

Borders and Policy Externalities

Jesús Fernández-Huertas Moraga¹

¹Universidad Carlos III de Madrid, IAE (CSIC), IZA and CReAM

Les migrations internationales: discours, perceptions et réalité
des faits
Namur, 17th December 2018

Potential huge efficiency gains/poverty reduction from migration

- Rodrik (2007): going for the real gains. Migration agreements over trade agreements.
- Clemens (2011): trillion dollar bills on the sidewalk.
 - Large population movements implied. Gallup poll: only 40 percent of the nationals of the poorest countries in the world would be willing to move. Docquier et al. (2015) show this reduces substantially the gains but the order of magnitude does not change.
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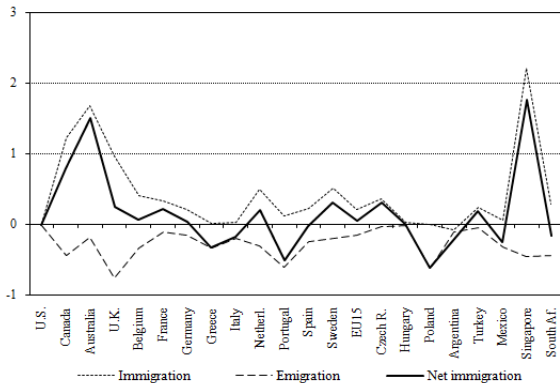
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Arguably small effects on origins and destinations

Wage effects of immigration and emigration between 1990 and 2000 (Docquier, Özden and Peri, 2014).



Why do governments restrict migration?

- National welfare maximization (Ethier, 1986). Example: undocumented workers pay taxes but do not receive benefits.
- Lobbying (Facchini and Willmann, 2005). Example: unions trying to protect national workers.
- To win elections directly (Ortega, 2005) or indirectly through attitudes (Facchini and Steinhardt, 2011). Immigrants as scapegoats in crisis situations.
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Are Migration Barriers Effective?

They are **very effective** but not always as expected. Examples:

- US-Mexico fence (Hanson and Spilimbergo, 1999).
- Tourist visas (Bertoli and Fernández-Huertas Moraga, 2015).

The effectiveness of migration barriers calls for **coordination** to address the **externalities**.

However, they are **not the only source** of externalities in migration policies: international public goods (Fernández-Huertas Moraga and Rapoport, 2014) or international spillovers (Stark et al., 2012).

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The need for coordination arises from:

- The consideration of refugee protection as an international public good. EU countries have all signed the 1951 Refugee Convention and its 1967 Protocol.
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The May 2015 European Agenda on Migration.

- The responsibility for hosting refugees no longer corresponds to the country of first arrival (Dublin) but it is shared through country **quotas** based on objective criteria.

A system for **tradable refugee-admission quotas (TRAQs)** with a **matching mechanism** linking refugees and destination countries (Fernández-Huertas Moraga and Rapoport, 2014, 2015a, 2015b, 2018). It added two new elements to the EU proposal:

- Respect for refugee rights: the right to choose their destination.
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Effective Migration Barriers: the US-Mexico Border

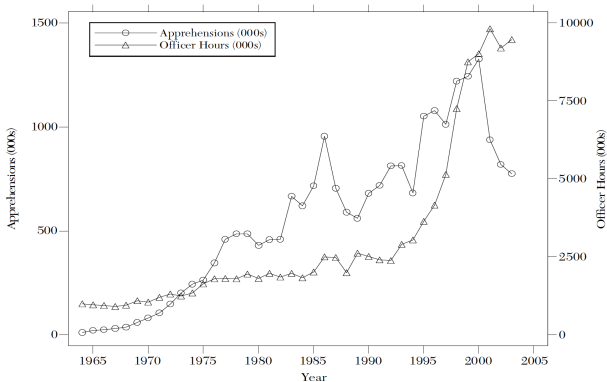


Figure 5. Linewatch Apprehensions and Enforcement by the U.S. Border Patrol

Source: Hanson (2006)

