Article

Migration and Asylum Flows to Germany: New Insights into the Motives

Appendix A: Overview tables

Table A1. Inflows of foreign born population by nationality (2007-2017)

In thousands

Germany

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Romania	42.9	48.2	57.3	75.5	97.5	120.5	139.5	198.7	221.4	222.3	230.6
Poland	140.0	119.9	112.0	115.6	164.7	177.8	190.4	192.2	190.8	160.7	149.7
Bulgaria	20.5	24.1	29.2	39.8	52.4	60.2	60.9	80.1	86.3	83.0	81.6
Syria	1.7	2.0	2.3	3.0	4.6	8.5	19.0	69.1	309.7	179.4	76.4
Croatia	8.4	8.7	9.1	10.2	11.5	12.9	25.8	46.1	61.0	62.1	58.6
Italy	18.2	20.1	22.2	23.9	28.1	36.9	47.5	56.7	57.2	52.6	51.5
Hungary	22.2	25.2	25.3	29.3	41.1	54.5	60.0	58.8	58.1	51.6	48.1
Turkey	26.7	26.7	27.2	27.6	28.6	26.2	23.2	22.1	23.7	28.6	33.7
India	9.4	11.4	12.0	13.2	15.4	18.1	19.5	22.4	26.1	27.7	29.5
Iraq	5.0	8.9	13.1	9.5	7.5	6.7	5.2	7.1	64.8	68.0	27.6
China	13.6	14.3	15.4	16.2	18.3	19.7	22.4	23.2	25.5	26.6	26.6
Greece	8.0	8.3	8.6	12.3	23.0	32.7	32.1	28.8	28.3	27.1	26.1
Serbia	..	5.4	7.0	16.7	16.5	22.1	27.3	38.4	39.7	22.9	24.5
Bosnia-Herzeg.	6.4	6.2	6.1	6.9	9.5	12.2	15.1	20.7	21.7	22.4	24.0
United States	17.5	17.5	17.7	18.3	20.1	19.6	20.5	20.5	21.1	20.7	21.1
Other countries	234.4	227.1	241.7	265.6	302.9	337.4	399.7	457.9	780.8	663.4	474.5
Total	**574.8**	**573.8**	**606.3**	**683.5**	**841.7**	**965.9**	**1 108.1**	**1 342.5**	**2 016.2**	**1 719.1**	**1 384.0**

Source: International Migration Outlook 2019 - © OECD 2019; Table B.1

Statistical Annex

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Table A2. Inflows of asylum seekers by nationality (2008-2018)

Germany

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Syria	775	819	1 490	2 634	6 201	11 851	39 332	158 657	266 248	48 970	44 165
Iraq	6 836	6 538	5 555	5 831	5 352	3 958	5 345	29 784	96 115	21 930	16 330
Iran	815	1 170	2 475	3 352	4 348	4 424	3 194	5 394	26 426	8 610	10 855
Nigeria	561	791	716	759	892	1 923	3 924	5 207	12 709	7 810	10 170
Turkey	1 408	1 429	1 340	1 578	1 457	1 521	1 565	1 500	5 383	8 025	10 160
Afghanistan	657	3 375	5 905	7 767	7 498	7 735	9 115	31 382	127 011	16 425	9 945
Eritrea	262	346	642	632	650	3 616	13 198	10 876	18 854	10 225	5 570
Somalia	165	346	2 235	984	1 243	3 786	5 528	5 126	9 851	6 835	5 075
Russia	792	936	1 199	1 689	3 202	14 887	4 411	5 257	10 985	4 885	3 940
Georgia	232	560	664	471	1 298	2 336	2 873	2 782	3 448	3 080	3 765
Guinea	199	237	229	281	428	1 260	1 148	662	3 458	3 955	2 870
Pakistan	320	481	840	2 539	3 412	4 101	3 968	8 199	14 484	3 670	2 210
Albania	63	49	39	78	232	1 247	7 865	53 805	14 853	3 775	1 875
Azerbaidjan	360	652	469	646	547	905	1 192	1 335	4 573	3 030	1 785
Moldova	14	36	41	21	30	68	255	1 561	3 346	890	1 780
Other countries	8 626	9 884	17 493	16 479	27 749	45 962	70 159	120 373	104 620	46 195	31 435
Total	**22 085**	**27 649**	**41 332**	**45 741**	**64 539**	**109 580**	**173 072**	**441 900**	**722 364**	**198 310**	**161 930**

