Asylum migration in OECD countries: In the search of lost well-being

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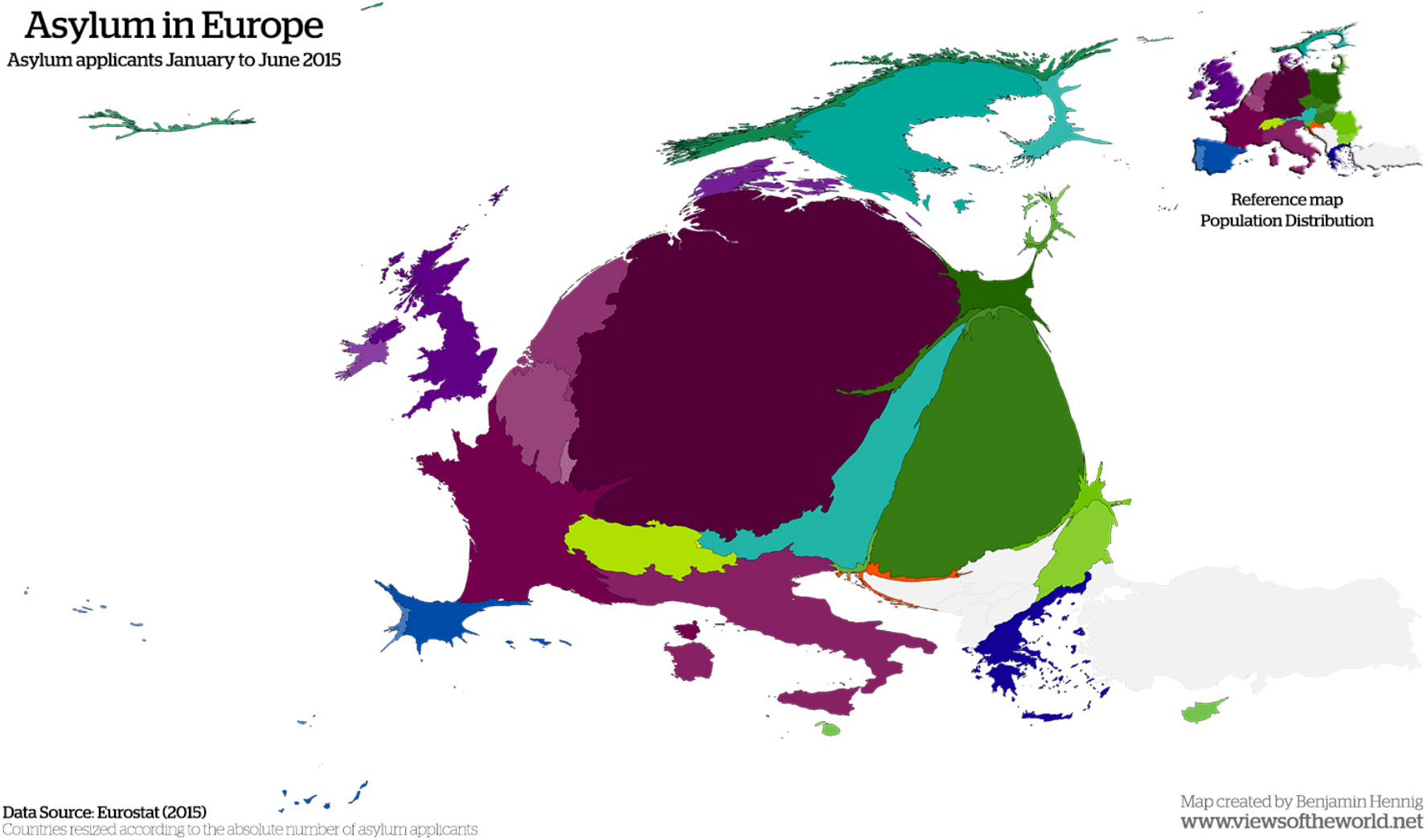
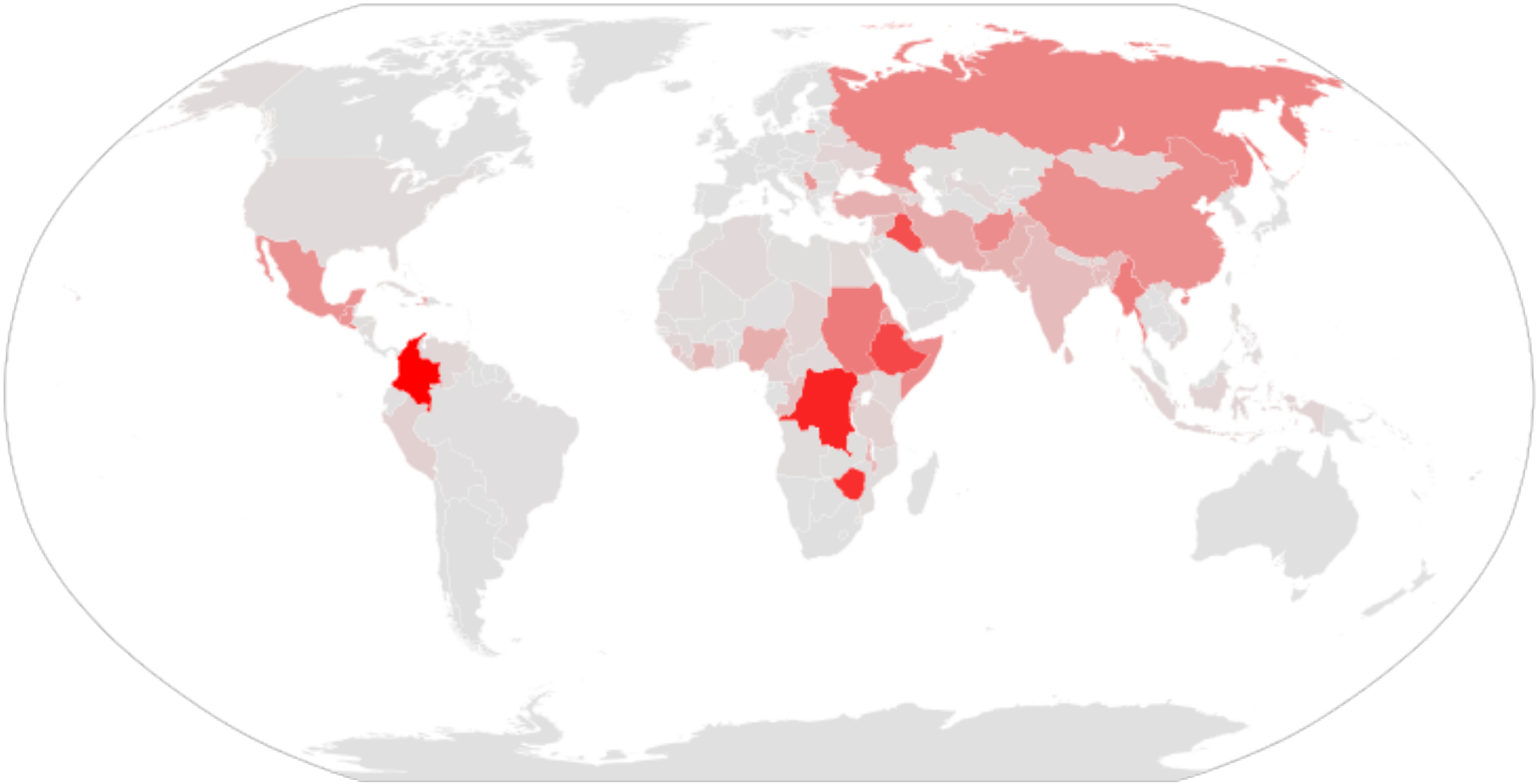
Exodus: Movement of Jah people!