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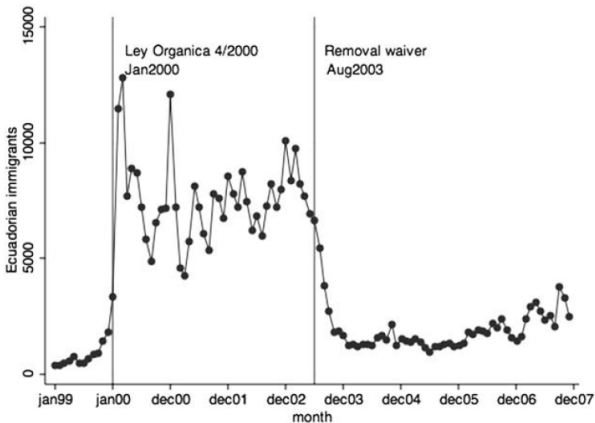
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Effective Migration Barriers: Tourist Visas

FIGURE 2. Monthly Inflows of Ecuadorians to Spain, 1999–2007



Effective Migration Barriers: Tourist Visas

- Grogger and Hanson (2011) find no effect of tourist visas on migration flows.
- Bertoli et al. (2011) find that Ecuadorian flows to Spain fell by 80 percent when Spain removed the visa waiver for Ecuadorians.
- Bertoli and Fernández-Huertas Moraga (2013) estimate that tourist visas reduced migration flows to Spain by 74 percent between 1997 and 2009. The result only appears when controlling for the confounding influence of alternative destinations: **multilateral resistance to migration**.
- Not a Spain-only result: Bertoli and Fernández-Huertas Moraga (2015) find a 40-47 percent average effect on net migration flows to OECD countries between 1990 and 2000.

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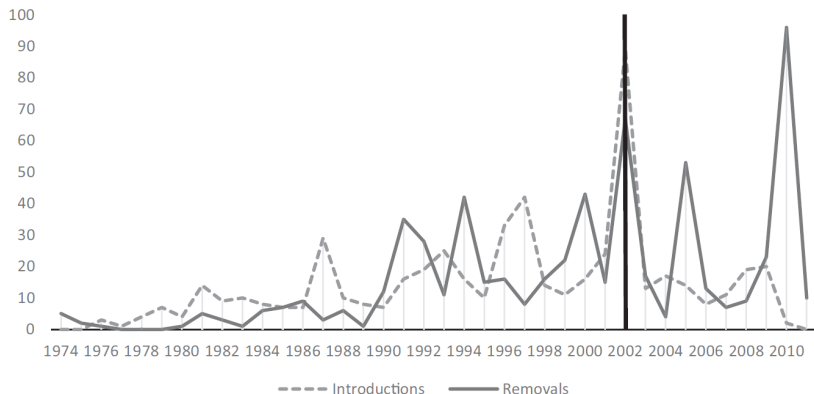
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Figure III. Visa Introductions and Removals Since 1974 (38 Destination Countries).



Source: Czaika and De Haas (2017)

The Effect of Tourist Visas on Third Countries

- Alternative destinations complicate the unbiased estimation of migration barriers. Why?
 - Because they affect third countries: externalities of migration policies.
- Bertoli and Fernández-Huertas Moraga (2015) find that a visa requirement imposed by a destination country increases net migration flows to other destinations perceived as substitutes between 3 and 17 percent between 1990 and 2000: diversion of migration flows.
 - Example: if Germany had offered visa-free access to Turkish citizens during 1990-2000, Turkish flows to the Netherlands would have decreased by 54-57 percent: from 34,000 to 18,000-19,000. Flows to Germany would have increased by 19-21 percent: from 390,000 to 465,000-472,000.

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The New Border Fences

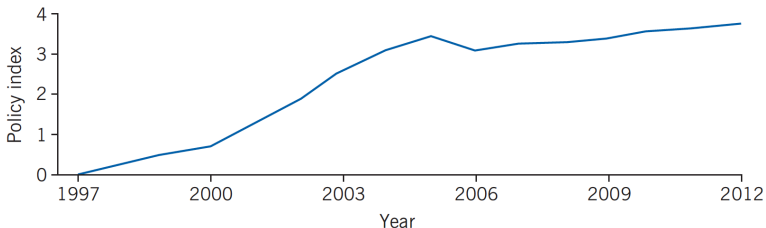


Source: Business Insider (2016).

