

# Supplementary Materials for Liberal Displacement Policies Attract Forced Migrants in the Global South\*

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## Section A.1: Understanding Migrant Decisionmaking

Scholars of migration generally analyze migrant flight patterns in terms of a choice-based, rationalist, utility-maximizing framework (Czaika, 2009; Hanson and McIntosh, 2016). In seminal models of migration, individuals weigh the costs of leaving versus the prospective benefits of migrating to various destination countries before deciding whether and where to go, subject to uncertainty and budget constraints. Factors driving individuals to leave their home countries are “push” factors, while factors inducing gravitation toward certain destinations are “pull” factors. We draw on this framework, but broaden the scope of most existing models by focusing on *de jure* policy environments as an unexplored pull factor.

The literature on refugee and asylum-seeker decisionmaking emphasizes a limited set of push and pull factors that influence the expected costs and benefits of flight. Corresponding with the legal definition of forced migrants as individuals fleeing persecution and discrimination, conflict and repression in home countries raise the costs of staying (Neumayer, 2005; Moore and Shellman, 2007; Giménez-Gómez, Walle and Zergawu, 2019). Apart from its immediate implications for physical integrity, moreover, violence induces out-migration by destroying economic opportunities and individual livelihoods (Adhikari, 2013), and by changing local, ethno-political power structures (Steele, 2017). External displacement thus increases with conflict and repression.

Existing research also highlights several key pull factors. Above all, distance raises migration costs (Iqbal, 2007), so we should observe asylum-seekers pulled in greatest numbers to neighboring countries. Similarly, migrant networks—whether co-ethnic or co-lingual—are a powerful draw to specific destinations (Fitzgerald, Leblang, and Teets, 2014). Before individuals migrate, kin groups can relay information about conditions in prospective destinations, as well as risks along the way. Within destination countries, these networks ease integration (Rüegger and Bohnet, 2018), reduce the risk of xenophobic attacks (Freibel, Gallego, and Mendola, 2013), and help secure higher-paying jobs (Munshi, 2003) and better housing (Light, Bernard, and Kim, 1999).

Political and economic conditions in target countries also exert a powerful influence in migrants’ decisionmaking. This is instinctive when migration is viewed, as in choice-based models, as an inter-

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temporal optimization problem (Czaika, 2009). Even for forcibly displaced persons, whose chief motive is personal security, factors like relative differences in GDP per capita, unemployment (Fitzgerald, Leblang, and Teets, 2014), and labor supply projections (Hatton and Williamson, 2003; Hanson and McIntosh, 2016) are taken into account. Specifically, these factors pull migrants toward strong, growing economies and push them from stagnant ones. Finally, prior research also identifies the important role of civic strife and civil liberties as pull factors. Asylum seekers fleeing persecution and discrimination are naturally less likely to relocate to destinations perpetrating the same abuses from which they are fleeing in the first place (Moore and Shellman, 2007; Echevarria and Gardeazabal, 2016). In sum, political, social and economic conditions in target countries are salient as potential asylum seekers decide if and where to flee. This, in turn, raises the prospect that asylum and refugee policies in potential target countries would enter calculus of fleeing migrants. We build on and extend this intuition, focusing on asylum and refugee policies in the developing world.

Czaika (2009) has formalized the argument that liberal policies attract migrants. His model implies that since liberal asylum policies attract migrants, migration outflows should trigger a “race to the bottom” among Western countries restricting asylum policies to deter inflows. Such restrictions induce migrants hosted in developing countries to extend their stay, rather than attempt a dangerous South-North trip (e.g. Mediterranean crossing). Protracted displacement, in turn, can pressure developing (host) countries to enact more liberal asylum policies (e.g., working permits) to ease migrants’ integration and make them more self-sufficient. This in turn, argues Czaika, should further increase the stock of FDP hosted in developing countries. We build on this theoretical foundation.

## Section A.2: Gravity Models

To test the relationship between *de jure* migration policies and FDP flows we estimate a set of gravity models. Gravity models are the workhorse for analyzing migration and trade flows between countries (Anderson, 2011), and as a result, a large literature has emerged on their correct specification. Head and Mayer (2014) offer a full overview of gravity estimation. The central debate in the gravity literature is between proponents of log-linearized versus exponential specifications. In the log-linearized transformation, the dependent variable is logged and then estimated with ordinary least squares. However, owing to Jensen’s inequality, which holds that  $E[\ln(y)] \neq \ln[E(y)]$ , ordinary least squares (OLS) estimates of the log-linearized transformation are inconsistent in the presence of heteroscedasticity (Santos Silva and Tenreyro, 2006). Cluster robust standard errors do not affect the parameter estimates, so while clustering can mitigate bias in the standard error estimate, the log-linear transformation still yields biased coefficient estimates with clustered standard errors.

A second problem with the log-linear transformation relates to its handling of zero values. In standard migration gravity models, many zeroes are typically observed as flight is rare within some dyads. The log-linear transformation drops observations with zero values because  $\ln(0)$  is undefined. Generally, researchers have avoided this problem by adding a small positive quantity to the dependent variable prior to logging. Most often, this entails taking  $\ln(\text{Dependent Variable} + 1)$ . However, this procedure leads to inconsistent parameter estimates because the gravity framework requires that 1 is added to both the dependent variable and the explanatory regressors. In turn, if 1 is added to variables on both sides of the equation, the log-linear transformation is rendered infeasible (Echevarria and Gardeazabal, 2016, 266).

In light of these problems, some scholars advocate for zero-truncated (Rüegger and Bohnet, 2018) or zero-inflated (Moore and Shellman, 2007) models. Unfortunately, neither of these approaches alleviates methodological concerns. On one hand, truncated estimators that exclude zero-valued observations suffer from significant bias (Martin and Pham, 2015). On the other hand, zero-inflated models make the untenable assumption that some zero-valued observations are structural and others arise natu-

rally from a count process (Cameron and Trivedi, 2013). In the context of refugee flight, zero-inflation is theoretically inappropriate because migrant flows are generated by a single process. There are no structural factors precluding flight within any dyad, merely factors, like distance, making it more or less probable. Secondly, zero-inflated estimators suffer the additional drawback that they are sensitive to the scale of the dependent variable.

A prominent alternative approach to gravity estimation uses an exponential function to model the conditional mean of the dependent variable. In particular, the Poisson pseudo-maximum likelihood (PPML) estimator is preferred under broad conditions (Martin and Pham, 2015). PPML is a weighted, non-linear least squares estimator, and critically, neither requires that the data follow a Poisson distribution nor that they take strictly integer values (Santos Silva and Tenreyro, 2006, 645). The PPML estimator also shares the same first-order conditions as the standard Poisson maximum likelihood estimator. Alleviating concerns outlined above about the presence of many zeroes, Santos Silva and Tenreyro (2011) show that PPML is well-behaved in the presence of excess zeroes, and that the estimator makes no assumptions about dispersion. Because PPML only requires that the conditional variance is proportional to the conditional mean, not necessarily equal to it, the estimator is valid in the presence of under-, equi-, and over-dispersion.

We employ PPML in our core specifications. While problems with log-linearized models and advantages to multiplicative gravity estimation are generally recognized in the economics literature (Beine, Bertoli, and Moraga, 2016; Docquier et. al. 2016), best practices have not diffused to political science (but see Giménez-Gómez, Walle, and Zergawu, 2019). A second, related estimator, the negative binomial pseudo-maximum likelihood (NBPML) estimator, has also gained some acceptance. NBPML is a modified PPML estimator, but unlike PPML it is sensitive to the scale of the dependent variable.

In our core gravity estimates, we include fixed effects for countries of origin, countries of asylum, and years. This structure of the fixed effects follows Fally (2015) to account for “multilateral resistance,” or barriers between an origin state and flows to all potential destinations. We cluster standard errors by dyad to account for correlated disturbance terms within origin-asylum pairs.

## Section A.3: Data Description

Our dependent variable is the arrival rate, defined as the number of asylum applications plus prima facie refugee arrivals divided by the country of origin population in hundreds of thousands. Asylum-seekers are defined as individuals seeking refugee status but not yet recognized as such by host country authorities or UNHCR. Prima facie refugees are those recognized without individual status determination because readily apparent conditions in their home country warrant their recognition as refugees. We focus on asylum applications and prima facie refugee arrivals because refugee recognition on the basis of individual status determination is endogenous to asylum policy liberality (Hatton 2016).

Data on the directed dyadic number of asylum-seeker applications are provided by the UNHCR Population Statistics Database, which compiles information from reports by UN country officers, non-governmental organizations, and government agencies. UNHCR data are only reported when they take strictly positive values, and the standard practice is to fill all missing values with zero (Echevarria and Gardeazabal, 2016; Marbach, 2018). We adopt this approach in our primary analyses. These data are widely used in the literature, and are available for all countries from 2000 to 2016. Thus, although our data on asylum and refugee policies extend from 1951 to 2017, data availability limitations mean we can only use that portion of our data covering 2000 to 2016, for which the dependent variable is available. Data on the directed dyadic number of prima facie arrivals come from statistics released by

the UNHCR to [Fearon and Shaver \(2020\)](#).

The core independent variable in our analyses is the country-level policy index score. Specifically, for each country of asylum-year we take the policy score of the most recently passed or amended national-level law pertinent to forced displacement. Because the quantity of interest we aim to capture is the *de jure* policy environment in a given country it makes sense to use the score of the most recently passed or amended law since recently codified laws are likely to be those most representative of the enforcement environment in a given country. In alternative specifications we also disaggregate the full policy score into scores for each of the five policy fields—access, services, livelihoods, movement, and participation—in order to assess which elements of asylum policy are most important. Because countries' scores are relatively slow moving over time, and because policies often require several years to take force, we construct a five-year lagged moving average of the policy index. By taking the five-year lagged moving average, we center the policy score on the third year prior to the year in which the dependent variable is measured. Algebraically, the primary independent variable can be written as  $\left(\frac{\text{Policy}_{t-1} + \text{Policy}_{t-2} + \text{Policy}_{t-3} + \text{Policy}_{t-4} + \text{Policy}_{t-5}}{5}\right)$ . The five-year lagged structure of the moving average helps allay concerns that policy changes are an endogenous response to developments in origin states. Our main results also hold when we use simple three and five-year lags of the policy index, rather than moving averages.

Apart from our policy measure, our core specification includes dyadic controls for inter-capital distance, territorial contiguity, common language, transnational ethnic kin, the GDP per capita ratio and its squared term; and country-level variables for both origin and asylum states, such as population, unemployment rate, civil conflict incidence, and democracy score.

