror scale, an index ranging from 1 (no terror) to 5 (high terror). We also use the indexes provided by Freedom House, one for civil liberties and one for political rights. These are on a scale of 1 (complete freedom) to 7 (freedom highly restricted). We also include a variable to capture the wars (usually civil wars) that are a prominent feature of many origin countries. Here we use the Uppsala Conflict Data Program (UCDP) index of battle deaths (best estimate), in thousands. For both origin and destination countries, we capture overall living standards with real GDP per capita from the Penn World Tables. The employment situation in destination countries is represented by the OECD harmonised unemployment rate.

We include a measure of the stock of immigrants from each origin country living at each destination. This is the bilateral migrant stock in 2000–01, and it includes only adults aged 25 and over. This is aimed at capturing the diaspora network effect that is well known in the migration literature. In order to reflect previously established communities, we use observations from near the beginning of the period of analysis. While this captures the assistance and encouragement of relatives, often working though family reunification systems and deepening migration corridors, it also reflects deeper fundamentals such as colonial and historic links, and language and cultural affinities. Finally, we also include the distance between the national capitals of each origin and destination pair. The sources of all the variables are listed in Hatton and Moloney (2015).

Table 9.2 shows the results of regressions with fixed effects by origin country. The dependent variable is the log of the number of applications from an origin to a destination (plus one to account for zeros). The first column of Table 9.2 includes a dummy variable for each year but no destination country dummies. Not surprisingly, the diaspora effect is highly significant. Given that origin-country fixed effects are included, this reflects differences in the migrant stock across destinations. As both the dependent variable and the migrant stock are in logs, the coefficient implies that a 10 per cent increase in the stock would increase the flow of asylum applications by 2.7 per cent. The effect of log distance between country capitals is negative and significant, even in the presence of the migrant stock. The result is as would be expected if the cost and difficulty of reaching a destination increases with distance, and it may also reflect the existence of alternatives nearer to the origin country. Every 10 per cent increase in distance reduces applications by more than 5 per cent.

Table 9.2: Asylum applications, origin and destination effects, 1997–2012 (Dependent variable: log asylum applications from origin to destination)

	(1)	(2)	(3)	(4)
Political terror scale	0.214** (4.44)	0.214** (4.48)	0.221** (4.55)	0.200* (1.98)
Civil liberties (Freedom House index)	0.285** (4.81)	0.285** (4.93)	0.290** (4.76)	0.291** (4.70)
Political rights (Freedom House index)	–0.044 (1.07)	–0.044 (1.06)	–0.049 (1.18)	–0.049 (1.18)
Civil war battle deaths (000s)	0.011 (0.64)	0.012 (0.76)	0.010 (0.62)	0.010 (0.60)
Log origin country real GDP per capita	–0.486** (2.19)	–0.517** (2.35)	–0.526** (2.26)	–0.524** (2.25)
Log migrant stock in 2000–01 from origin at destination	0.270** (13.74)	0.226** (8.54)		
Log distance from origin to destination	–0.582** (4.41)	–0.777** (4.07)		
Log destination country GDP per capita	–0.404* (1.82)	0.178 (0.35)	0.082 (0.16)	0.082 (0.16)
Unemployment rate at destination	–0.043** (3.80)	–0.025** (2.22)	–0.025** (2.29)	–0.028* (1.85)
Political terror scale* distance from origin to destination				0.015 (0.26)
Unemployment rate at destination* distance				0.002 (0.19)
Fixed effects (number of FE)	Origin (48)	Origin (48)	Origin*Dest (626)	Origin*Dest (626)
Destination dummies	No	Yes	No	No
Year dummies	Yes	Yes	Yes	Yes
R^2 within	0.28	0.40	0.11	0.12
No. of obs.	9,610	9,610	9,610	9,610

Note: 'z' statistics are in parentheses; significance at 5 and 10 per cent denoted by ** and * respectively. Constant terms and coefficients on destination dummies and year dummies are not reported.

The coefficients on the migrant stock and distance change very little when destination dummies are added in column (2). But one effect of this is to change the coefficient on log destination GDP from negative to positive, although it remains insignificant. The destination dummies are not shown but it is worth noting that, conditional on the other variables, applications to Australia are about half the average for the other 18 countries. The third column includes origin-by-destination fixed effects, and so the migrant stock and distance, which take only one value for

each dyad, drop out. Nevertheless, there is very little change in the other coefficients between columns (1) and (3). Not surprisingly, a large share of these dyad-specific effects is captured in columns (1) and (2) by the migrant stock and distance, and this accounts for the lower R-squared in column (3).