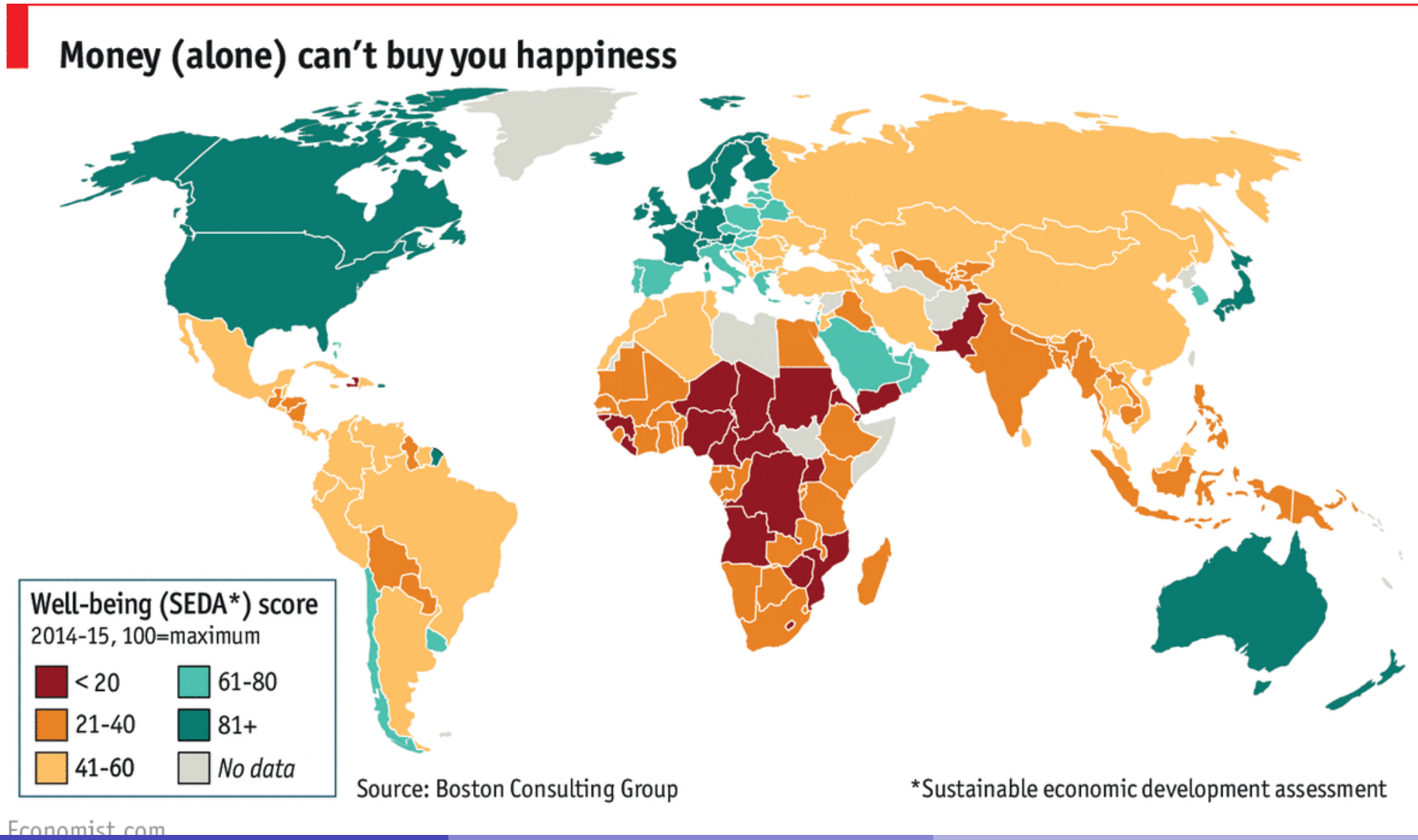
We know where we're going, uh!