We test our assumption of policy knowledge empirically. If information diffusion about asylum policies is necessary for policies to affect asylum-seekers flows, an observable implication is that there should be an interaction effect between policy liberality and factors presumed to increase policy awareness and information diffusion. Based on in-person interviews in Uganda, we posit two factors that magnify policy knowledge. First, communication technologies (ICT) facilitate information diffusion. In particular mobile and Internet penetration have enabled migrants to gain policy knowledge. To capture these factors we use mobile subscriptions per capita and an index of information globalization ([Dreher, 2006](#)). For both variables, we coarsen the measure in a country of origin along its interquartile range, and give a value of 1 for all observations in the top quartile, or 0 otherwise. Second, building on theories of information diffusion within ethnic networks ([Larson and Lewis, 2017](#)), ethnic kin are also expected to be central to transnational transmission of information. Cross-border kin groups can relay information about both *de jure* policy changes and details of *de facto* policy realities, in addition to easing migrant integration efforts. Our measure of transnational ethnic kinship ties is drawn from the Ethnic Power Relations (EPR) dataset ([Vogt et. al., 2015](#)).

## Section A.4: Measurement Challenges Inherent in UNHCR Data

Data quality and measurement error are central limitations confronting quantitative studies of forced displacement. Indeed, during complex crises, UNHCR officials are often tasked with enumerating hundreds of thousands or millions of refugees across large, remote, poorly administered areas, and often in the face of host government obstruction ([Crisp, 1999, 6](#)). Complicating measurement further, asylum-seekers and refugees often move frequently within and between countries and take steps to conceal their real identities, mainly due to safety concerns stemming from the nature of the threats they flee—persecution, discrimination, and war. Even data on voluntary migrant flows, which are easier to track than forced migrant flows, are only available for 33 OECD countries from 1982 to 2010 ([Helbling and Leblang, 2019](#)). These measurement challenges must be kept in mind when interpreting

our gravity results. That said, we believe the data we use, from the UNHCR PopStats database and [Fearon and Shaver \(2020\)](#), represent the most accurate and comprehensive available data.

## Descriptive Statistics: Gravity Models

Summary statistics for all variables used in the analysis can be found here. CoO refers to Country of Origin and CoA refers to Country of Asylum.

Table A.5: Descriptive Statistics: Gravity Models

	Observations	Mean	Std. Dev.	Minimum	Maximum
<b>Dependent Variables:</b>					
Forced Migrant Arrival Rate	130817	1.097224	41.2646	0	5114.048
<b>Independent Variables:</b>					
Policy Liberality Index (5 Yr. MA)	321282	.1467213	.1367037	0	1
Access Liberality Index (5 Yr. MA)	321282	.2683493	.2416118	0	1
Services Liberality Index (5 Yr. MA)	321282	.1147776	.1550298	0	.9055791
Livelihoods Liberality Index (5 Yr. MA)	321282	.1305719	.1447689	0	.8911608
Movement Liberality Index (5 Yr. MA)	321282	.3367562	.2665507	0	1
Participation Liberality Index (5 Yr. MA)	321282	.0468285	.0846325	0	1
High Information Openness in CoO	297857	.2502711	.4331698	0	1
Transnational Ethnic Kin (TEK) Presence	330690	.1328767	.339442	0	1
# of TEK Linkages	330690	.1740361	.5081278	0	5
<b>Control Variables:</b>					
Inter-capital Distance	338628	8.939322	.6885742	5.021536	10.15057
Territorial Contiguity	346722	.0399282	.1957909	0	1
Common Language	338628	.4738888	.4993185	0	1
Bilateral Migrant Stock	162024	2.139785	3.227431	0	14.9454
Africa Dyad	346722	.4118112	.492162	0	1
Middle East Dyad	346722	.072075	.2586125	0	1
South Asia Dyad	346722	.0064893	.0802948	0	1
Population in CoO	331171	4.786992	1.663238	.5627444	10.18427
Population in CoA	331171	4.786992	1.663238	.5627444	10.18427
GDP/Capita Ratio	303052	1.310814	1.299713	.0009941	7.606859
GDP/Capita Ratio <sup>2</sup>	303052	4.15775	1.511929	2.45e-08	14.50718
Unemployment Rate in CoO	186662	2.589026	.7995792	.1395466	4.481027
Unemployment Rate in CoA	186662	2.589026	.7995792	.1395466	4.481027
Civil War in CoO	339204	.2180517	.4129233	0	1
Civil War in CoA	339204	.2180517	.4129233	0	1
Repression in CoO	337436	.5060893	1.164501	-3.334726	3.767393
Repression in CoA	330942	.5096887	1.166882	-3.334726	3.767393

## Qualitative Interviews

We conducted a series of qualitative interviews with asylum-seekers, refugees, representatives from humanitarian organizations, and UN and government officials in Uganda between June 8 and July

19, 2017. We selected Uganda for our fieldwork because it is an important case, hosting an exceptionally large forced migrant population—as of 2019 it hosted the fourth-most FDP in the world in terms of total stock and the seventh-most forced migrants in the world on a per capita basis. Uganda also drastically liberalized its asylum policy in the past 15 years.

All interviews were conducted with informed consent, and our field study was approved by [Authors’] Institutional Review Board (Protocol #: 827614). We also received explicit permission to conduct interviews from the Office of the Prime Minister of Uganda and the Uganda National Police Force. Interview responses quoted in the paper are anonymized to ensure participant privacy and safety. Demographic statistics on study participants are shown in Table A.6. A total of 100 interviewees were forced migrants residing in Uganda. These participants came from diverse national backgrounds, including: the Democratic Republic of the Congo, South Sudan, Burundi, Rwanda, Somalia, and Ethiopia; and ethnic backgrounds, including: Banyamulenge and Banyarwanda, Hutus and Tutsis, and Dinka, Nuer, and Equatorians. We also talked to 7 Ugandans who work at national NGOs, 5 non-Ugandans who work for international NGOs, 5 employees of the Government of Uganda, 7 representatives from United Nations organizations, and 2 other South Sudanese opposition politicians. Conversations took the form of semi-structured interviews and focus group discussions, and fieldwork took place in Kampala, Mbarara, and the Nakivale Refugee Settlement.

Table A.6: Demographic Statistics on Qualitative Study Participants

	Activists and Officials					Forced Migrants						Totals
	Ugandans	Intl	Govt	UN	Non-Refugee SS	DRC	South Sudan	Burundi	Rwanda	Somalia	Ethiopia	
Men	2	2	5	4	2	36	13	7	0	3	1	<b>75</b>
Women	5	3	0	3	0	16	5	6	5	8	0	<b>51</b>
Total	<b>7</b>	<b>5</b>	<b>5</b>	<b>7</b>	<b>2</b>	<b>52</b>	<b>18</b>	<b>13</b>	<b>5</b>	<b>11</b>	<b>1</b>	<b>126</b>

*Note:* Ugandans refers to local Ugandan NGO advocates; Intl refers to international NGO advocates; Govt refers to Ugandan government officials; UN refers to United Nations officials; DRC refers to refugees from the Democratic Republic of the Congo; Non-Refugee SS refers to non-refugee South Sudanese opposition politicians.

## Section A.7: Research Ethics

Researchers have a moral imperative to protect human subjects throughout the research process. In conducting interviews, we took the utmost care to comply with standards and obligations described in the APSA Principles and Guidance for Human Subject Research, and detailed in depth in the literature on fieldwork (e.g. Wood, 2006; Cronin-Furman and Lake, 2018). As described below, we took multiple steps to identify and mitigate risks associated with our research.

We conducted semi-structured interviews and focus group discussions at three interview sites (Kampala, Mbarara, and Nakivale) in Uganda in June/July 2017. Our protocol for interviews and focus group discussions went through an IRB review and approval process at the Authors’ institution in the US to ensure that the activities were in line with US regulations regarding the protection of human subjects. In Uganda, the Office of the Prime Minister (OPM) also granted explicit approval for our research activities.<sup>1</sup> Fanaka Kwawote, a Ugandan research institution, provided a local context review,

<sup>1</sup>OPM granted us approval to conduct interviews and visit Nakivale refugee settlement, but we never (and were under no

and verified that our project complied with standard research ethics procedures and all relevant laws in Uganda. Fanaka Kwawote also reviewed our protocol and confirmed that our interview approach was sensitive to and respectful of local knowledge and customs. In Uganda, our research team also worked with the Kampala office of Innovations for Poverty Action (IPA) to ensure continuing compliance with local and US standards for ethical research.

We interviewed two sets of actors: policymakers, including Ugandan government, UN, and humanitarian workers; and forcibly displaced people (i.e. refugees and asylum-seekers). During interviews and group discussions, we focused conversation on: (1) the factors underlying Uganda's refugee policy; (2) how information about Uganda's policy diffuses throughout the region; and (3) whether and how Uganda's policy influences migrants' decisionmaking. Policymakers primarily discussed their conduct and perspective from their official capacity. All interviews were confidential. Interviewees were identified by number (i.e. Interviewee 2) and minimal, relevant but non-identifying information (e.g. gender and nationality). During interviews, a research assistant transcribed notes electronically. All transcripts are stored in a password-protected folder accessible only to the Authors.

Before each interview, prospective interviewees were presented with Authors' business cards and an informative letter (available upon request) about the aims of our research project, the format of the interviews, the subjects the interview would touch on, and a complete description of respondents' rights, including the right to stop the conversation at any time. This letter also included names and contact information for members of the research team, research directors at IPA's Uganda office, and representatives of the Authors' institution's IRB. All interviews proceeded with verbal consent obtained after respondents received and read through the informative letter. Specifically, after receiving the informative letter, respondents were read the following verbal consent statement:

### **Verbal Consent Statement**

“Hello. My name is [Author], and I am [Authors' position] at [Authors' institution] in the United States. We are conducting an exploratory study on the integration of refugees into host communities. We would like to ask you some questions about refugees in Uganda and East Africa more broadly. The letter provided to you details more information about the research project. Do you have any questions about the research? Participation in this study will involve an interview that will take about 30 minutes. Although participation in this study will not benefit you personally, we hope that the results of the study contribute in the design of subsequent interventions and programs that will improve development outcomes and livelihoods for refugees.