One of the most important origin-country effects is the political terror scale, where an increase of one point on the five-point scale increases asylum applications by about 20 per cent. Of the two Freedom House indexes, only that for civil liberties is significant, in contrast to some previous findings. An increase of one point on the scale (a deterioration in civil liberties) increases asylum applications by nearly 30 per cent. The lack of significance of political rights may reflect the fact that this can potentially cut in both directions: political repression may increase the incentive to leave but at the same time reduce the ability to do so. War deaths provide little additional explanatory power, which may seem surprising in light of large numbers fleeing from civil wars. But these effects are accounted for by the variables that represent human rights abuses and lack of civil liberties. Interestingly, the log of origin-country GDP per capita gives a significant negative coefficient, indicating that the richer (or the less poor) the country, the lower are asylum applications even though poverty may also constrain the ability to migrate. The coefficient implies that a 10 per cent increase in origin-country GDP per capita reduces asylum applications by around 5 per cent.

Although the effect of destination GDP per capita is weak, the destination unemployment rate has a negative effect, as expected. As Australia avoided the recession that began with the global financial crisis (GFC), this could account for the relative rise in applications from 2008. An increase in the unemployment rate in a destination country from, say, 5 to 10 per cent would reduce asylum applications to that country by 12.5 per cent. Although the unemployment rate rose more in other countries than in Australia from 2008 to 2010, this divergence in unemployment rates would account for at most a 5 per cent relative increase in asylum applications to Australia.

It is possible that the effects of 'push' and 'pull' on the number of applications would be attenuated by the cost and difficulty of reaching a destination. One way to test this is to interact some of the key variables with the log of distance. For example, an eruption of human rights abuses could induce refugees to seek the nearest destination. Column (4) in Table 9.2 adds an interaction between the log of distance and the political

terror scale. The coefficient is not negative or significant as the hypothesis would suggest, although the main effect is weakened. A similar argument might be made for destination country effects: the more remote from the origin country the weaker the 'pull' effects would be. But although the interaction between distance and the unemployment rate at destination country is positive, as expected, it is small and insignificant. Other interactions, not reported here, produced similarly insignificant results.

The effects of policy

We add to the basic model the policy indexes discussed earlier. It should be recalled that there is no dyadic dimension to this: for a given destination, our index of policy is the same towards applicants from all origin countries. The first column of Table 9.3 shows that the asylum policy index has a strong negative effect. This is consistent with the results of other studies, which typically found that tougher policies have deterrent effects on the flow of applications that are significantly negative but often modest in magnitude. The coefficient implies that a one-point increase in the overall index reduces asylum applications by around 5 per cent. Column (2) of Table 9.3 includes each of the three components of the index separately. Two of the three have strong negative effects. These are policies on access to territory and more restrictive processing of applications. An increase of one point on one of these indices reduces asylum claims by around 10 per cent. By contrast, the index for 'welfare', which is a rather heterogeneous collection of reception conditions and rights, seems to have no negative effect and perhaps a marginally positive effect. In this respect, the results are consistent those reported previously in Hatton (2009).

A widely used measure of the stance of asylum policy is the recognition rate. The measure used here is the share of all first instance claims that resulted in a positive outcome, either full convention status or acceptance on humanitarian grounds. This is the overall rate for the destination country, so it is not a dyadic variable. One of the pitfalls of using the recognition rate is that it is an outcome variable: it depends not only on policy but also on the merits of the applications considered. In particular, tougher processing rules may deter those with weaker claims, so that the coefficient on the recognition rate could go either way. In order to avoid possible endogeneity, column (3) of Table 9.3 includes the recognition rate lagged one year. As this represents the refugee status determination

procedure, the policy index for processing is omitted. The coefficient is only significant at the 10 per cent level and it suggests a modest effect on applications—an increase of 10 percentage points in the recognition rate raises applications by 1.4 per cent. When the processing index is also included, the latter remains strongly significant, suggesting that the index is a better representation of policy than the recognition rate.