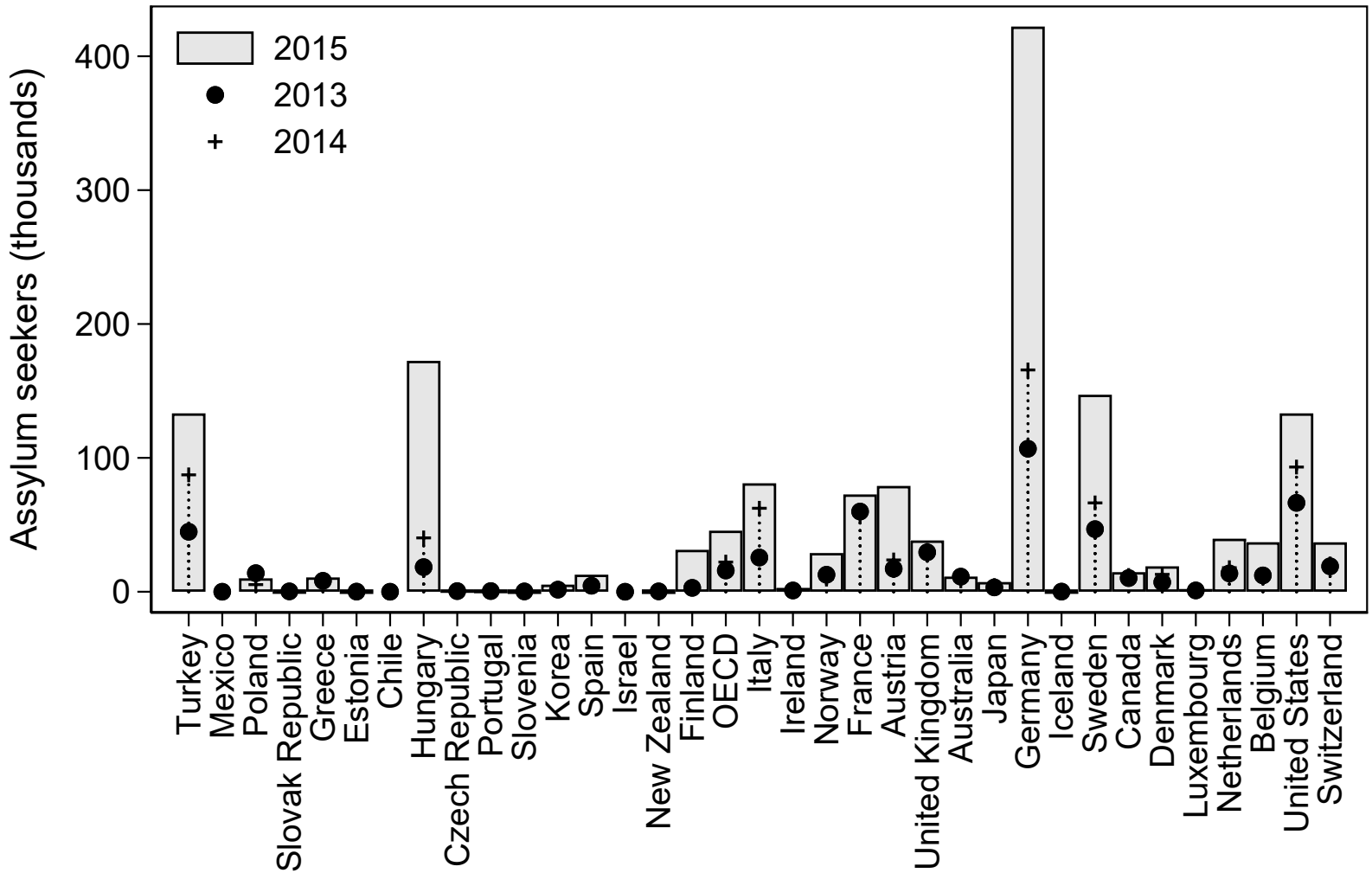
We know where we're from.