If it is okay with you, I will be keeping written notes of our conversation in order to capture the full context of your statements. I will not reveal the details of our conversation beyond members of our research team, whom will maintain your confidentiality. We will keep your identity completely confidential at all times and in all finished work. Anonymized information from this interview may be used in public presentations and written publications. All notes from this interview will be kept in a password-protected file. Your participation in this study is completely voluntary. If at any time during our talk you feel uncomfortable answering a question please let me know. You are not obliged to answer any or all questions, and can end the interview at any time. If at any time you want to withdraw from this study please tell me, and I will destroy my written transcript. You are free to revoke your consent to be interviewed at any point. If you have any questions about this study, you may contact me through the information on the business cards. You may also contact anyone listed in the informative letter, including representatives of Authors' university, if you have any questions or concerns. Do you have any questions at this time? Do you want to participate in the study?”

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obligation to) share interview transcripts or research findings with OPM or any other Ugandan government agency.

## Minimizing Risks and “Do No Harm”

Above all, our research team consistently worked to abide by the “do no harm” standard, minimizing risks to human subjects while working to maximize the benefits of our research (Wood, 2006). In collaboration with local and American partners, we assessed that the potential contributions of our research project were substantial while risks were minimal. More than 79 million people are forcibly displaced worldwide, including some 34 million refugees or asylum-seekers. 85% of these are displaced within the Global South (UNHCR, 2019). The sheer magnitude of forced displacement renders understanding migrant decisionmaking and asylum and refugee policymaking essential. De jure policies, such as rights to employment and free movement, can powerfully influence the integration and well-being of forced migrants, enhancing their access to life-sustaining services, welfare programs, and gainful employment. Understanding whether and how policies affect migrant decisionmaking over destinations is also a central question for policy planning and crisis response. The research thus stands to contribute to knowledge around a range of academically and policy-relevant questions.

In addition to the potentially substantial benefits of this research, our team also worked to identify and mitigate risks to interviewees, particularly those who are forcibly displaced people. First, we considered power differentials between ourselves and research participants. Although we conducted our research with permission from the OPM, no government officials were ever present at our interviews with forced migrants, humanitarian workers, or UN officials, and all interviewees were provided with an informative letter about the project, documenting their rights, including their ability to refuse to participate or to withdraw consent at any time. Second, before, during, and after interviews, we ensured that participants understood their responses would be held confidentially, and that no identifying information was collected or would be revealed. Third, no deception was used in the study. Fourth, we designed our interviews to reduce any possible harm. Specific steps we took included: (1) notifying prospective respondents about interview topics in the pre-interview informative letter they received, reducing the risk that anyone who consented to participate would be surprised by or uncomfortable with the topics of conversation; and (2) selecting a context (Uganda) and field sites (Kampala, Mbarara, Nakivale) where safety concerns were minimal and communities of displaced people were large and well-established – in these areas, forcibly displaced people are not exposed to risks of cross-border conflict spillovers, unlike populations near South Sudan in the northwest. Finally, in Uganda we met and discussed the challenges of trauma-sensitive interview research with representatives from Tutapona, a mental health advocacy organization specializing in addressing conflict-induced trauma. These conversations ensured our research team was able to identify potential signs of psychological distress or trauma if they emerged in the course of interviews. Topics of conversation centered on experiences with and knowledge of Uganda’s well-known, liberal policy, rather than drivers of flight in the first place, reducing the risk of triggering potentially traumatic memories of violence.

# Accounting for Diffusion in Policymaking

In a companion paper, [Blair, Grossman, and Weinstein \(2021\)](#) study the correlates of displacement policy reforms, and find evidence of regional diffusion. Countries are significantly more likely to liberalize their asylum policies when regional neighbors have liberalized in the prior 3 years. Diffusion dynamics do not bias our gravity estimates because our fixed effects structure—origin, destination, and year fixed effects—accounts for multilateral resistance, or barriers to flows between each origin country and all prospective destinations in each year ([Fally 2015](#)). Nevertheless, our results are robust to accounting for diffusion more directly. First, in columns 1-3 we add a control for regional policy diffusion around a destination country. Specifically, we add an indicator for policy liberalization in a country within 1500km of a destination in the prior 3 years. Second, in columns 4-6 we incorporate inverse probability of treatment weights (IPTW), which up-weight observations where policy liberalization in a destination was less likely. Following [Hernán and Robins \(2020\)](#), we construct these by: (1) estimating a probit model of policy liberalization including measures of diffusion; (2) predicting the conditional probability of liberalization for each destination-year; and (3) generating IPTW such that

$$IPTW = \begin{cases} Pr(Liberalization = 1|Covariates), & \text{if } Liberalization = 1 \\ 1 - Pr(Liberalization = 1|Covariates), & \text{if } Liberalization = 0 \end{cases}$$

IPTW are well-behaved, with a mean and median around 1 (mean = 1.330, median = 1.000).

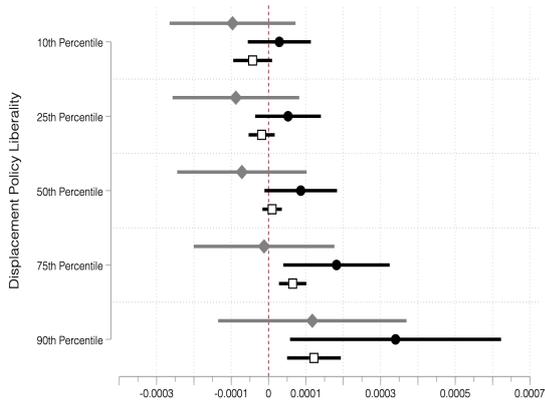
Table A.8: Accounting for Diffusion in Policymaking

VARIABLES	Controlling for Diffusion			IPTW		
	(1) PPML	(2) PPML	(3) PPML	(4) PPML	(5) PPML	(6) PPML
Policy Liberality Index (5 Yr. MA) x Info	3.258* (1.935)			3.901** (1.958)		
Information Openness CoO	-1.125 (0.971)			-1.303 (1.088)		
Policy Liberality Index (5 Yr. MA) x TEK Presence		2.907** (1.374)			2.589* (1.486)	
TEK	0.697*** (0.208)	0.152 (0.335)		0.694*** (0.258)	0.177 (0.370)	
Policy Liberality Index (5 Yr. MA) x # of TEK			2.499*** (0.571)			2.244** (0.890)
# of TEK			-0.245* (0.148)			-0.169 (0.159)
Policy Liberality Index (5 Yr. MA)	-1.559 (1.315)	-1.046 (1.237)	-2.013* (1.199)	-2.842** (1.322)	-2.401* (1.254)	-2.540* (1.334)
Regional Policy Diffusion Near CoA	Y	Y	Y	N	N	N
IPTW	N	N	N	Y	Y	Y
Constant	-27.297 (23.455)	-22.418 (20.258)	-26.457 (19.577)	3.560 (25.862)	16.150 (24.436)	18.793 (24.203)
Observations	111,883	112,334	112,334	93,345	93,634	93,634
Pseudo-R <sup>2</sup>	0.824	0.842	0.845	0.844	0.853	0.853
AIC	260156	275590	271012	224294	236486	236144

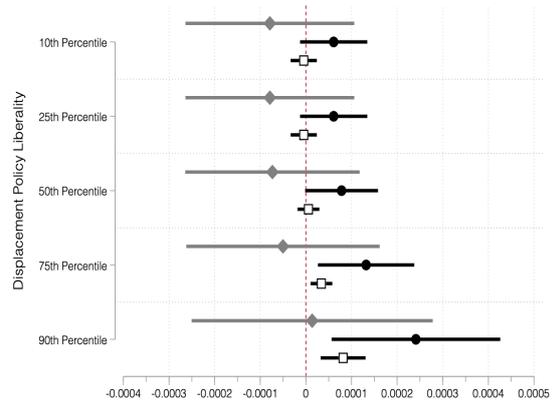
Note: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; robust, dyad-clustered standard errors are in parentheses; CoA refers to country of asylum; parameters follow Table 1; policy summary indices are constructed using inverse covariance-weighting (ICW).

Figure A.9: Disaggregating Policy Domains

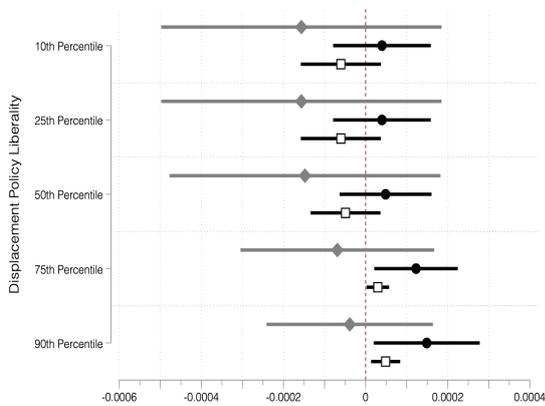
(a) Conditional Effects of Access Liberality



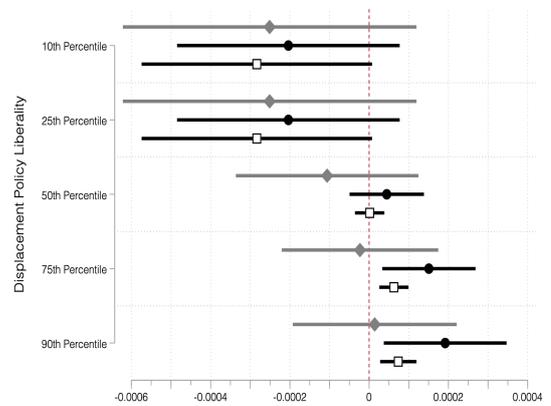
(b) Conditional Effects of Services Liberality



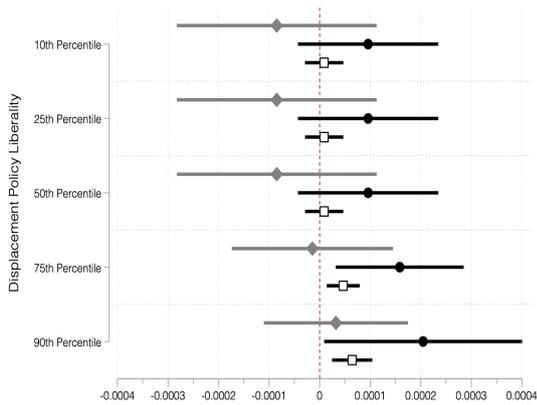
(c) Conditional Effects of Livelihoods Liberality



(d) Conditional Effects of Movement Liberality



(e) Conditional Effects of Participation Liberality



*Note:* Each plot shows the average marginal effect (AME) of a one-unit increase of the respective facilitator at different levels of displacement policy liberality. Gray diamonds correspond to models taking information openness as the facilitator. Black circles correspond to models taking TEK presence as the facilitator. White squares correspond to models taking the number of TEK linkages as the facilitator. The top left panel studies the effect of access policy liberality, the top right panel studies the effect of services policy liberality, the middle left panel studies the effect of livelihoods policy liberality, the middle right panel studies the effect of movement policy liberality, and the bottom left panel studies the effect of participation policy liberality.