Table 9.3: Asylum applications and policy effects, 1997–2012
(Dependent variable: log asylum applications from origin to destination)

	(1)	(2)	(3)	(4)
Political terror scale	0.221** (4.53)	0.221** (4.57)	0.220** (4.55)	0.159** (2.64)
Civil liberties (Freedom House index)	0.289** (4.74)	0.292** (4.80)	0.290** (4.80)	0.206** (2.09)
Political rights (Freedom House index)	–0.050 (1.21)	–0.049 (1.19)	–0.050 (1.20)	0.019 (0.40)
Civil war battle deaths (000s)	0.010 (0.62)	0.010 (0.64)	0.010 (0.63)	0.009** (3.21)
Log origin country real GDP per capita	–0.533** (2.26)	–0.542** (2.32)	–0.540** (2.32)	–0.941** (3.87)
Log destination country GDP per capita	0.066 (0.12)	–0.122 (0.23)	–0.130 (0.25)	0.421 (0.93)
Unemployment rate at destination	–0.024** (2.14)	–0.024** (2.19)	–0.021* (1.90)	–0.024* (1.79)
Asylum policy index overall	–0.046** (4.03)			
Policy on access		–0.115** (4.12)	–0.130** (3.54)	–0.142** (4.34)
Policy on processing		–0.100** (6.45)		
Policy on welfare		0.049* (1.76)	–0.002 (0.24)	–0.011 (0.46)
Recognition rate (lagged)			0.143* (1.74)	0.099 (0.95)
Visitor visa required				–0.193 (1.63)
Fixed effects (number of FE)	Origin*Dest (626)	Origin*Dest (626)	Origin*Dest (626)	Origin*Dest (626)
Year dummies	Yes	Yes	Yes	Yes
R^2 within	0.12	0.13	0.12	0.15
No. of obs.	9,610	9,610	9,610	5,662

Note: 'z' statistics are in parentheses; significance at 5 and 10 per cent denoted by ** and * respectively. Constant terms and coefficients on year dummies are not reported.

One important issue raised in the literature is the effect of visa requirements, as noted above. The requirement for a visitor visa can be used as a screening device to reduce the number of claims from those entering the destination country from origin countries that are likely to produce asylum applications. The data on visa policy is limited, but Hobolth provides a dataset on visa requirements from each origin country to each destination. Unfortunately, the dataset starts only in 2001 (later for some destinations), and it omits Australia, Canada and Ireland. This reduces the number of available observations by more than 40 per cent. But an even greater limitation is that for 98 per cent of available observations, a visa is required and there are very few within-dyad changes (only 36). The result of adding the dummy variable for visa required is shown in column (4) of Table 9.3, and it gives a negative but insignificant coefficient. The order of magnitude—a reduction of about 20 per cent when a visa is required—is rather smaller than that obtained in other studies (Hatton, 2004; Czaika & Hobolth, 2013).

Of course, the policy effects in Table 9.3 are an average across all destination countries, where a one-point tightening in policy could mean different things. It is worth asking if the policy effects observed here adequately capture the effects of the sharp changes in Australian asylum policies. On one hand, the policy shifts in Australia were more dramatic than elsewhere, and might therefore be expected to have larger effects. But on the other hand, asylum seekers heading for Australia have fewer alternative destinations than those heading for Europe, and as a result the deterrent effect of policies for Australia would be weaker.

In the first column of Table 9.4 we include two dummies for key periods in asylum policy, one for 2002 onwards and another for 2008 onwards. Not surprisingly, the 2002 dummy is large and negative. This is on top of the average policy effect, so the restrictive policies introduced in late 2001 had larger effects than would have been expected based on the experience of other countries. The easing of policy from 2008 had the opposite effect, but its magnitude is not fully offsetting. It should be remembered, however, that our data stops in 2012, and so it does not include the surge of applications in 2013. It is worth noting, however, that these are large effects: a cut of around half in the numbers after 2001, and an increase of around a third from 2008. Column (2) of Table 9.4 shows that the results are similar when the three components of the policy index are entered separately, although the 2008 dummy is no longer significant.