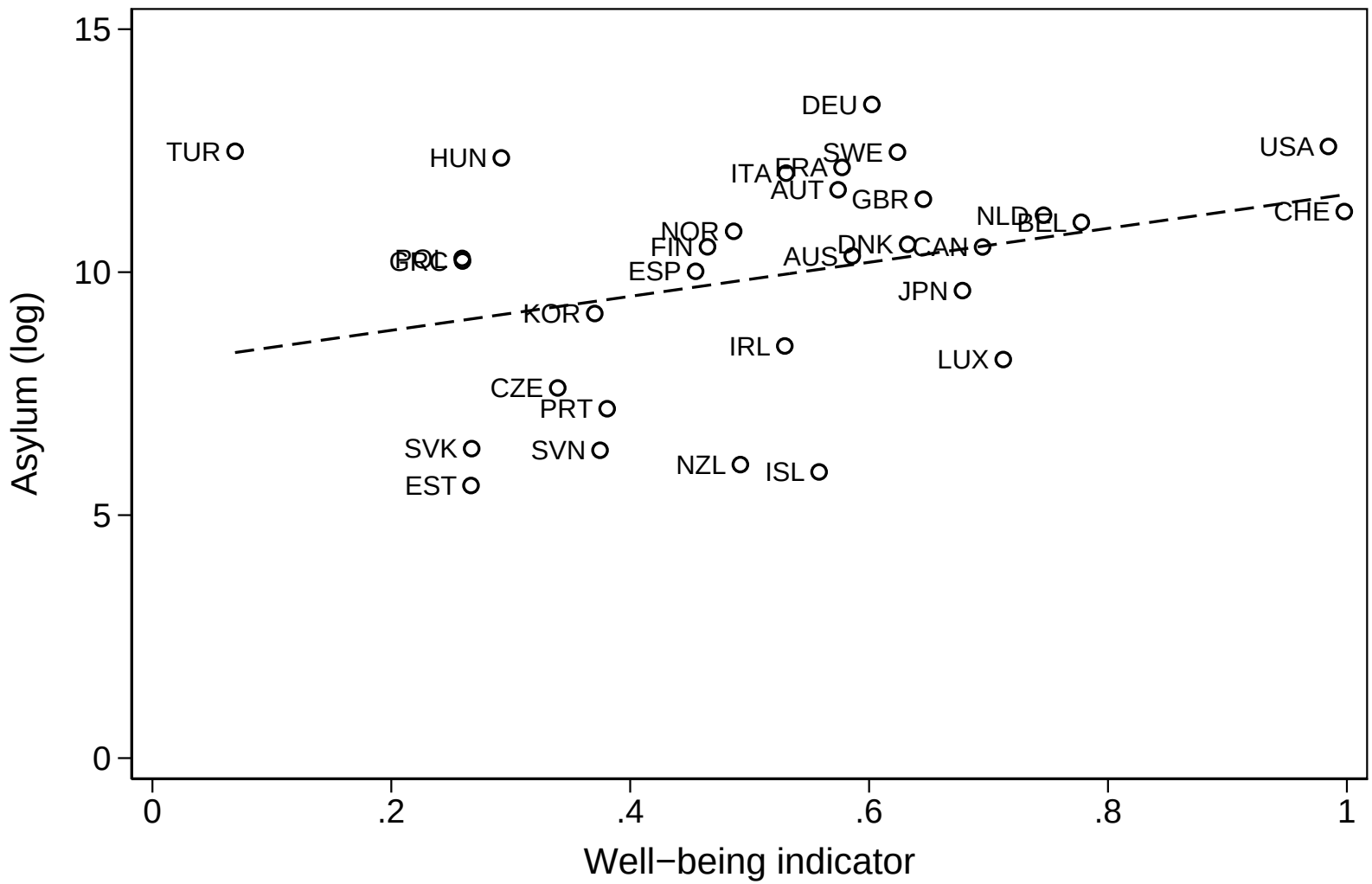
Open your eyes and look within:



Are you satisfied (with the life you're living)? Uh!



We're going to our Father land



Outline

Background

- Why do individuals abandon their home and cross international borders to seek asylum in a foreign destination?
- Standard migration models (Anderson, 2011; Beine et al., 2011; Grogger and Hanson, 2011) present some shortcomings when it comes to explain forced migration (i.e., refugees and asylum seekers), which elude wage considerations.
  - distress-driven migration (Missirian and Schlenker, 2017a)
  - Temperature, floods or earthquakes (Feng et al., 2010; Gray and Mueller, 2012; Yang, 2008; Missirian and Schlenker, 2017b)
  - politics, oppression and violence in source countries (Davenport et al., 2003; Hatton, 2009; Moore and Shellman, 2004; Missirian and Schlenker, 2017b; Neumayer, 2005; Schmeidl, 1997)
  - Policies on host countries (Holzer et al., 2000; Neumayer, 2004; Thielemann, 2004, 2006; Vink and Meijerink, 2003).

Determinants of asylum seekers

- well-being determinants of asylum seekers using the gravity equation (Hatton, 2009 EJ, 2016 AER):
  - Origin: terror scale, political rights, civil liberties, wars, income
  - Destination: unemployment, recognition, migration, welfare
  - Bilateral: distance
- Issues:
  - A formal model to explain and derive a gravity equation for asylum flows
    - Empirical bias: Multilateral resistance (time-varying third country effects)
  - Country-specific "crude indicators" of welfare (Hatton, 2009 EJ, p. 211)
    - Decision making: differentials rather than in absolute levels (Ariely, 2009)

Contributions

1. First, we develop a model which:
   1. incorporates well-being explicitly in the migration decision and reduces the uncertainty of the idiosyncratic migration component.
   2. introduces multilateral resistance in bilateral asylum flows.
2. Second, we construct multi-dimensional home and host well-being indices
3. Third, and estimate the effects of well-being on asylum flows controlling for unobserved bilateral heterogeneity, multilateral resistance terms, zero asylum flows and heteroskedastic residuals

The setup

- The prospect asylum seeker faces a discrete menu of host locations; each with an idiosyncratic cost of relocating of $\varepsilon_{ijz} > 1$ and a common bilateral cost to all migrants in the country pair, which are modeled with iceberg cost $\tau_{ij} > 1$.
- An *i*-country asylum seeker assesses the well-being of location j. The well-being gain $\varphi_{ij} > 0$ enters multiplicative in the model and enhances or deters relocation costs.