### 3 and 5 Year Lags of Policy Score

In our main models, we study the five-year lagged moving average of a destination country's policy score. Below, we replicate results from Table 1 using simple three-year and five-year lags of a destination country's policy score. Results are substantively similar.

Table A.10: Replicating Table 1 With a 3 Year Lagged Policy Measure

VARIABLES	Information Openness in Origin		Transnational Ethnic Kin Linkage		# of Transnational Ethnic Kin Linkages	
	(1)	(2)	(3)	(4)	(5)	(6)
Policy Liberty Index (3 Yr. Lag) x Facilitator	5.102*** (1.929)	4.228*** (1.504)	4.096*** (1.215)	2.945*** (0.915)	1.647*** (0.225)	1.352*** (0.194)
Facilitator	-1.539 (0.959)	-1.569* (0.928)	-0.229 (0.332)	-0.131 (0.313)	-0.127 (0.080)	-0.129 (0.083)
Policy Liberty Index (3 Yr. Lag)	-1.146 (1.012)	-0.260 (0.833)	-0.909 (0.944)	-0.358 (0.895)	-0.848 (1.130)	-0.352 (0.936)
Constant	-20.061 (23.030)	-18.994 (22.927)	-9.157 (21.273)	-10.976 (20.055)	-19.485 (20.239)	-17.406 (19.790)
Pseudo R <sup>2</sup>	0.825	0.825	0.842	0.842	0.843	0.843
AIC	259879	259895	276462	276756	274707	274481
Observations	112,211	112,211	112,662	112,662	112,662	112,662
Summary Index Weighting	ICW	EW	ICW	EW	ICW	EW

Note: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; robust, dyad-clustered standard errors are in parentheses; in each column, the header denotes the respective facilitator variable; parameters follow Table ??; policy summary indices are constructed using inverse covariance-weighting (ICW) or equal-weighting (EW).

Table A.11: Replicating Table 1 With a 5 Year Lagged Policy Measure

VARIABLES	Information Openness in Origin		Transnational Ethnic Kin Linkage		# of Transnational Ethnic Kin Linkages	
	(1)	(2)	(3)	(4)	(5)	(6)
Policy Liberty Index (5 Yr. Lag) x Facilitator	3.962** (1.562)	3.424*** (1.247)	2.184** (0.980)	1.749** (0.742)	1.984*** (0.606)	1.590*** (0.443)
Facilitator	-1.172 (0.854)	-1.231 (0.835)	0.273 (0.249)	0.272 (0.247)	-0.057 (0.102)	-0.057 (0.097)
Policy Liberty Index (5 Yr. Lag)	-0.601 (0.872)	0.040 (0.802)	-1.010 (0.671)	-0.511 (0.617)	-0.985 (0.706)	-0.464 (0.657)
Constant	-22.134 (21.980)	-21.126 (22.040)	-24.177 (18.162)	-22.305 (18.189)	-23.125 (18.142)	-21.403 (18.213)
Pseudo R <sup>2</sup>	0.823	0.823	0.839	0.839	0.840	0.840
AIC	262408	261835	281145	280830	279825	279250
Observations	112,211	112,211	112,662	112,662	112,662	112,662
Summary Index Weighting	ICW	EW	ICW	EW	ICW	EW

Note: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; robust, dyad-clustered standard errors are in parentheses; in each column, the header denotes the respective facilitator variable; parameters follow Table ??; policy summary indices are constructed using inverse covariance-weighting (ICW) or equal-weighting (EW).

## Lower-Limit Tobit Estimator

Flows of FDP between countries cannot be negative. As such, an alternative estimator, the lower-limit Tobit, may be appropriate (Rose, 2004). Below, we replicate results from Table 1 using a Tobit estimator with a lower-limit of 0. Results are substantively similar. The conditional effect of policy liberality is nearly significant in column 4 ( $p = 0.152$ ).

Table A.12: Replicating Table 1 With a Lower-Limit Tobit Estimator

VARIABLES	Information Openness in Origin		Transnational Ethnic Kin Linkage		# of Transnational Ethnic Kin Linkages	
	(1)	(2)	(3)	(4)	(5)	(6)
Policy Liberality Index (5 Yr. MA) x Facilitator	65.723** (30.292)	47.247* (24.371)	89.661* (54.395)	69.905 (48.763)	62.302** (29.494)	46.208* (24.863)
Facilitator	-15.137* (7.931)	-13.962* (8.227)	-7.328 (10.279)	-7.147 (11.731)	-7.490 (8.505)	-6.858 (9.187)
Policy Liberality Index (5 Yr. MA)	-31.667 (24.656)	-10.897 (15.211)	-4.127 (24.435)	11.789 (17.696)	-3.397 (22.590)	13.248 (16.764)
Constant	279.364** (122.878)	279.127** (123.324)	287.405** (125.484)	284.004** (125.455)	293.072** (127.814)	290.046** (128.419)
Pseudo R <sup>2</sup>	0.127	0.127	0.124	0.125	0.125	0.124
AIC	198381	198391	203296	203294	203293	203298
Observations	119,238	119,238	119,719	119,719	119,719	119,719
Summary Index Weighting	ICW	EW	ICW	EW	ICW	EW

Note: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; robust, dyad-clustered standard errors are in parentheses; in each column, the header denotes the respective facilitator variable; parameters follow Table 1; policy summary indices are constructed using inverse covariance-weighting (ICW) or equal-weighting (EW).

## Alternative Dependent Variable

In the main text we study the arrival rate using data on asylum applications and prima facie refugees from the UNHCR. These data cover 2000-2017. We can extend the dependent variable back to 1992 using additional data on prima facie arrivals from Fearon and Shaver (2020).

Table A.13: Replicating Table 1 With an Alternative Dependent Variable Covering 1992-2017

VARIABLES	Information Openness in Origin		Transnational Ethnic Kin Linkage		# of Transnational Ethnic Kin Linkages	
	(1)	(2)	(3)	(4)	(5)	(6)
Policy Liberality Index (5 Yr. MA) x Facilitator	4.292* (2.429)	3.453* (1.867)	4.021** (1.755)	3.538*** (1.190)	2.957*** (0.670)	2.510*** (0.548)
Facilitator	-1.126 (1.292)	-1.099 (1.298)	-0.573 (0.434)	-0.656* (0.389)	-0.455*** (0.168)	-0.492*** (0.171)
Policy Liberality Index (5 Yr. MA)	-3.511*** (1.249)	-2.156* (1.220)	-3.152*** (1.142)	-2.568** (1.143)	-3.872*** (1.148)	-3.000*** (1.113)
Constant	-23.517 (27.869)	-20.848 (28.115)	-11.066 (20.522)	-9.537 (19.711)	-16.757 (18.924)	-14.090 (18.992)
Pseudo R <sup>2</sup>	0.833	0.832	0.848	0.849	0.851	0.851
AIC	275020	276421	291012	290908	286000	286680
Observations	133,647	133,647	134,098	134,098	134,098	134,098
Summary Index Weighting	ICW	EW	ICW	EW	ICW	EW

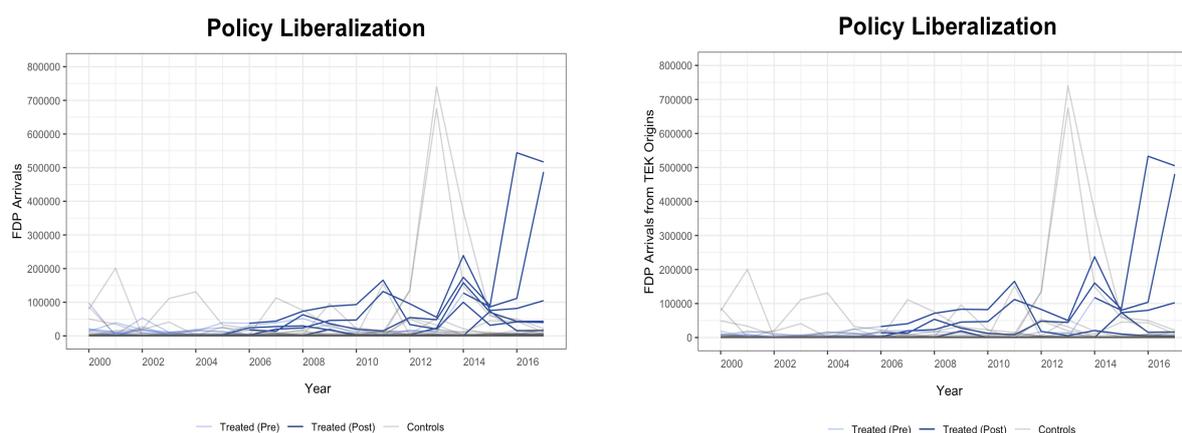
Note: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ ; robust, dyad-clustered standard errors are in parentheses; in each column, the header denotes the respective facilitator variable; parameters follow Table 1; policy summary indices are constructed using inverse covariance-weighting (ICW) or equal-weighting (EW).

## Section A.14: Generalized Synthetic Control Method

Our primary estimations in the policy extension section of the main text use a PPML gravity model with directed dyad-years as the unit of analysis. Although gravity models are the best known approach for estimating flows between countries (Anderson, 2011), they require strong identification assumptions associated with panel-data methods. In particular, the PPML estimations must define a causal model of FDP flows, and estimate a single effect of policy liberalization, rather than an effect allowed to vary across countries. PPML will also be biased in the presence of unobserved time-varying confounders. To assess the robustness of our PPML results we estimate comparable models using generalized synthetic controls (Xu, 2017).

In the generalized synthetic control framework, we define a predictive model of flows to a destination country, and compare the observed effect of asylum policy liberalization on flows to each destination's unique counterfactual flow absent liberalization. The estimation uses a latent factor approach, fitting an interactive, two-way (unit and time) fixed effects model using control units, then obtaining latent factors and estimating factor loadings for treated units by projecting pretreatment treated outcomes onto the factor space. In the final step, the method imputes treated counterfactual outcomes based on estimated loadings (Xu, 2017, 58). The unit of analysis is the country-year. Treatment is defined as asylum policy liberalization such that a country's score is in the top quartile of all asylum policy scores. The dependent variable is the number of FDP arrivals in a country-year. We estimate separate models for all arrivals and arrivals from origins linked by transnational ethnic kin. The predictive model we fit controls for population, GDP/capita, repression, democracy, unemployment, and civil war in destinations, as well as intense civil war episodes in each destination's region. All models also include two-way, country and year fixed effects. In all models, we use a cross-validation procedure to select the number of unobserved factors within the interval (0, 3). Standard errors are calculated from 1000 parametric bootstraps. We use an expectation-maximization algorithm for bootstrapping and cross-validation.