Table 9.4: Asylum applications and policy effects, 1997–2012
(Dependent variable: log asylum applications from origin to destination)

	(1)	(2)	(3)	(4)
Political terror scale	0.222** (4.56)	0.222** (4.59)	0.223** (4.55)	0.222** (4.58)
Civil liberties (Freedom House index)	0.287** (4.70)	0.292** (4.75)	0.287** (4.70)	0.289** (4.76)
Political rights (Freedom House index)	–0.049 (1.18)	–0.048 (0.64)	–0.049 (0.63)	–0.049 (1.16)
Civil war battle deaths (000s)	0.010 (0.63)	0.010 (0.64)	0.010 (0.63)	0.010 (0.64)
Log origin country real GDP per capita	–0.537** (2.32)	–0.545** (2.33)	–0.537** (2.27)	–0.545** (2.33)
Log destination country GDP per capita	0.020 (0.04)	–0.145 (0.28)	0.028 (0.05)	–0.141 (0.27)
Unemployment rate at destination	–0.026** (2.25)	–0.026** (2.30)	–0.026** (2.35)	–0.026** (2.35)
Asylum policy index overall	–0.039** (3.24)		–0.040** (3.54)	
Policy on access		–0.099** (2.76)		–0.100** (2.80)
Policy on processing		–0.094** (5.79)		–0.095** (5.92)
Policy on welfare		0.054* (1.88)		0.053* (1.89)
Dummy: Australia from 2002	–0.513** (3.84)	–0.457** (2.99)		
Dummy: Australia from 2008	0.384** (2.03)	0.300* (1.76)		
Policy index overall* Australia dummy			–0.075** (3.40)	
Policy on access* Australia dummy				–0.097 (0.83)
Policy on processing* Australia dummy				–0.095 (1.25)
Fixed effects (number of FE)	Origin*Dest (626)	Origin*Dest (626)	Origin*Dest (626)	Origin*Dest (626)
Year dummies	Yes	Yes	Yes	Yes
R^2 within	0.12	0.13	0.13	0.13
No. of obs.	9610	9610	9610	9610

Note: 'z' statistics are in parentheses; significance at 5 and 10 per cent denoted by ** and * respectively. Constant terms and coefficients on year dummies are not reported.

Columns (3) and (4) investigate the issue of whether these shifts reflect stronger policy effects in Australia than in other destination countries. In column (3), the overall policy index is interacted with a dummy variable for Australia. The significant negative coefficient supports the idea that Australian policies had stronger effects than the average of other countries. Column (4) adds interactions for the two most important policy components, access and processing. Here, both interactions are negative, implying effects that are twice as large as the average for the other countries, but neither is significant, probably due to multicollinearity.

Counterfactual analysis

It is worth briefly illustrating what the regression results imply for individual countries in the dataset. We first look at the effects of changes in terror and civil liberties on the number of applications from certain origin countries. The method is to predict the change in applications to all destination countries over a period that is accounted for by the political terror scale and the Freedom House index of civil liberties in a particular origin country. The coefficients used in the prediction are from column (2) of Table 9.4. The predicted percentage changes in applications from 2000 to 2006 and from 2006 to 2012 are reported in Table 9.5. These countries are the top 20 origins of asylum applications to Australia (listed in the left-hand column of Table 9.1), with the addition of Syria and exception of Myanmar. However, the prediction is for the change in applications to all 19 destination countries, not just Australia.

Table 9.5: Predicted change in asylum applications due to political terror and civil liberties (percentage)

Country	2000–06	2006–12	Country	2000–06	2006–12
China	–9.2	0.6	Egypt	31.2	–16.8
Afghanistan	43.4	10.0	Bangladesh	29.5	–8.1
India	–7.9	13.2	Lebanon	–24.3	1.2
Sri Lanka	12.9	–17.2	Zimbabwe	78.2	–9.1
Iran	12.2	1.0	Nepal	27.3	–26.6
Pakistan	12.4	26.2	Korea	–8.0	1.4
Iraq	–24.8	–19.2	Philippines	0.2	0.8
Malaysia	–14.4	3.2	Turkey	–43.6	21.0
Indonesia	–39.9	0.6	Vietnam	–18.9	15.5
Fiji	–13.3	2.5	Syria	–23.9	112.3

Source: Authors' calculations, based on column (2) of Table 9.4.