Table A3: ICRG Variables used

ICRG variables used	ICRG point range	Approx. value of 1 ICRG point
Socioeconomic Conditions	0-12	8 percentage points
Sub-categories		
Consumer Confidence	0-4	20 percentage points
Unemployment	0-4	20 percentage points
Poverty	0-4	20 percentage points
Political Risk (polrisk)	0-18	5 percentage points
Robust sub-categories		
Internal Conflict	0-12	8 percentage points
Ethnic Tensions	0-6	14 percentage points
(Military in Politics)	0-6	14 percentage points
Non-robust sub-categories		
External Conflict	0-12	8 percentage points
Government Stability	0-12	8 percentage points
Religious Tensions	0-6	14 percentage points
Law and Order	0-6	14 percentage points

Note: An important assumption is that the point range is chosen in such a way as to guarantee about
equal distance between the points. 0 (minimum score) is 'very high risk; maximum score is 'very low risk'.
Moving up the scale implies an improvement of the condition.
It is more informative to look at sub-categories rather than aggregate categories. As to political risk factors we neglected external conflict, religious tensions, government stability, corruption as they were correlated with internal conflict, ethnic tensions and military in politics.   Internal conflict and ethnic tensions were always significant determinants of (asylum) migration flows; military in politics not always.

Table B1. Determinants of migration (all countries and sub-groups)

Table B1   Determinants of migration using sub-samples and the sub-components of the ICRG variables

Dependent variable:	(1)	(2) Immigration-EU	(3) Immigration-	(4)	(5)
Immigration to Germany Explanatory variables (all lagged)	Immigration	only	Non-EU	High Inflow	China & India
Accumulated migration stock in logs	0.708***	0.804***	0.610***	1.065***	-0.285
(Network effect)	(0.002)	(0.003)	(0.003)	(0.003)	(0.180)
Population pressure	0.026***	0.009***	-0.027***	-0.063***	0.649**
	(0.001)	(0.001)	(0.001)	(0.002)	(0.252)
Relative per capita income	-0.016***	-0.025***	-0.012***	-0.060***	-0.148***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.015)
ICRG rating poverty	-0.142***	0.334***	-0.051***	1.043***	-0.091***
	(0.002)	(0.006)	(0.002)	(0.010)	(0.030)
ICRG rating unemployment	-0.053***	-0.053***	-0.158***	0.129***	0.019
	(0.001)	(0.001)	(0.001)	(0.002)	(0.027)
ICRG rating consumer confidence	-0.044***	0.103***	-0.104***	-0.154***	-0.021
	(0.001)	(0.002)	(0.001)	(0.002)	(0.016)
ICRG rating ethnic tensions	-0.188***	-0.445***	-0.098***	-0.966***	-0.102***
	(0.001)	(0.003)	(0.001)	(0.004)	(0.034)
ICRG rating internal conflict	-0.065***	-0.262***	0.067***	-0.107***	0.006
	(0.001)	(0.001)	(0.001)	(0.001)	(0.009)
Average temperature, in celsius	-0.012***	0.130***	-0.008***	0.075***	-0.027
	(0.001)	(0.001)	(0.001)	(0.001)	(0.023)
Average precipitation, in mm	0.001***	0.003***	0.004***	0.001***	0.003***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Share of migration to other c. (bias control)	-2.645***	-1.146***	-2.536***	-1.316***	-20.425***
	(0.016)	(0.027)	(0.023)	(0.030)	(2.478)
Observations	1,968	405	1,563	120	30
Number of origin countries	134	27	107	8	2
Origin fixed effects	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes
Pseudo-R^2 (not adjusted for df)	0.958	0.973	0.926	0.944	0.993

Note: Standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$; period: 2001-2017; EU comprises all 27 EU member states (including the UK who was still an EU member in this time period; excluding Germany); non-EU comprises the rest (107 countries).

High inflow ('hinflow') countries are: Romania, Poland, Bulgaria, Croatia, Italy, Hungary, Greece, Turkey, Serbia and Montenegro, Bosnia and Herzegovina. China and India are medium inflow ('minflow') countries.

Table B2. Determinants of asylum migration (robustness checks)