Figure A.15: Raw Data for Treated and Control Units in Synthetic Controls Estimations



*Note:* The plots show raw data on FDP flows (asylum applications + prima facie refugee arrivals) for all units. Light gray lines are flows to control units, from which counterfactual averages are estimated. Light blue lines are flows to treated units in the pre-treatment period. Dark blue lines are flows to treated units in the post-treatment period. The top panel studies all FDP arrivals, and the bottom panel studies FDP arrivals from origins linked by transnational ethnic kin (TEK).

## Section A.16: Interrupted Time-Series Analyses

Interrupted time-series (ITS) analysis is a quasi-experimental design to estimate the effect of policy interventions. ITS requires measuring an outcome from a treatment group at multiple times pre- and post-treatment. The treatment effect is calculated by taking the difference in means and slopes from before and after treatment. In particular, comparative ITS takes treated and untreated time-series, and studies whether group differences in pre-treatment means and slopes differ from corresponding post-treatment differences (McDowall, McCleary, and Bartos, 2019).

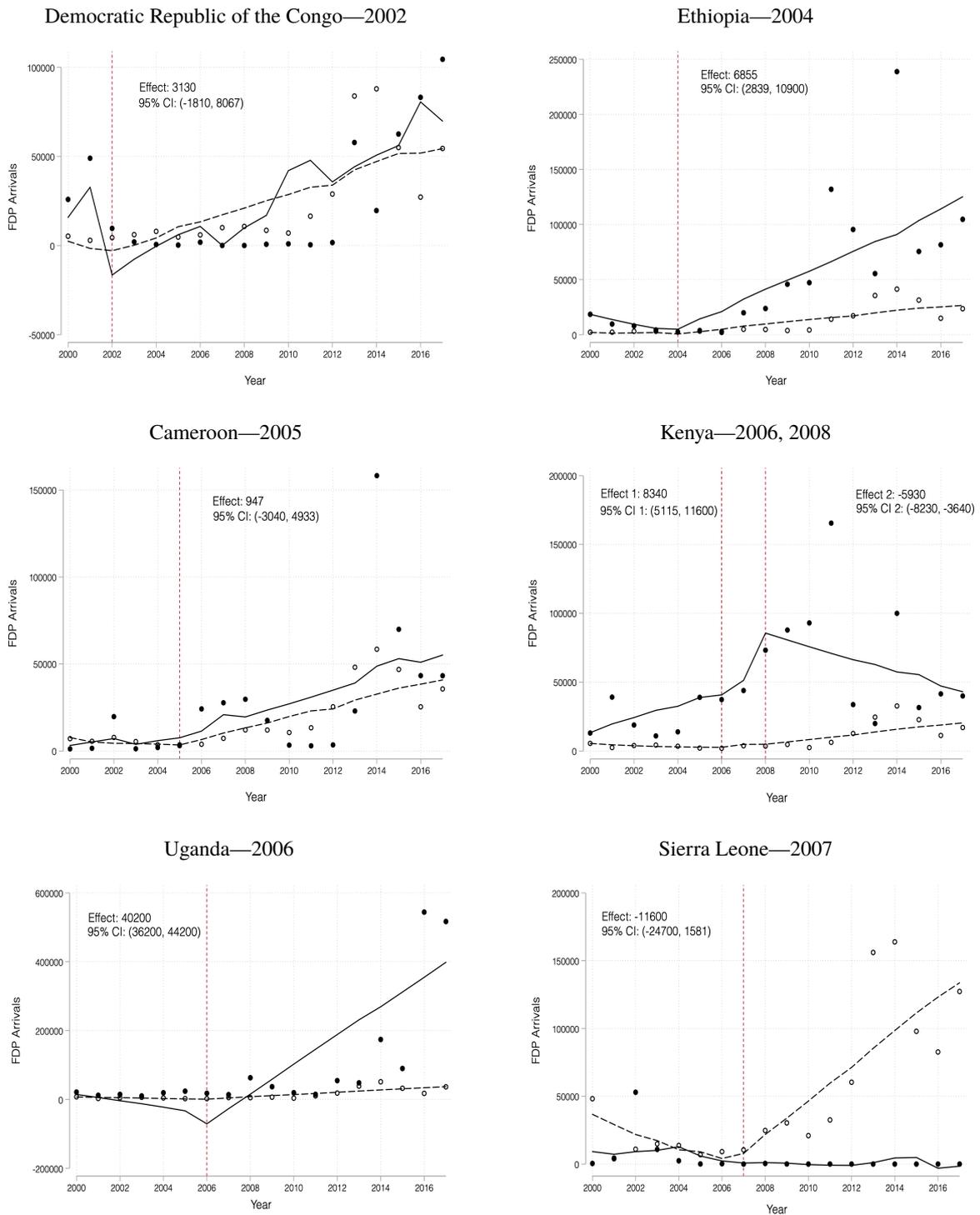
We assess treatments defined by displacement policy reforms. Following Blair, Grossman, and Weinstein (2021), we define policy reforms as one standard deviation liberalizing or restrictive changes in a country's policy score. All such changes in the post-2000 period are described in Table A.17. We model trends in FDP flows to destination countries. By modelling trends pre- and post-reform, our models rule out the possibility that changes in FDP flows are due to pre-existing trends. Comparing outcomes in treated countries to those in countries that did not implement policy reforms at the same time, we rule out the possibility that observed effects are due to other, concurrent events that affected all countries equally. We formally test for pre-treatment differences in means and slopes to select the most comparable control units (Linden, 2015).

Table A.17: Policy Changes of +/- 1 Standard Deviation Since 2000

COUNTRY	YEAR	$\Delta$ IN POLICY	$\Delta$ IN ACCESS	$\Delta$ IN SERVICES	$\Delta$ IN LIVELIHOODS	$\Delta$ IN MOVEMENT	$\Delta$ IN PARTICIPATION	DESCRIPTION
Democratic Republic of the Congo	2002	+ 1.22	+ 1.68	+ 3.53	+ 1.08	+ 1.52	+ 0.00	The DRC passed the Law no. 021/2002 "Portant statut des re'fugie's en Re'publique De'mocratique du Congo."
Ethiopia	2004	+ 1.45	+ 2.06	+ 2.17	+ 0.63	+ 0.03	+ 2.20	Ethiopia passed the Refugee Proclamation No. 409/2004.
Kazakhstan	2004	- 1.72	- 0.86	- 2.92	- 1.72	- 1.14	- 1.32	Kazakhstan amended the Presidential Decree On Granting of political asylum as of 15 July 1996.
Cameroon	2005	+ 2.92	+ 1.49	+ 2.91	+ 1.41	+ 1.22	+ 4.16	Cameroon passed the Loi n°2005/006 du 27 juillet 2005 Portant statut des re'fugie's au Cameroun.
Kenya	2006	+ 1.60	+ 3.06	+ 2.05	+ 1.44	+ 1.96	+ 0.28	Kenya passed The Refugee Act of 2006.
Uganda	2006	+ 3.86	+ 3.10	+ 3.41	+ 5.41	+ 2.37	+ 2.35	Uganda passed The Refugees Act of 2006.
Kenya	2007	- 1.64	- 3.06	- 2.05	- 1.44	- 2.08	- 0.28	Kenya amended the Kenya Immigration Act.
Sierra Leone	2007	+ 2.85	+ 3.03	+ 1.57	+ 0.64	+ 2.34	+ 3.54	Sierra Leone passed The Refugees Protection Act of 2007.
Central African Republic	2007	+ 2.87	+ 3.59	+ 3.72	+ 2.28	+ 3.06	+ 1.44	The CAR passed the Decret No. 07.019 du 28 Decembre 2007 portant Statut des Refugies en Republique Centrafricaine.
Burkina Faso	2008	+ 1.62	+ 0.88	+ 0.44	+ 0.85	- 0.12	+ 3.08	Burkina Faso passed the La loi n° 042-2008/AN du 23 octobre 2008 portant statut des re'fugie's au Burkina Faso.
The Gambia	2008	+ 1.32	+ 3.11	+ 1.34	+ 0.91	+ 2.08	+ 0.00	The Gambia passed the Refugee Act of 2008.
Kenya	2008	+ 1.64	+ 3.06	+ 2.05	+ 1.44	+ 1.96	+ 0.28	Kenya amended The Refugee Act of 2006.
Guinea-Bissau	2008	+ 2.21	+ 2.28	+ 3.34	+ 1.98	+ 1.81	+ 1.41	Guinea-Bissau passed the Lei No. 6/2008 de 2008, Aprovado o Estatuto do Refugiado.
Kazakhstan	2009	+ 1.37	+ 1.46	+ 0.33	+ 1.06	+ 0.29	+ 1.92	Kazakhstan passed The Law of the Republic of Kazakhstan On Refugees.
Armenia	2009	- 4.56	+ 0.38	+ 3.14	+ 0.60	- 0.24	- 11.56	Armenia passed The Law of the Republic of Armenia on Refugees and Asylum.
South Sudan	2012	+ 2.47	+ 3.97	+ 1.94	+ 1.26	+ 2.08	+ 2.20	South Sudan passed the Act No. 20 of 2012.
Azerbaijan	2013	- 2.45	- 0.62	- 1.71	- 4.20	- 0.41	- 2.20	Azerbaijan passed the Migration Code of the Azerbaijan Republic.
Turkey	2013	- 1.97	- 0.38	- 0.78	- 3.99	- 1.11	- 0.86	Turkey passed the Law on Foreigners and International Protection.
Sudan	2014	+ 2.09	+ 1.94	+ 1.46	+ 0.34	+ 1.00	+ 3.28	Sudan passed The Asylum Regulation Act of 2014.
Nigeria	2015	- 1.58	- 1.66	- 1.39	- 1.53	+ 0.41	- 2.47	Nigeria passed the Immigration Act of 2015.
Kenya	2017	+ 1.01	+ 2.23	+ 4.36	+ 0.88	- 0.67	+ 1.16	Kenya passed The Refugees Bill of 2016.
Zambia	2017	+ 4.15	+ 2.92	+ 3.19	+ 2.03	- 0.67	+ 7.86	Zambia passed The Refugees Act of 2017.
Djibouti	2017	+ 2.37	+ 2.63	+ 2.91	+ 1.76	+ 0.99	+ 2.60	Djibouti passed the De'cret N° 2017-410/PR/MI fixant les modalite's d'exercice des droits fondamentaux des re'fugie's et demandeurs d'asile en Re'publique de Djibouti.