The decision and the pie

- In line with the relative decision making theory, a rational individual decides to seek asylum in country j if:

$$\varphi_{ij} > \varepsilon_{ijz}\tau_{ij}. \tag{1}$$

- The asylum seeker has a logarithm utility and the observable component of migrant utility is then:

$$u_{ij} = \ln \varphi_{ij} - \ln \tau_{ij}, \tag{2}$$

- the probability that a random migrant select a particular destination is given by the multinomial logit form. The aggregate probability is the proportion of identical migrants from i (except for the values of ε_{ijz}) that choose j. The predicted aggregate flow of asylum seekers from i to j is:

$$A_{ij} = \frac{\varphi_{ij}/\tau_{ij}}{\sum_k \varphi_{ik}/\tau_{ik}} N_i. \tag{3}$$

A structural gravity equation for asylum seekers

$$A_{ij} = \underbrace{\frac{S_j N_i}{N}}_{\text{Frictionless asylum}} \times \underbrace{\frac{\varphi_{ij}/\tau_{ij}}{\Omega_j L_i}}_{\text{Asylum frictions}} . \tag{4}$$

- The second term represents frictions that impede or enhance asylum flows. In a simple two country setup, bilateral migration flows will flow towards destinations with higher wage and well-being differentials with lower travel cost.
- However, multiple alternative destination influence the migration decision. This fact is captured by Ω_j and L_i, whose interpretation is analogous to the multilateral resistance terms in a gravity model of trade (Anderson & van Wincoop, 2003).

Estimation

We use the the Pseudo-Poisson Maximum likelihood (PPML) estimator proposed by Silva and Tenreyro (2006) using Larch's et al. (2017) procedure:

$$A_{ijt} = \exp\left(\beta_1 \ln w_{ijt} + \beta_2 \ln \varphi_{ijt} + \lambda_{ij} + \lambda_{it} + \lambda_{jt}\right) \times \varepsilon_{ijt}.$$

Data

OECD: Asylum seekers
Better Life Index the BLI following the recent guidelines by the Commission on the Measurement of Economic Performance and Social Progress (CMEPSP), based on three domains: material conditions, quality of life and sustainability.

Better Life Index

A composite indicator for better life

- We elaborate a global well-being indicator comparable across economies.
  - Data Envelopment Analysis (DEA) & Multi-Criteria-Decision-Making (MCDM) techniques (Peiró & Picazo, 2018).
    - endogenous weights that maximise each country's well-being relative to the well-being of all other countries in the sample assessed with the same set of weights

$$\textit{Composite indicator dimension } d^*_{c'} = \text{Minimise}_{\lambda_c, S^+_{ic'}} \frac{1}{1 + \frac{1}{I}\sum_{i=1}^{I} \frac{S^+_{ic'}}{\textit{indicator } i_{c'}}}$$

Subject to:

$$x_{c'} \geq \sum_{c=1}^{34} \lambda_c x_c$$

$$\textit{Indicator } i_{c'} = \sum_{c=1}^{34} \lambda_c \textit{indicator } i_c - S^+_{ic'} \quad i = 1, \ldots I$$

$$S^+_{ic'} \geq 0 \quad i = 1, \ldots I$$

$$\lambda_c \geq 0 \quad c = 1, \ldots 34$$

A composite indicator for better life

- Issues with DEA:
  - lack of discriminating power (countries vs dimensions)
  - Idiosyncratic weights
- Combination of DEA with with Multi-Criteria-Decision-Making (MCDM) (Despotis, 2002):

$$\text{Minimise}_{m_c,\omega_i,z} \quad t\frac{1}{34}\sum_{c=1}^{34} m_c + (1-t)z$$