<http://www.businessinsider.com/map-refugees-europe-migrants-2016-2>

The Race to the Bottom on Refugee Rights

Figure 2. Asylum policy index, unweighted 14-country average



Note: The index consists of 15 components and is intended to show major alterations in policies facing asylum-seekers. Each one-unit increase indicates a toughening of standards. Countries included are Austria, Belgium, Czech Republic, Denmark, France, Germany Hungary, Ireland, Italy, Netherlands, Poland, Spain, Sweden, and the UK.

Source: Author's own calculations.

Source: Hatton (2015)

Substitutability of asylum policies

Strategic substitutability: if a country increases recognition rates, the rest reacts to increased flows by reducing them.

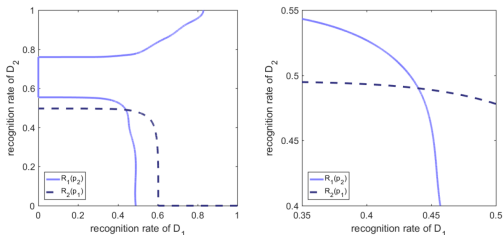
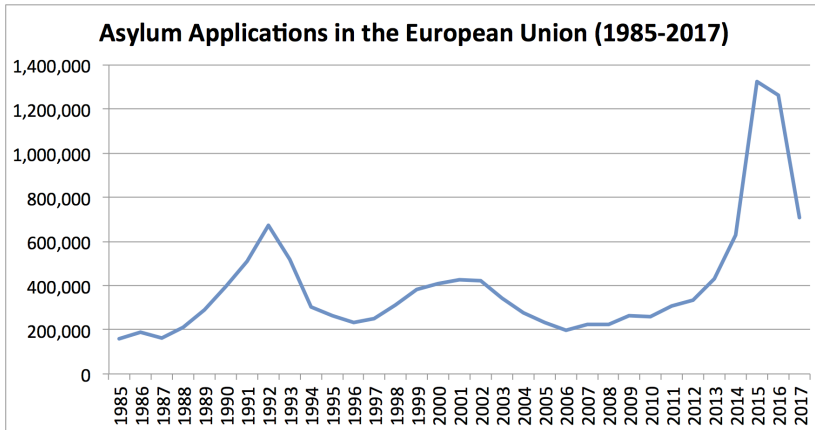


Figure 7: Mutually best responses in the game between destinations. The left graph shows the best response functions over the entire policy space; the right graph zooms in on the equilibrium.

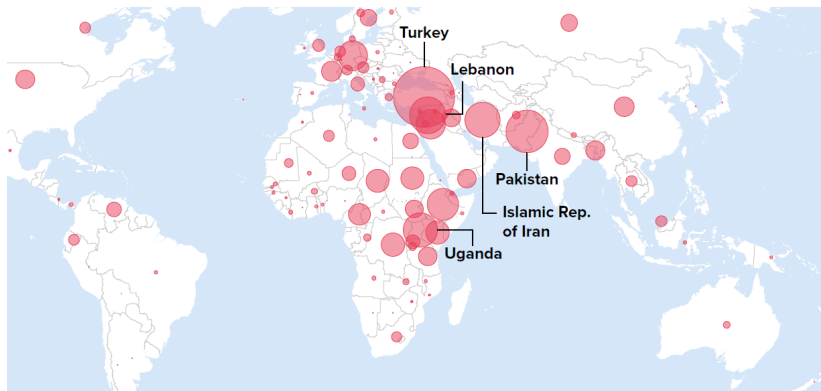
Source: Görlach and Motz (2017)