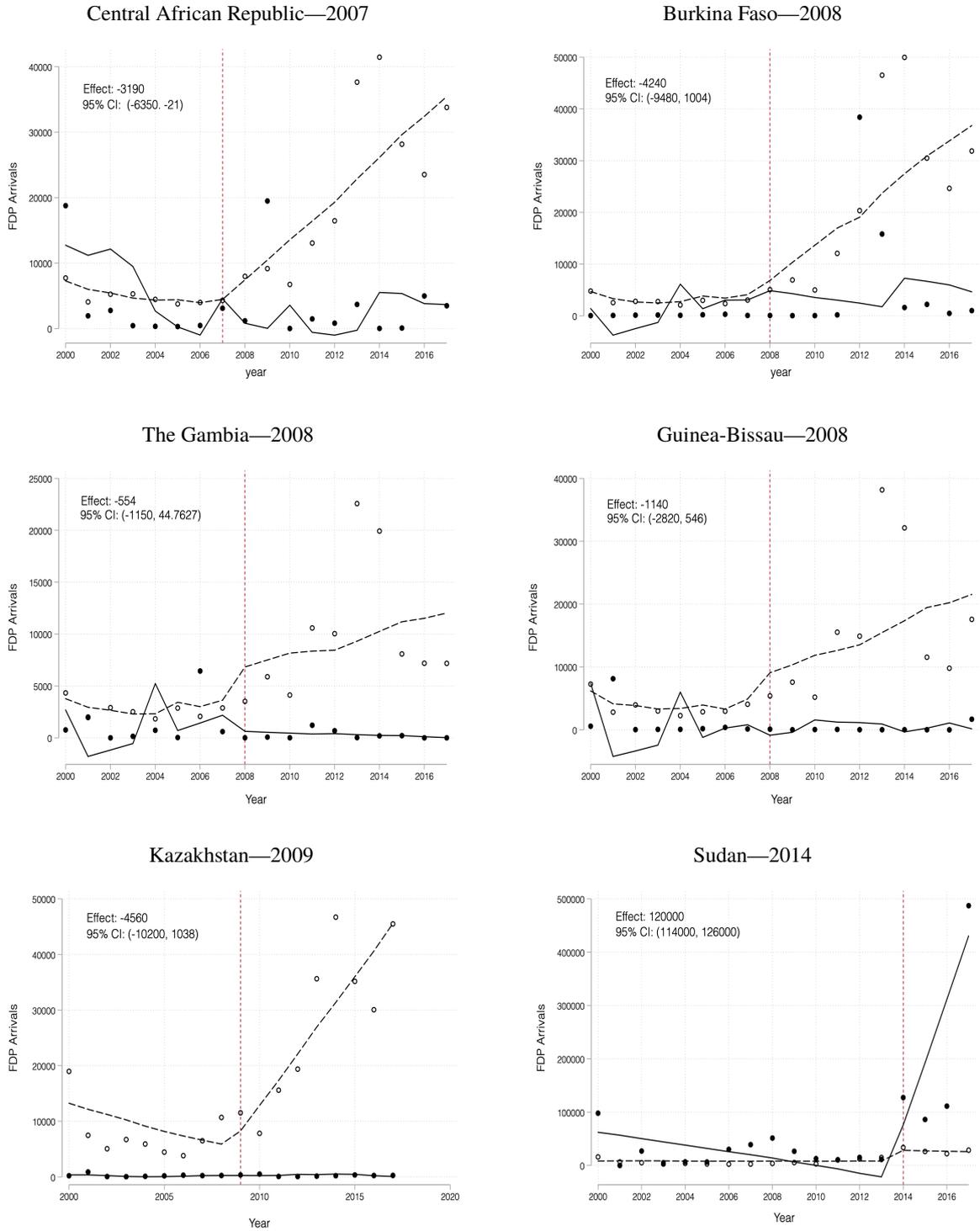
Note: Changes in scores are expressed in standard deviations.

Figure A.18: Interrupted Time-Series Analyses of Liberalizing Changes



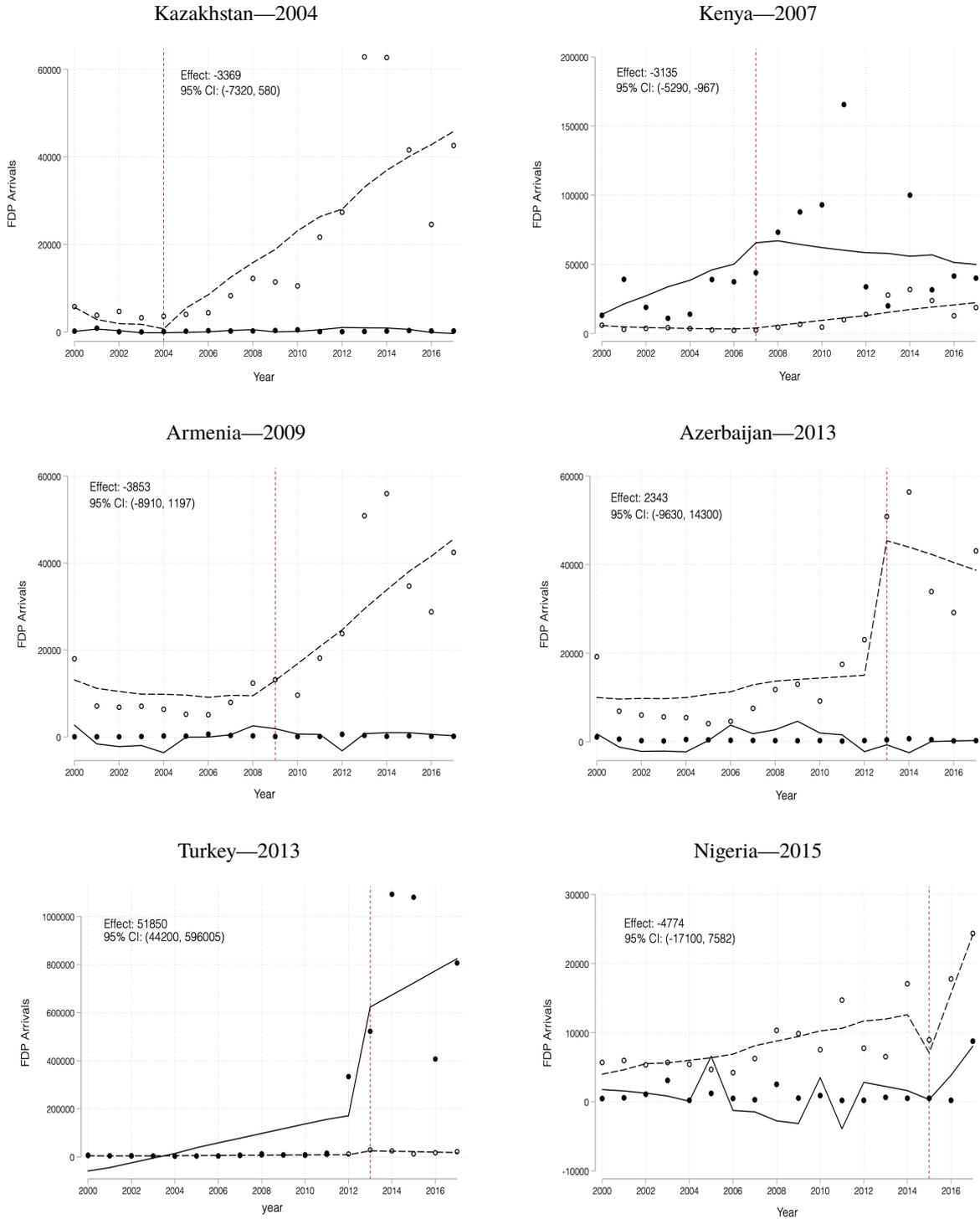
*Note:* Dashed black lines are predicted flows to control units, and the thick black line captures predicted flows to the respective treated unit. Hollow black points are actual flows to control units, and solid black points are actual flows to the respective treated unit. The red dashed line marks the treatment year. Treatments are defined by one standard deviation policy liberalizations. Estimated effects indicate the difference in annual flows to treatment versus control countries in the post-intervention period.

Figure A.18, continued: Interrupted Time-Series Analyses of Liberalizing Changes



*Note:* Dashed black lines are predicted flows to control units, and the thick black line captures predicted flows to the respective treated unit. Hollow black points are actual flows to control units, and solid black points are actual flows to the respective treated unit. The red dashed line marks the treatment year. Treatments are defined by one standard deviation policy liberalizations. Estimated effects indicate the difference in annual flows to treatment versus control countries in the post-intervention period.

Figure A.19: Interrupted Time-Series Analyses of Restrictive Changes



*Note:* Dashed black lines are predicted flows to control units, and the thick black line captures predicted flows to the respective treated unit. Hollow black points are actual flows to control units, and solid black points are actual flows to the respective treated unit. The red dashed line marks the treatment year. Treatments are defined by one standard deviation policy restrictions. Estimated effects indicate the difference in annual flows to treatment versus control countries in the post-intervention period.

## Section A.20: Qualitative Evidence

As described in Table A.6, we interviewed 126 forcibly displaced people and other stakeholders in Uganda in June/July 2017. Conversations revealed: (1) that liberal policies, particularly on employment and services, attracted flows; and (2) that ethnic kin and co-nationals were a vector for diffusion of information about policies and conditions in host countries.

### Evidence on Policy Gravitation

Our quantitative results suggest liberal policies attract FDP, and that access to services, employment opportunities, and free movement are particularly attractive pull factors. In contrast, we find a weaker effect of citizenship rights. Interviewees confirmed these insights and the general phenomenon of gravitation toward liberal policy environments.

For instance, several FDP described Uganda's policy as "enticing" (Author interview, Kampala, Uganda, June 14, 2017). Further, many FDP cited employment, aid, and free movement as specific reasons why they were attracted to Uganda as a host country:

"It is easier for refugees to register a business [here]..." —Author interview, Kampala, Uganda, June 14, 2017.

"[here there is] a good school, good facilities, and also feeding, you know, food security, and healthcare services." —Author interview, Kampala, Uganda, June 16, 2017.