Dependent variable:	(1)	(2)	(3)	(4)
				Asylum
Asylum applications	Asylum	Asylum	Asylum	recognized
Explanatory variables (all lagged by 1 period)	Baseline	robust	robust	robust
Recognition rate	0.017***	0.017***	----	0.034***
	(0.000)	(0.000)		(0.000)
Accumulated migration stock (log)	0.210***	0.210***	-0.199***	-0.541***
	(0.005)	(0.005)	(0.006)	(0.021)
Population pressure	-0.016***	-0.016***	0.055***	0.276***
	(0.004)	(0.004)	(0.004)	(0.019)
Relative per capita income	-0.140***	-0.140***	-0.052***	-0.238***
	(0.001)	(0.001)	(0.001)	(0.003)
ICRG rating consumer confidence	-0.050***	-0.050***	-0.087***	-0.145***
	(0.003)	(0.003)	(0.003)	(0.011)
ICRG rating unemployment	-0.033***	-0.033***	-0.034***	0.253***
	(0.004)	(0.004)	(0.004)	(0.016)
ICRG rating poverty	0.374***	0.374***	0.095***	0.327***
	(0.006)	(0.006)	(0.007)	(0.043)
ICRG rating ethnic tensions	-0.122***	-0.122***	-0.028***	-0.208***
	(0.003)	(0.003)	(0.003)	(0.014)
ICRG rating internal conflict	-0.034***	-0.034***	-0.093***	-0.287***
	(0.001)	(0.001)	(0.002)	(0.004)
Average temperature	0.216***	0.216***	0.253***	-0.015
	(0.004)	(0.004)	(0.004)	(0.013)
Average precipitation	0.021***	0.021***	0.017***	0.003***
	(0.000)	(0.000)	(0.000)	(0.001)
Bias control 1: Share of asylum in other European destinations	-3.353***		-1.581***	-15.267***
	(0.041)		(0.044)	(0.135)
Bias control 2: Share of asylum in transit countries		8.042***		
		(0.099)		
Recognized asylum seekers (log)			0.378***	
			(0.002)	
Observations	1,447	1,447	677	1,096
Number of origin countries	115	115	63	74
Origin fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Pseudo-R^2 (not adjusted for degrees of freedom)	0.912	0.912	0.910	-

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1; period: 2001-2017; the recognition rate (col. 1) is the share of positive asylum decisions in total decisions (negative and closed) and it is worthwhile to point out that asylum decisions are not equivalent to asylum applications/requests/claims; col. 2 replaces the share of asylum to other European destinations by the share of asylum in transit countries; col. 3 uses the log of recognized asylum seekers in absolute terms instead of the recognition rate; col. 4 uses the number of recognized asylum seekers instead of the number of asylum applications as dependent variable.

Table B3. Determinants of asylum migration in sub-groups ('major' and 'no return policy') of origin countries

Dependent variable:	(1)	(2)	(3)	(4)
Asylum applications	Asylum	Asylum	Asylum	Asylum
	Major	Major	No return policy	No return policy
Explanatory variables (all lagged by one period):				
Recognition_rate	0.018***	0.019***	0.018***	0.019***
	(0.000)	(0.000)	(0.000)	(0.000)
Accumulated migration stock (log)	0.392***	0.040***	0.371***	0.046***
	(0.004)	(0.004)	(0.004)	(0.004)
Population pressure	0.027***	0.413***	0.026***	0.411***
	(0.004)	(0.004)	(0.004)	(0.004)
Relative per capita income	-0.146***	-0.157***	-0.139***	-0.155***
	(0.001)	(0.001)	(0.001)	(0.001)
ICRG rating socioeconomic conditions	0.059***	-0.050***	0.059***	-0.051***
	(0.002)	(0.002)	(0.002)	(0.002)
ICRG rating ethnic tensions	-0.160***	-0.109***	-0.055***	-0.133***
	(0.004)	(0.004)	(0.004)	(0.004)
ICRG rating internal conflict	-0.001	-0.094***	-0.031***	-0.087***
	(0.002)	(0.002)	(0.001)	(0.001)
Interaction: Major*etension	0.093***	-0.000		
	(0.005)	(0.005)		
Interaction: Major*intconflict	-0.080***	-0.002		
	(0.002)	(0.002)		
Dummy for major origin countries	0.000	0.000		
	(0.000)	(0.000)		
Average temperature, in celsius	0.203***	0.089***	0.206***	0.091***
	(0.004)	(0.003)	(0.004)	(0.003)
Average precipitation, in mm	0.023***	0.015***	0.023***	0.015***
	(0.000)	(0.000)	(0.000)	(0.000)
Share of asylum flows to rest of Europe	-0.593***	-0.543***	-0.347***	-0.527***
(bias control)	(0.034)	(0.017)	(0.034)	(0.018)
year_after_2014		1.372***		1.368***
		(0.003)		(0.003)
Interaction: No return policy*etension			-0.045***	0.062***
			(0.005)	(0.005)
Interaction: No return policy*intconflict			-0.078***	-0.053***
			(0.003)	(0.003)
Dummy for no return policy countries			0.000	0.000
			(0.000)	(0.000)
Observations	1,528	1,528	1,528	1,528
Number of origin countries	115	115	115	115
Origin fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Pseudo-R^2 (not adjusted for degrees of freedom)	0.909	0.875	0.909	0.875

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1; period: 2000-2017; Sub-group '*major*': Syria, Iraq, Afghanistan, Bosnia and Herzegovina, Serbia, Macedonia, Albania, Georgia, Russia, Turkey, Somalia, Nigeria, Eritrea, Pakistan; sub-group '*no*

return policy' : India, Pakistan, Bangladesh, Lebanon, Algeria, Egypt, Morocco, Mali, Nigeria, Niger, Ethiopia, Tunisia, Ghana, Guinea, Guinea-Bissau, Burkina Faso, Benin.