Subject to :

$$\sum_{i=1}^{I} \omega_i \; indicator \; i_c + m_c = composite \; indicator \; dimension \; d_c^* \quad c = 1,...34$$

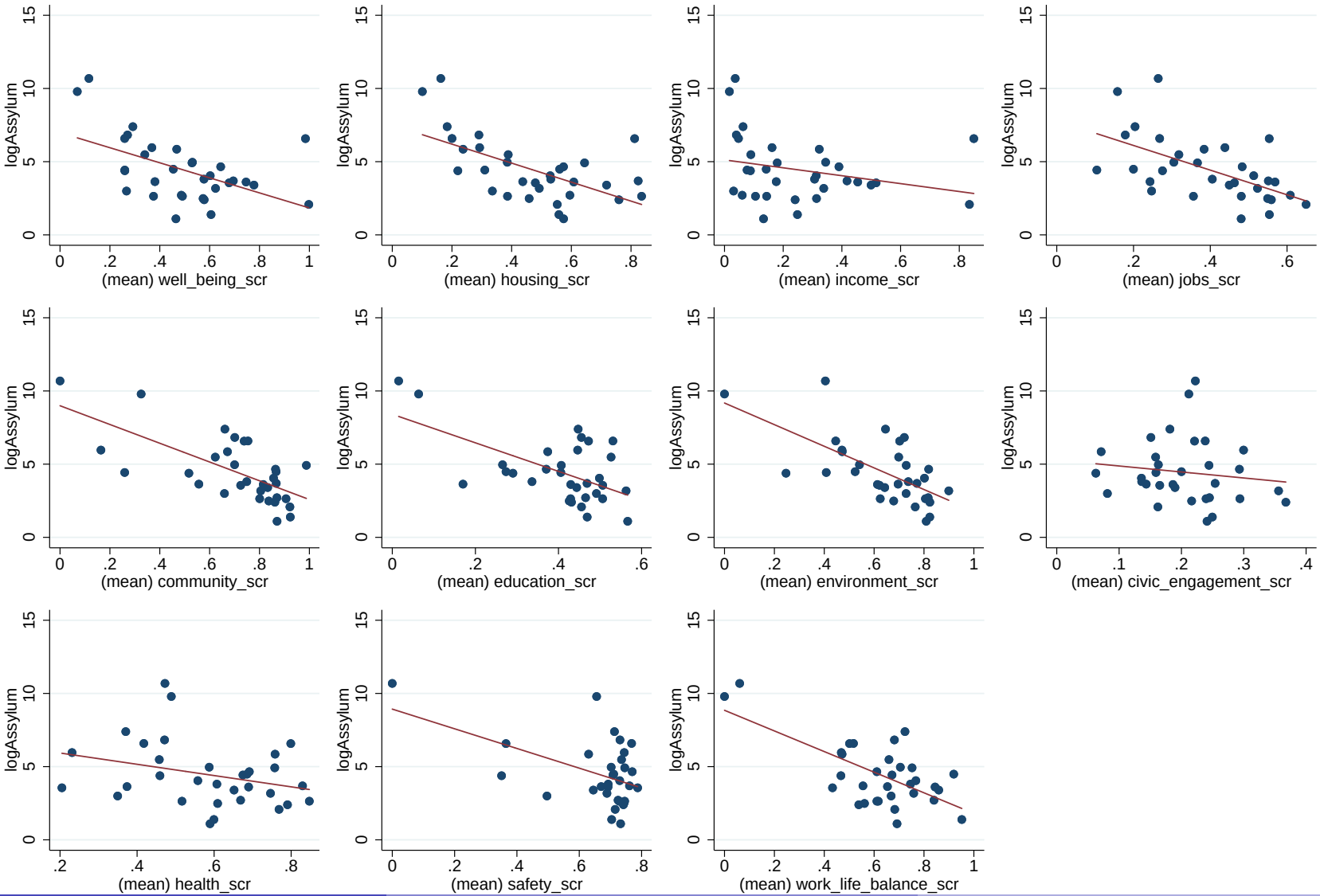
$$(m_c - z) \leq 0 \quad c = 1,...34$$

$$m_c \geq 0 \quad c = 1,...34$$

$$\omega_i \geq \varepsilon \quad i = 1,...I$$

$$z \geq 0$$

Asylum vs well-being dimensions origin



	(1)	(2)	(3)	(4)
Well-being ratio	0.365***	0.582***	0.343***	-0.004
	(0.04)	(0.15)	(0.04)	(0.13)
Stock of migrants (log)	0.531**	0.269	0.051**	-0.039
	(0.21)	(1.12)	(0.02)	(0.07)
Population home (log)	1.483***		0.038**	
	(0.35)		(0.02)	
Population host (log)	0.612**		0.041**	
	(0.30)		(0.02)	
Distance (log)	-0.850**		-0.022	
	(0.34)		(0.03)	
Observations	2304	2304	2304	2304
R^2	0.934	0.997	0.424	0.900
Method	PPML	PPML	OLS	OLS
Country Pair FE	No	Yes	No	Yes
Home*year FE	No	Yes	No	Yes
Host*year FE	No	Yes	No	Yes

Notes: Robust standard errors in parentheses, clustered by country pair. PPML estimation

	(1)	(2)
Well-being ratio	0.981**	
	(0.22)	
Well-being ratio (Lead)	0.253	
	(0.29)	
Well-being ratio (Lag)		1.687**
		(0.78)
Observations	2108	2108
R^2	0.9981	0.9952
Country Pair FE	Yes	Yes
Home*year FE	Yes	Yes
Host*year FE	Yes	Yes

Notes: Robust standard errors in parentheses, clustered by country pair. PPML estimation.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

	(1)	(2)	(3)	(4)
Well-being ratio diff	2.630*			
	(1.63)			
Well-being ratio No income		0.628***		
		(0.12)		
Well-being ratio STD			0.925***	
			(0.24)	
Well-being ratio rank				10.212***
				(2.43)
Observations	3162	3162	3162	3162
R^2	0.994	0.994	0.994	0.994
Country Pair FE	Yes	Yes	Yes	Yes
Home*year FE	Yes	No	Yes	Yes
Host*year FE	Yes	No	Yes	Yes

Notes: Robust standard errors in parentheses, clustered by country pair. PPML estimation

Dep variable PPML: asylum in levels

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

	(1)	(2)	(3)	(4)
Population home (log)	4.814	6.660		