"I can go [from Kampala] to the refugee camp without even asking OPM [the Office of the Prime Minister] because I have my refugee card. That is the only thing I really thank with the Government of Uganda because they have given us that freedom [of movement]." —Author interview, Kampala, Uganda, June 22, 2017.

"The land that is very interesting. ... [Uganda] has a good policy that each person should be given enough land so that at times they will not be poor." —Author interview, Kampala, Uganda, June 23, 2017.

"Uganda is a country of freedom, where many people come." —Author interview, Kampala, Uganda, June 28, 2017.

"The reason why we have so many refugees, South Sudanese to Uganda... there are extra services that people have in Uganda and not in Kenya." —Author interview, Kampala, Uganda, June 29, 2017.

"... you may chose Uganda with all the other South Sudanese, but if that policy was not here we would go back and not stay." —Author interview, Kampala, Uganda, June 29, 2017.

"[Uganda] will allow you and help with family tracing and reunion. ... I said I have some people who came before me, and I need to join them. The Act helps for reunion." —Author interview, Kampala, Uganda, June 29, 2017.

"Uganda is according a warm welcome to the refugees which are making it an attractive destination. Ugandans treat refugees as brothers and sisters who deserve protection and a safe place for their children and a way to support themselves. ... Uganda gives refugees the right to work and travel freely, access Ugandan social services, a plot of land to live on, a plot of land to farm and the children are allowed to attend schools. ... This cut across to all the different nationality of refugees Uganda hosts." —Author interview, Kampala, Uganda, July 19, 2017.

Humanitarian workers and other officials shared the assessment that Uganda’s policy was a pull factor:

“Of course everything erupted in July last year and we’ve seen a huge influx of South Sudanese. Most of them are coming to Uganda probably because of the policy that is in place here... people go to Uganda [because] Uganda has this policy I’ve never heard of anywhere else. As a refugee you can move freely, you can work, you can go to school.” —Author interview, Kampala, Uganda, June 21, 2017.

“Uganda also has improved [access to] social services compared to the neighbouring fragile states. It’s kind of pull factors.” —Author interview, Kampala, Uganda, July 18, 2017.

These statements are consistent with our gravity models suggesting FDP are particularly attracted to policy environments affording them rights to work and live outside of refugee camps, as well as access to services. One notable finding of ours, which challenges extant work from the Global North, is that citizenship and political engagement rights do not significantly affect developing world FDP decisions about where to flee. This null findings has an intuitive explanation. Most developing world refugees and asylum-seekers typically either want to return to their home countries or seek resettlement in Western countries, not to reside permanently in an asylum country in the Global South. Insofar as permanent residency is not a goal, the null effects on asylum rates of liberal citizenship policies make sense. As one Congolese respondent in Uganda estimated,

“90% [of Congolese refugees in Uganda]” do not want to remain in Uganda, compared to returning to the Democratic Republic of the Congo or resettling in a third country. — Author interview, Kampala, Uganda, June 14, 2017.

## **Evidence on General Policy Knowledge**

Many interviewees explained that Uganda is regionally well-known for its liberal policy. Specifically, they stated that prospective FDP throughout East Africa had come to know that Uganda was relatively more liberal than other potential host states.

A number of Congolese refugees reported that they knew about liberal provisions in Uganda:

“Uganda can have its missions, its objective, but it leaves everyone free to stay where he wants to stay. In other countries, refugees can stay only in camps.” —Author interview, Kampala, Uganda, June 28, 2017.

“In the community, the general opinion will be Uganda is best.” —Author interview, Nakivale, Uganda, July 5, 2017.

Somali FDP knew access provisions were more liberal in Uganda than other regional host countries as well:

“They welcome you well. You can stay here as an asylum-seeker. They can’t welcome for you anywhere [else in East Africa].” —Author interview, Kampala, Uganda, June 29, 2017.

In addition, refugees contrasted Uganda’s policy with more restrictive policy in the Democratic Republic of the Congo (DRC):

“Truly speaking, Uganda is doing its best. It is fairly liberal ... In Congo, under the 2004 law, UNHCR is more on the ground. These rights are not visible on the ground [in DRC].” —Author interview, Kampala, Uganda, June 14, 2017.

Many other FDP from South Sudan, Somalia, and Ethiopia contrasted Uganda's liberality with well-known, restrictive conditions in Kenya and elsewhere:

"Uganda being the best, or one of the best... because I cannot complain because it is much better than Kenya. In Kenya, you go to register in Kakuma and you cannot move outside because they will not let you leave this place. They arrest you because they want you to stay in this place." —Author interview, Kampala, Uganda, June 15, 2017.

"If you have a refugee card in Kenya, they arrest you. They don't like you. The problem is conflict for sure." —Author interview, Kampala, Uganda, June 29, 2017.

"I can't go to Kenya because they can't give you a refugee card easily." —Author interview, Kampala, Uganda, June 29, 2017.

"It is confusing for you in Kenya, so I came for peace in Uganda." —Author interview, Kampala, Uganda, June 29, 2017.

"They catch you in Kenya, and can arrest you. We know many from the camps in Kenya who had troubles, so we come to Uganda." —Author interview, Kampala, Uganda, June 29, 2017.

"... we only know Uganda from Kenya. We know it's safer here." —Author interview, Kampala, Uganda, June 29, 2017.

"In Kenya Dadaab you can't go to Nairobi. But here you can go to the city for work." —Author interview, Kampala, Uganda, June 29, 2017.

"[We heard anti-Islamic discrimination] exists in Kenya but not Uganda." —Author interview, Kampala, Uganda, June 29, 2017.

"Some people cross the border from Kakuma to Kenya and they come back to Uganda. This shows that Kenya's policy to us too harsh. Even from Khartoum now they go [to Uganda]. I was in Sudan and there are problems. They are trying to force you into a settlement, and there are issues with the registration of urban refugees [in Khartoum]. Sudan wants no one in the cities. In Uganda, there is free movement." —Author interview, Kampala, Uganda, June 29, 2017.

"And you find that life is also more cheap [for a refugee] in Uganda. In Kenya it is quite expensive to buy a soda. Here you can get a meal for your family." —Author interview, Kampala, Uganda, June 29, 2017.

"If you go to Kenya, your passport must be stamped, and they ask if you support our government. But here, you just move freely." —Author interview, Kampala, Uganda, June 29, 2017.

"When you look at the countries hosting South Sudanese, Uganda is the best. Why? Because Uganda has freedom, and according to the Act, whereby you have the freedom to do anything... start an organization, work. In the work department, it is free of charge to work as long as you have a refugee card. And they look and see that there are many South Sudanese in Uganda. You move also freely, and you can have your business. In Kenya, they cannot allow this." —Author interview, Kampala, Uganda, June 29, 2017.

"We came five years ago. We had to cross Kenya, but I never stayed there. Kenya is not safe. We heard they were bad, and I knew some friends in Uganda before." —Author interview, Nakivale, Uganda, July 6, 2017.

“I came by car nine months ago. We crossed Kenya, and it is bad. They do not like Somalis or Muslims. Some in my family were here already, so I settled with them.” —Author interview, Nakivale, Uganda, July 6, 2017.

“I have been 25 years here from Gambella [in Ethiopia]. Kenya is a big problem and there’s a lot of corruption. They just want your pocket. Uganda is better ... here it looks at least a bit like my homeland.” —Author interview, Nakivale, Uganda, July 6, 2017.

Humanitarian officials also noted that Uganda was known for having a better policy environment than other regional host countries:

“it’s significantly better than other countries... than Kenya.” —Author interview, Kampala, Uganda, June 15, 2017.

“the policy that is in place here, which is quite good—it is not perfect but for the region it is great.” —Author interview, Kampala, Uganda, June 21, 2017.

“the land is a big part of the policy. And it has gone quite broad now I would say. Many people know about the policy now.” —Author interview, Kampala, Uganda, June 21, 2017.

“[Policy in Uganda] is much better than Kenya. And Kenya has many other problems with the Somali. There are more there, but the government is often hostile to them. Like in Uganda they are a close community in Kenya—and they have to be. ... So there are threats about policy in Kenya that lead them to Uganda.” —Author interview, Kampala, Uganda, June 21, 2017.

“It would be wrong to say that the other countries are not welcoming, but Uganda is less restrictive. You are free to move, to work. ... Tanzania has much, much land, and it hosts many refugees. But if they go to Tanzania they will be fixed. They cannot move freely as in Uganda.” —Author interview, Kampala, Uganda, June 27, 2017.

“[Uganda] could be a model for refugees in Kenya and Tanzania. These countries are much worse than Uganda. The message of Uganda must be taken to Kenya and Tanzania.” —Author interview, Kampala, Uganda, July 10, 2017.

“Of course, [Uganda is] very good. There’s freedom of movement and equal access to opportunity... if you compare that to Kenya, you see Uganda is a few steps ahead.” —Author interview, Kampala, Uganda, July 12, 2017.

## **Evidence on Co-Ethnics as a Source of Policy Knowledge**

How did knowledge of Uganda’s policy spread throughout East Africa? Interviewees pointed to populations of co-ethnics/co-nationals split between origin and host countries as a key source of information.

For example, one Congolese refugee we spoke with described how community leaders and civil society activists from the Congolese community in Uganda “are familiar with the laws” and help pass information back to prospective migrants in the DRC (Author interview, Kampala, Uganda, June 14, 2017). Others explained, “On the rights, [co-ethnic/co-national community leaders and organizations] just give you the idea...” (Author interview, Kampala, Uganda, June 26, 2017). Likewise, Burundian FDP reported, “In Kampala, we have an association of lawyers. All these associations and clubs play a major role in taking care of refugees [and informing us]...” (Author interview, Kampala, Uganda, June 28, 2017). A South Sudanese interviewee corroborated the role of co-ethnic community leaders, who

help inform prospective migrants about policy conditions, explaining, “especially the leaders can let [refugees] know [about the law]...” (Author interview, Kampala, Uganda, June 16, 2017).

A group of Congolese diaspora community leaders in Kampala corroborated their role in informing prospective FDP in the DRC about policies in Uganda:

“We teach refugees their rights and obligations. ... Who will help them know their rights. ... We help them a lot so they can know what is their right.” —Author interview, Kampala, Uganda, June 22, 2017.

Several FDP explicitly clarified that co-ethnics in Uganda communicate about conditions like land access to prospective migrant kin in origin countries:

“After the war broke out, with defection, loss of job, the people in Uganda were able to tell others [that policy was better in Uganda than Kenya].” —Author interview, Kampala, Uganda, June 23, 2017.