Table B4. Determinants of recognition rates (the perspective of decision-making units)

Dependent variable:	(1)	(2)	(3)	(4)
Recognition rates	Recognition	Recognition	Recognition	Recognition
Explanatory variables (all lagged by one period):				
Average recognition rate in	0.012***	0.021***	0.012***	0.019***
all other dest. (excluding Germany)	(0.001)	(0.001)	(0.001)	(0.001)
ICRG rating socioeconomic conditions (aggregate)	0.096***	0.092***	0.119***	0.131***
	(0.014)	(0.012)	(0.015)	(0.014)
ICRG rating ethnic tensions			-0.055***	-0.011
			(0.021)	(0.018)
ICRG rating external conflict			-0.049***	-0.049***
			(0.011)	(0.010)
ICRG rating government stability			-0.034***	-0.119***
			(0.009)	(0.007)
ICRG rating internal conflict			0.004	0.021**
			(0.010)	(0.009)
ICRG rating law and order			-0.151***	-0.259***
			(0.032)	(0.027)
ICRG rating military in politics			-0.186***	-0.089***
			(0.021)	(0.019)
ICRG rating religious tensions			0.011	-0.014
			(0.018)	(0.017)
ICRG rating political factors (aggregate)	-0.090***	-0.078***		
	(0.007)	(0.007)		
year_after_2014		0.239***		0.101***
		(0.018)		(0.020)
Observations	1,448	1,448	1,448	1,448
Number of origin countries	97	97	97	97
Origin fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Time dummy	Yes	Time dummy
Pseudo-R^2 (not adjusted for degrees of freedom)	0.554	0.502	0.556	0.511

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

Table B5. Determinants of asylum requests by recognition groups

Dependent variable:	(1)	(2)	(3)
Asylum applications	Asylum	Asylum	Asylum
	High recog.	Medium recog.	Low recog.
Explanatory variables (all lagged by one period):			
Recognition rate	0.016***	0.017***	0.018***
	(0.000)	(0.000)	(0.000)
Share of asylum mig to rest of Europe	-0.674***	-0.763***	-0.404***
	(0.036)	(0.034)	(0.034)
Accumulated migration stock (log)	0.400***	0.354***	0.382***
	(0.004)	(0.004)	(0.004)
Population pressure	0.016***	0.032***	0.026***
	(0.004)	(0.004)	(0.004)
Relative per capita income	-0.127***	-0.137***	-0.139***
	(0.001)	(0.001)	(0.001)
ICRG rating socioeconomic conditions	0.034***	0.037***	0.051***
	(0.002)	(0.002)	(0.002)
ICRG rating ethnic tensions	-0.136***	-0.210***	-0.093***
	(0.002)	(0.004)	(0.002)
ICRG rating internal conflict	0.055***	-0.057***	-0.037***
	(0.002)	(0.001)	(0.001)
Hrecog*etension	0.054***		
	(0.016)		
Hrecog*intconflict	-0.245***		
	(0.002)		
Dummy for high recognition rates	0.000		
	(0.000)		
Average temperature, in celsius	0.235***	0.207***	0.210***
	(0.004)	(0.004)	(0.004)
Average precipitation, in mm	0.022***	0.023***	0.023***
	(0.000)	(0.000)	(0.000)
year_after_2014			
Mrecog*etension		0.172***	
		(0.005)	
Mrecog*intconflict		0.085***	
		(0.003)	
Dummy for medium recognition rates		0.000	
		(0.000)	
Lrecog*etension			-0.233***
			(0.017)
Lrecog*intconflict			-0.145***
			(0.006)
Dummy for low recognition rates			0.000
			(0.000)

Observations	1,528	1,528	1,528
Number of origin countries	115	115	115
Origin fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Pseudo-R^2 (not adjusted for degrees of freedom)	0.911	0.909	0.909

Standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$; period: 2001-2017

'hrecog' countries: Afghanistan, Iraq, Syria, Eritrea, Somalia

'mrecog' countries: Pakistan, Turkey, Russia, Egypt, Nigeria, Ethiopia, Ghana, Guinea

'lrecog' countries: Bosnia-Herzegovina, Georgia, Macedonia, Guinea-Bissau, Niger, Benin, Mali, India, Morocco