Asylum Applications in the European Union



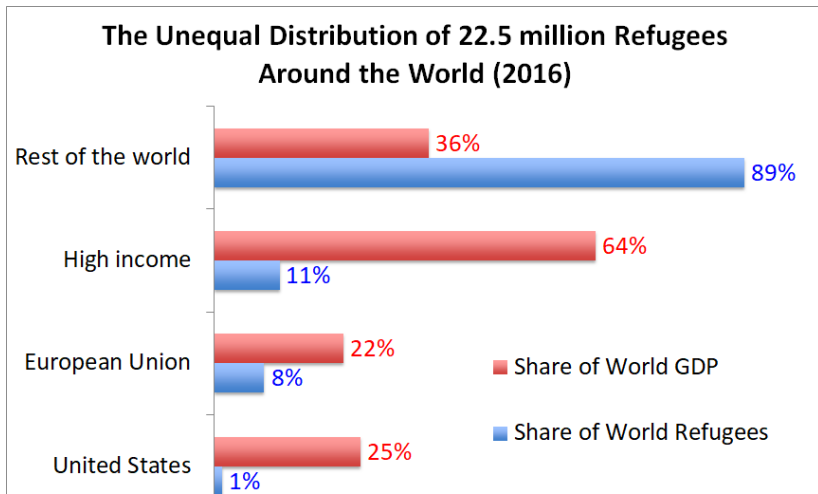
Data on all EU countries available only from 1998 in Eurostat.

Stocks of Refugees in 2016



Source: UNHCR (2017). <http://popstats.unhcr.org/en/overview>

Stocks of Refugees and GDP in 2016



A Brief Chronology

Following Hatton (2015):

- Dublin Convention of 1990. An asylum claim would be assessed once, normally by the country of first entry. Not implemented until 1997.
- 1999: Formal start of the Common European Asylum System (CEAS) in Tampere and Treaty of Amsterdam that allows the European Commission to legislate on asylum. The harmonization of policies through directives starts.
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- 1999: Formal start of the Common European Asylum System (CEAS) in Tampere and Treaty of Amsterdam that allows the European Commission to legislate on asylum. The **harmonization** of policies through **directives** starts.
- 2000: European Refugee Fund. Substituted by the Asylum, Migration and Integration Fund in 2014. Formal mechanisms for **burden sharing**.
- 2003: EURODAC; 2005: FRONTEX; 2010 European Asylum Support Office (EASO).

Responsibility sharing assessment

- Thielemann et al. (2010) estimate the total amount to be distributed in 2008-13 by the **European Refugee Fund** was 14 percent of total asylum costs for the EU-27 for the single year 2007.
- These costs include: reception and accommodation, administrative procedures, deportation, integration measures, etc. This is independent from the opportunity cost.
- Hatton (2012): “the Commission’s pilot study of transfers from Malta to France indicated an **average cost of per person of nearly 8,000 euros** (of which selection and travel is just over 1,000 euros, and the rest is accommodation and other support costs) as compared with the **4,000 euros** currently allowed for transfers under the ERF.”

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Reform proposals

- Thielemann et al. (2010) suggest, through different rules, that **fair burden sharing** would imply that between 33 and 40 percent of asylum seekers should be transferred to different countries, a large share going to new member states. This should be complemented with:
 - 1 Harmonization of asylum-seekers costs.
 - 2 Financial compensation for receiving countries.
 - 3 Voluntary movement of asylum seekers from over-burdened to less affected states. Forced movements end up being very costly.
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The Policy Response: European Agenda on Migration

In May 2015, the European Commission launched the “European Agenda on Migration”. Its main elements were:

- Emergency operations (Triton, Poseidon) to save lives at sea.
- Budget increases for existing policies and further harmonization.
- Relocation (40,000 from Italy and Greece) and resettlement (20,000 from outside the EU) of refugees and asylum seekers following a distribution key: new scheme for responsibility sharing. The distribution key divided quotas according to:
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- July 2015: Member States and the European Council refuse to adopt mandatory quotas. They prefer to stick to **voluntary pledges** that fall short of the European Commission numbers: 32,256 for relocation (rather than 40,000) and 18,425 for resettlement (rather than 20,000).
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- September 2015: the European Parliament approves Juncker's plan and adds that **refugee preferences** must be taken into account in the relocation and resettlement procedures.
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- 9 October 2015: 19 Eritreans are relocated from Italy to Sweden.
- March 2018: 53,278 total relocations (33,846) and resettlements (19,432) had taken place, barely 30 per cent of the total.