Not surprisingly, the patterns are very different across origin countries. From 2000 to 2006, the number of applications from Afghanistan is predicted to increase by 43.4 per cent, and those from Zimbabwe by 78.2 per cent, solely due to the rise in terror and the decrease in civil liberties. On the other hand, these two variables predict substantial decreases in applications from Indonesia and Turkey. Over the period 2006 to 2012, there are again some negative and some positive predictions, notably the dramatic increase in predicted applications from Syria. As the scale and timing of these events varies widely between origin countries, their effects on total applications to any given destination are to some degree offsetting, and the overall impact is muted. For applications to Australia from the origin countries in our database, the overall effects of changes in terror and civil liberties is to decrease asylum applications by 9.1 per cent from 2000 to 2006 and to increase them by 6.5 per cent from 2006 to 2012.

The effects of asylum policies can be assessed by applying the same method to destination countries. The predictions in Table 9.6 are based on changes in policy on access and policy on the processing of asylum claims. For Australia, prediction (1) is based on the two policy indexes only. Based on those coefficients, the tightening of policy in the early 2000s is predicted to have reduced asylum claims by 28.7 per cent between 2000 and 2006, while the easing of policy at the end of the decade increased applications by an estimated 19.4 per cent. If, in addition, we include the effects of the dummy variables for 2002 onwards and 2008 onwards (prediction 2), the effects are greater than 50 per cent in both directions.

Table 9.6: Predicted change in asylum applications due to policy on access and processing (percentage)

Country	2000–06	2006–12	Country	2000–06	2006–12
Australia (1)	–28.7	19.4	Ireland	–14.1	1.8
Australia (2)	–53.6	59.6	Italy	–11.5	2.9
Austria	–27.7	–2.0	Netherlands	–27.1	1.4
Belgium	–8.7	0.9	Norway	–9.1	–12.2
Canada	–13.5	–8.1	Poland	3.5	–4.9
Czech Rep	–5.1	1.8	Spain	–9.5	3.0
Denmark	–26.5	5.8	Sweden	33.3	4.0
France	–16.8	11.2	Switzerland	–9.0	–18.0
Germany	–1.5	0.7	UK	–43.4	–8.5
Hungary	–6.1	–0.9	US	–8.5	–11.5

Source: Authors' calculations, based on column (2) of Table 9.4.

There is considerable diversity in the effects of policy in other countries. Table 9.6 shows that the severe tightening of policy in the UK between 2000 and 2006 predicts a reduction in applications of 43.4 per cent, while the tightening in Austria, Denmark and the Netherlands predict reductions of more than 20 per cent. By contrast, the easing of policy in Sweden is predicted to increase applications by a third. In 2006–12, applications in France are predicted to increase by 11.2 per cent, while declines of more than 10 per cent are predicted for Norway, Switzerland and the US, although the magnitude and variation in policy effects is less than for 2000–06. For the 18 countries excluding Australia, the predicted policy effect was to reduce applications overall by 11.5 per cent in 2000–06 and by 2.2 per cent in 2006–12.

Discussion

Consistent with our expectations, we find that terror, oppression and human rights abuse are the most powerful drivers of asylum applications from origin countries. Among the measures of origin-country political and social conditions, the political terror scale has a strong positive effect, while lack of civil liberties also has a positive effect. Origin country GDP per capita has a negative effect on the number of asylum claims, while destination country unemployment rates also have negative effects. Differences in unemployment trends since the recession account for only a small part of the relative increase in applications to Australia. Finally, destination country policy has a negative deterrent effect, but only through access and processing policies, not through welfare policies. These policies have significant deterrent effects, but they do not fully capture the impact of shifts in Australian policy after 2001 and again after 2007.

While the results obtained here are fairly robust, they come with several caveats. One is that we model flows as depending on conditions only in the origin and destination countries. This does not account for the effects of conditions in third countries, and particularly in transit countries. Although our approach sidesteps the heterogeneity across origin and destination country pairs, it may still be vulnerable to biases arising from within-pair endogeneity. Second, there is a great deal of heterogeneity in the circumstances that lead to asylum claims, which cannot be captured in aggregate-level analysis. As a result, we explain only a small proportion of the year-to-year variation in individual origin-to-destination streams.

The indicators that we use to explain migration flows are measured at the country level and do not capture within-country differences in the forces that drive asylum applications, for example between regions or ethnic groups. And third, for reasons outlined above, our policy index is inevitably a crude representation of the often subtle shifts in asylum policies.

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