	(9.60)	(7.00)		
Population host (log)	21.637	40.131**		
	(16.90)	(18.06)		
Well-being home (lag)	0.857		-2.369	
	(4.50)		(3.60)	
Well-being host (lag)		9.228***		3.082**
		(2.38)		(1.42)
Observations	2108	11346	2108	11346
R^2	0.996	0.978	0.997	0.988
Country Pair FE	Yes	Yes	Yes	Yes
Home*year FE	No	No	No	Yes
Host*year FE	No	No	Yes	No

Notes: Robust standard errors in parentheses,

	(1) Home	(2) Host
Housing	14.524	-1.862
	(9.41)	(1.77)
Income	-17.611	2.662
	(12.66)	(1.84)
Jobs	-4.204	1.896*
	(2.62)	(1.09)
Community	-3.084	-0.351
	(2.46)	(0.53)
Education	3.896**	0.474
	(1.94)	(1.63)
Environment	2.621	-0.560
	(10.39)	(1.45)
Civic engagement	13.763	12.965**
	(13.88)	(5.17)
Health	-13.718*	-0.400
	(7.65)	(0.41)
Safety	-0.660	0.905***
	(1.08)	(0.27)
Work-life balance	-3.762*	-1.570**
	(2.09)	(0.79)
Observations	2108	11346
R^2	0.996	0.985
Country Pair FE	Yes	Yes
Home*year FE	No	Yes
Host*year FE	Yes	No

Notes: Robust standard errors in parentheses, clustered by country pair.
Lagged variables, PPML estimation
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Take-away

1. Asylum flows & Well–being:
   1. Theoretical framework
   2. Composite well-being indicator
   3. Structural gravity estimation
2. Our findings give support to the use of this new set of multidimensional measures of well-being, as the Better Life Index

liberté, égalité, fraternité ...¿and well-being?

1. The inspirational foundations of the European project are falling apart at the seams of the refugee crisis
2. Can we do better?
   - Mind the gap: work-life balance, civic engagement and education
   - Push factors: enlarging the scope of economic policies at the source with a wider range targets and political and civil actors.
   - Pull factors, a better design of the refugee quota system, which takes into account not only the population and growth of the host country, but also civic engagement and safety.

The end