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A Proposal for an Improved System

Fernández-Huertas Moraga and Rapoport (2015a, 2015b) proposed a more efficient management of EU Asylum Policy by coordinating national policies differently.

The proposal added two new elements:

- 1 Initial attribution of responsibilities: the distribution key for initial quotas. Already in the European Agenda on Migration.
- 2 Tradability of the quotas. High-cost countries compensate low-cost countries to host extra refugees over their initial quotas.
- 3 Matching mechanism linking refugees to their preferred destinations and destinations to their preferred refugees.

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Earlier Literature

- Schuck (1997). Bilateral negotiations with tradable quotas. This is the first time the idea of trading visas for money was discussed but in a bilateral way, hence inefficiently.
- Bubb, Kremer and Levine (2011) complement this system of bilateral exchange with a screening device to separate true refugees from economic migrants.
- Fernández-Huertas Moraga and Rapoport (2014). General tradable immigration quotas model with a matching mechanism, one of the suggested applications being the resettlement of long-standing refugees.

An EU Market for Tradable Refugee-Admission Quotas

- Consider two types of migrants to be relocated: **refugees and asylum seekers**.
- There is an **international public good** element for refugees and for asylum seekers with valid claims.
- There are **responsibility sharing** concerns both for refugees and for asylum seekers.

We propose a **market for TRAQs** with possible different costs across countries and migrants' types where both migrants and countries' preferences are taken into account through a **matching mechanism**. Fernández-Huertas Moraga and Rapoport (2014) show such a market is efficient.

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TRAQs without matching (I)

- Each country i decides how many refugees and asylum seekers to receive given net perceived total cost $c_i(r_i, a_i)$.
- The cost function (reduced form including components such as the direct costs outlined above and indirect net costs such as the immigration surplus, net fiscal contribution, social and political costs) is convex and has an interior positive minimum.
- It is assumed that country i inhabitants/government care about refugees hosted by other countries (international public good) through the function $g_i(r_{-i})$.
- Solution of the total cost minimization problem:

$$\frac{\partial c_i}{\partial r_i}(r_i^{NC}, a_i^{NC}) = 0 = \frac{\partial c_i}{\partial a_i}(r_i^{NC}, a_i^{NC})$$

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TRAQs without matching (II)

Assume now that N countries sign a multilateral agreement, or a central authority steps in, to coordinate these countries towards a given level of refugee and asylum seekers acceptance: R and A .

$$\min_{\{r_i, a_i\}_{i=1}^N} \sum_{i=1}^N c_i(r_i, a_i)$$

$$s.t. \quad \sum_{i=1}^N (r_i + a_i) \geq R + A$$

$$\frac{\partial c_i}{\partial r_i}(r_i^M, a_i^M) = \lambda = \frac{\partial c_i}{\partial a_i}(r_i^M, a_i^M) \quad \forall i = 1 \dots N$$

where λ is the Lagrange multiplier associated to the constraint.

TRAQs without matching (III)

- A market for tradable refugee quotas where countries get paid for as many refugees and asylum seekers as they host in excess of their quotas replicates the central planner's solution.
- The problem to be solved by individual countries is:

$$\max_{\{r_i, a_i\}} g_i(r_{-i}) - c_i(r_i, a_i) + p(r_i + a_i - q_{i0})$$

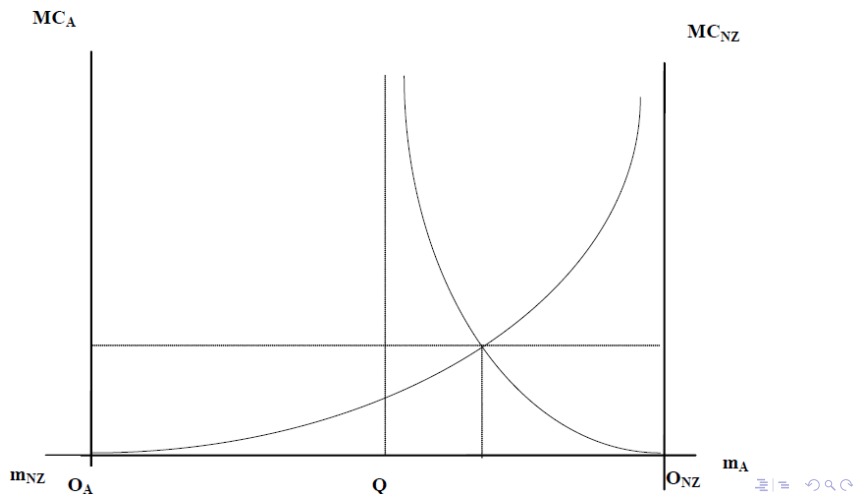
with $\sum_{i=1}^N q_{i0} = A + R$.

- The first order conditions are:

$$\frac{\partial c_i}{\partial r_i}(r_i^M, a_i^M) = p = \frac{\partial c_i}{\partial a_i}(r_i^M, a_i^M) \quad \forall i = 1 \dots N$$

- It is easy to show that $p = \lambda$

TRAQs with one type



Taking refugee preferences (heterogeneity) into account

We need to assign visas to refugees taking into account the latter's preferences. We can use the top trading cycles mechanism (Abdulkadiroglu and Sonmez, 1999):

- 1 Each refugee ranks all potentially desired destinations (preferred to current one).
- 2 An ordering of refugees is randomly chosen
- 3 Assign the first refugee her first choice, the second refugee her first choice and so on until a refugee chooses first a country whose quota is filled. Assign that refugee her second choice or, if that one is also filled, her third choice and so on.

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Only potential problem: if one of the N destinations is such an undesirable place that no refugee would consider going there. If a central planner never assigned refugees to undesired destinations:

- Countries could create “bad image” (e.g., be lenient on violence against refugees) to discourage applications.

How to avoid this possibility?

- Allow for the case where the overall number $R + A$ is not realized and the country pays the price p for the unfilled part of its quota. This acts as a penalty and provides incentives for countries to become attractive destinations.

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Two possible approaches:

- The uninteresting one: create a different market for each type of migrant: refugees or asylum seekers. All the presented results go through.
- Group different types of refugees (e.g., candidates to international resettlement and asylum seekers) in the same market. Redefine country i cost function as $c_i(m_i)$ where m_i is a vector of K elements (there can be more than two and you can differentiate by skill, religion, etc.) denoted m_i^k .

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Taking countries' preferences into account

- New total minimum cost problem. Solution: equalization of marginal costs across migrant types and countries.
- The properties of the market are not affected by taking countries' preferences into account.
- The properties of the matching mechanism, however, are affected. Solution concept: country-proposing or refugee-proposing deferred acceptance algorithm. Same result when the number of migrants is large (Azevedo and Leshno, 2016). Both are strategyproof *in the large*, meaning that the incentives to manipulate them disappear as the size of the matching market grows (Azevedo and Budish, 2017).

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▶ More on matching

Fernández-Huertas Moraga and Rapoport (2016)

▶ Assumptions

Total Cost	Quad-Rev-60000	Cub-Rev-60000	Quad-Rev-180000	Cub-Rev-180000
Voluntary quotas	152,013,000	101,342,000	152,013,000	101,342,000
EU quotas	4,416,478,043	3,256,233,092,708	39,748,302,385	87,918,293,503,105
Market quotas	213,135,459	168,247,126	1,918,219,135	4,542,672,406
Quota Price	7,105	8,412	21,314	75,711
Total Cost	Quad-Stat-60000	Cub-Stat-60000	Quad-Stat-180000	Cub-Stat-180000
Voluntary quotas	250,797,551	1,326,338,843	250,797,551	1,326,338,843
EU quotas	343,675,846	2,745,878,288	3,093,082,613	74,138,713,778
Market quotas	197,994,092	593,300,455	1,781,946,826	16,019,112,289
Quota Price	6,600	29,665	19,799	266,985