“The people communicate back home ... and the people cultivating go to Uganda. They are cultivating, and have the same land in South Sudan and Uganda. Another issue... the host communities have the same language. The community members speak the same language, and you feel okay to speak with them. You feel okay with them.” —Author interview, Kampala, Uganda, June 29, 2017.

Many other FDP respondents cited transnational ethnic kin as facilitating communication and integration—the two mechanisms surrounding kin that we elaborate in the paper:

“You know, you can go to Rwanda, they have relatives from Uganda there. You go to Nimule, Torit, Boma, in South Sudan, you can find South Sudanese who have relatives from Uganda there. The people speak the same language.” —Author interview, Kampala, Uganda, June 16, 2017.

“The Rwandese people are settled in areas where the people are like them. They were in the same situation and they understand what it takes to be in a secure place. ... there are many Acholi and Madi that have common origin where they come from. ... the majority come because the host have no problem with them... Even in the north the South Sudanese get along with the northern Uganda people.” —Author interview, Kampala, Uganda, June 23, 2017.

“Uganda and South Sudan were one country divided. More than 20 tribes are divided by that border. ... Of course, they have one language, and thus have one type of culture that is a good culture for hosting, to adapt someone to enter. These are the same people.” —Author interview, Kampala, Uganda, June 29, 2017.

“We have some communities who come here and are from the same tribe, especially the Madi.” —Author interview, Kampala, Uganda, June 29, 2017.

“I also second the ethnic sameness and language also, with the host communities [helping us learn and integrate].” —Author interview, Kampala, Uganda, June 29, 2017.

“we heard [about the policy because] Ugandan had many Burundians.” —Author interview, Nakivale, Uganda, July 5, 2017.

Humanitarian workers also echoed these points about the role of ethnic kin:

“If you think, some colonialists draw a line here but the tribes are split on both sides, and that’s really clear. It is that from northern Uganda to South Sudan, even DRC, they are brothers and sisters. Even literally, they have family on both sides. ... the reason is mainly ethnic contiguity ... in Uganda it’s all about your tribe, where your village is. And all of this—tribes and villages—which are then more connected to South Sudan or DRC than other places. So maybe these refugees are treated a little better.” —Author interview, Kampala, Uganda, June 21, 2017.

“they are ethnically the same. They are almost received by people of the same tribe.” —Author interview, Kampala, Uganda, June 23, 2017.

“the dialect is understandable. At the border we know there’s a lot of intermarriage—Ugandans and DRC, Ugandans and South Sudan. ... Most importantly is that as they should relate to somebody, and can easily adapt and speak the language.” —Author interview, Kampala, Uganda, June 23, 2017.

“The informal [co-ethnic] structures are seen as an extension of refugee laws. Part of the trouble is that there aren’t even clear lines between the locals and refugees. If you ask in a broad sense they do, generally it’s reciprocal. ... If you look at the west, it’s a debate to see who is Rwandan and who is Ugandan. The Acholi in South Sudan are the Acholi in Uganda. The Madi in South Sudan are the Madi in Uganda. ... These people were known to one another. They aren’t isolated. There’s no cultural barrier.” —Author interview, Kampala, Uganda, June 30, 2017.

“They have the same names, speak the same languages... this means they may locally reintegrate... .” —Author interview, Kampala, Uganda, July 12, 2017.

While the roles of co-ethnic networks in migrant decisionmaking are well-known, the evidence outlined above suggests another mechanism through which kinship ties influence migration—through policy knowledge. The suggestive evidence presented here implies that forced migrants are aware of asylum policies, especially in states where co-ethnics reside. These findings help establish our broader contention that *de jure* policies do affect forced migrants’ calculi.

## References for Supplementary Materials

Adhikari, Prakash. 2013. “Conflict-Induced Displacement, Understanding the Causes of Flight.” *American Journal of Political Science* 57(1): 82-89.

Anderson, James E. 2011. “The Gravity Model.” *Annual Review of Economics* 3: 133-60.

Beine, Michel, Simone Bertoli and Jesús Fernández-Huertas Moraga. 2016. “A Practitioners’ Guide to Gravity Models of International Migration.” *The World Economy* 39(4): 496-512.

Blair, Christopher W., Guy Grossman, and Jeremy M. Weinstein. Forthcoming. “Forced Displacement and Asylum Policy in the Developing World.” *International Organization*.

Cameron, Colin A. and Pravin Trivedi. 2013. *Regression Analysis of Count Data*. New York, NY.: Cambridge University Press.

Crisp, Jeff. 1999. “‘Who has counted the refugees?’ UNHCR and the politics of numbers.” *New Issues in Refugee Research Working Paper 12*.

- Cronin-Furman, Kate, and Milli Lake. 2018. “Ethics Abroad: Fieldwork in Fragile and Violent Contexts.” *PS: Political Science & Politics* 51(3): 607-14.
- Czaika, Mathias. 2009. “The Political Economy of Refugee Migration.” *Journal of Economics and Statistics* 229(6): 803-21.
- Dreher, Axel. 2006. “Does globalization affect growth? Evidence from a new index of globalization.” *Applied Economics* 38(10): 1091-110.
- Echevarria, Jon and Javier Gardeazabal. 2016. “Refugee Gravitation.” *Public Choice* 169(3-4): 269-92.
- Fally, Thibault. 2015. “Structural gravity and fixed effects.” *Journal of International Economics* 97(1): 76-85.
- Fearon, James D. and Andrew Shaver. 2020. “Civil War Violence and Refugee Outflows.” Unpublished Manuscript, Stanford University.
- Fitzgerald, Jennifer, David Leblang, and Jessica C. Teets. 2014. “Defying the Law of Gravity: The Political Economy of International Migration.” *World Politics* 66(3): 406-45.
- Freibel, Guido, Juan Miguel Gallego, and Mariapia Mendola. 2013. “Xenophobic attacks, migration intentions, and networks: evidence from the South of Africa.” *Journal of Population Economics* 26(2): 555-91.
- Giménez-Gómez, José-Manuel, Yabibal M. Walle and Yitagesu Zewdu Zergawu. 2019. “Trends in African Migration to Europe: Drivers Beyond Economic Motivations.” *Journal of Conflict Resolution* 63(8): 1797-831.
- Hanson, Gordon and Craig McIntosh. 2016. “Is the Mediterranean the New Rio Grande? US and EU Immigration Pressures in the Long Run.” *Journal of Economic Perspectives* 30(4): 57-82.
- Hatton, Timothy J. 2016. “Refugees, Asylum Seekers, and Policy in OECD Countries.” *American Economic Review: Papers & Proceedings* 106(5): 441-45.
- Hatton, Timothy J. and Jeffrey G. Williamson. 2003. “Demographic and Economic Pressure on Emigration out of Africa.” *Scandinavian Journal of Economics* 105(3): 465-86.
- Head, Keith and Thierry Mayer. 2014. “Gravity Equations: Workhorse, Toolkit, and Cookbook.” In *Handbook of International Economics* 4: 131-95.
- Helbling, Marc, and David Leblang. 2019. “Controlling immigration? How regulations affect migration flows.” *European Journal of Political Research* 58(1): 248-69.
- Hernán, Miguel A., and James M. Robins. 2020. *Causal Inference: What If*. CRC Press.
- Iqbal, Zaryab. 2007. “The Geo-Politics of Forced Migration in Africa, 1992–2001.” *Conflict Management and Peace Science* 24(2): 105-19.
- Larson, Jennifer M. and Janet I. Lewis. 2017. “Ethnic Networks.” *American Journal of Political Science* 61(2): 350-64.

- Light, Ivan, Richard B. Bernard, and Rebecca Kim. 1999. "Immigrant incorporation in the garment industry of Los Angeles." *International Migration Review* 33(1): 5-25.
- Linden, Ariel. 2015. "Conducting interrupted time-series analysis for single- and multiple-group comparisons." *The Stata Journal* 15(2): 480-500.
- Marbach, Moritz. 2018. "On imputing UNHCR data." *Research & Politics* 5(4): 1-7.
- Martin, Will and Cong S. Pham. 2015. "Estimating the Gravity Model When Zero Trade Flows Are Frequent and Economically Determined." *World Bank Policy Research Working Paper 7308*. World Bank.
- McDowall, David, Richard McCleary, and Bradley J. Bartos. (Eds.). 2019. *Interrupted Time Series Analysis*. New York, NY.: Oxford University Press.
- Moore, Will H. and Stephen M. Shellman. 2007. "Whither Will They Go? A Global Study of Refugees' Destinations, 1965–1995." *International Studies Quarterly* 51(4): 811-34.
- Munshi, Kaivan. 2003. "Networks in the Modern Economy: Mexican Migrants in the U.S. Labor Market." *Quarterly Journal of Economics* 118(2): 549-99.
- Neumayer, Eric. 2005. "Bogus Refugees? The Determinants of Asylum Migration to Western Europe." *International Studies Quarterly* 49(3): 389-409.
- Rose, Andrew K. 2004. "Do We Really Know That the WTO Increases Trade?" *American Economic Review* 94(1): 98-114.
- Rüegger, Seraina and Heidrun Bohnet. 2018. "The Ethnicity of Refugees (ER): A new dataset for understanding flight patterns." *Conflict Management and Peace Science* 35(1): 65-88.
- Santos Silva, J.M.C. and Silvana Tenreyro. 2006. "The Log of Gravity." *Review of Economics and Statistics* 88(4): 641-58.
- Santos Silva, J.M.C. and Silvana Tenreyro. 2011. "Further simulation evidence on the performance of the Poisson pseudo-maximum likelihood estimator." *Economics Letters* 112(2): 220-22.
- Steele, Abbey. 2017. *Democracy and Displacement in Colombia's Civil War*. Ithaca, NY.: Cornell University Press.
- United Nations High Commissioner for Refugees. 2019. *Global Trends in Forced Displacement in 2019*. United Nations.
- Vogt, Manuel, Nils-Christian Bormann, Seraina Rüegger, Lars-Erik Cederman, Philipp Hunziker, and Luc Girardin. 2015. "Integrating Data on Ethnicity, Geography, and Conflict: The Ethnic Power Relations Data Set Family." *Journal of Conflict Resolution* 59(7): 1327-42.
- Wood, Elisabeth Jean. 2006. "The ethical challenges of field research in conflict zones." *Qualitative Sociology* 29(3): 373-86.
- Xu, Yiqing. 2017. "Generalized Synthetic Control Method: Causal Inference with Interactive Fixed Effects Models." *Political Analysis* 25(1): 57-76.