Stated Preferences, Quadratic Cost Function

Countries	Initial quotas (EU proposal)	Refugee Cost Parameter: taken from Eurobarometer 2011	Market Quota	Cost Reduction with respect to initial quota
Germany	46,463	11	32,495	9%
France	35,351	26	11,206	47%
Spain	21,881	9	22,871	0%
Poland	13,860	7	24,036	54%
Netherlands	10,637	8	9,310	2%
Romania	6,750	7	12,611	75%
Belgium	6,676	27	1,836	53%
Sweden	6,537	4	10,671	40%
Austria	5,326	19	1,981	39%
Portugal	4,478	13	3,550	4%
Italy	0	17	15,823	inf
Total	180,000		180,000	42%
Quotas traded			32%	

Was/Is this a realistic approach?

- Migration barriers are effective. Hence, they affect other potential destination countries: *externality*.
- Refugee protection is an international public good, subject to free riding concerns that can lead to a race to the bottom.
- The theoretical proposal of a Tradable Refugee-admission Quotas market with matching almost became feasible:
 - 1 Initial attribution of responsibilities (*quotas*) was in place.
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Other proposals

- Blocher and Gulati (2016). Refugees would be endowed with an asset (a subsidy) so that receiving countries would have incentives to compete for them.
 - Who pays for the asset? The country originating the refugee flight: Syria, Irak, etc.
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- Humanitarian Investment Fund for Refugees (Talbot, Postel and Barder, 2016). The subsidy (voucher) would be funded by donor countries. They run a simulation resettling 100,000 refugees at \$40,000 per refugee: total cost of \$4 billion.
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Taking refugee preferences (heterogeneity) into account

The described mechanism is:

- Pareto improving: ensures total welfare of participating host countries goes up (participation constraints can be easily included).
- Pareto efficient: no mutually beneficial exchanges among refugees once assigned a destination.
- Incentive compatible (truthful revelation): no refugee/country has an incentive to misrepresent her preferences whatever the strategies others use.
- The cost-minimization problem of the central authority is completely equivalent to the homogenous case (ie, equalize marginal costs across countries and types), which can be replicated by a TRAQs system.

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Taking countries' preferences into account

Proposal: country-proposing deferred acceptance mechanism. Less manipulable according to Pathak and Sonmez (2011). Still, clear trade-off from introducing country preferences:

- More efficiency. Countries might be willing both to take more immigrants in and to participate in the market if they can pick their preferred immigrants.
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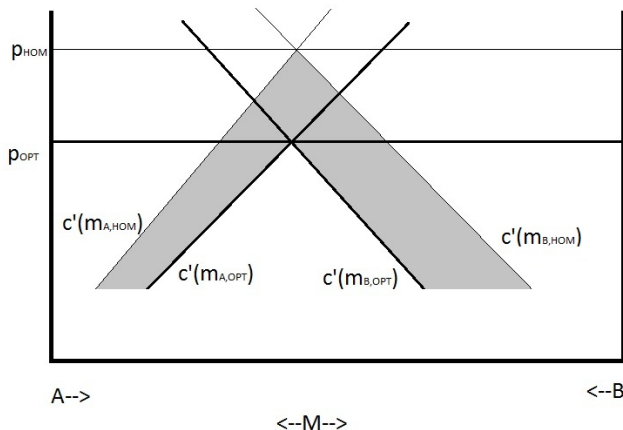
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Taking countries' preferences into account: example

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Cost function for the simulations

The cost function is assumed to be:

$$c_i(r_i) = \frac{\gamma_i}{2} \frac{r_i^2}{pop_i}$$

- **Revealed preferences** are backed up as:

$$c'_i(r_i^{pledged}) = \gamma_i^{revealed} \frac{r_i^{pledged}}{pop_i} = p$$

- **Stated preferences** substitute γ_i with the share of people in the Special Eurobarometer 380 from 2011 disagreeing with the statement: “The EU Member States should offer protection and asylum to people in need.” [▶ Back](#)