Access denied: how bureaucrats shape politicians' incentives to choose restrictive asylum policies

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Abstract

Recent years have seen a surge of politicians campaigning on policies that aim to deter asylum applicants. We present a game-theoretic model in which foreign nationals consider applying for asylum and bureaucrats decide their case if they apply. We show that while policies that make the asylum application less attractive decrease the probability that foreign nationals apply, they also endogenously raise the credibility of applicants' claims to political persecution and, therefore, may not decrease the number of admitted refugees. Investigating how these competing effects shape asylum policy-making, we show how policy choices depend on bureaucrats' leniency and politicians' objectives. Our analysis speaks to the causes of restrictive asylum policies and their limited effectiveness in reducing immigration.

Keywords: Bureaucracy; Populism; Asylum Policy; Refugees; Formal theory

In principle, whether or not an asylum seeker is granted refugee status should depend only on the person's individual threat of political persecution—a seemingly non-partisan criterion. However, from Hungary's Victor Orban to Austria's former chancellor Sebastian Kurz and former U.S. President Donald Trump, asylum seekers are often the target of intense political campaigns, with politicians pursuing policies designed to decrease immigration. For example, both Victor Orban and Donald Trump promised to erect border walls aimed at shielding their countries from alleged refugee flows. Similarly, Sebastian Kurz pushed for tight labor market restrictions, pursuing a reduction of Austria's attractiveness as a destination country for potential asylum applicants.

Politicians argue that the implementation of these restrictive policies deters potential asylum seekers and reduces the number of admitted refugees. This rationale follows a simplistic logic in which the number of asylum applications (the demand for asylum) translates proportionally to the number of *admitted* refugees. However, this logic overlooks the importance of a specialized bureaucracy tasked with deciding either to admit or not to admit asylum applicants as refugees (the supply for asylum). Moreover, it also misses the strategic interaction between foreign nationals that contemplate applying for asylum—who may have an incentive to apply even when not eligible under the country's asylum standard—and bureaucrats who try to discern between eligible and ineligible applicants.

In this paper, we analyze how restrictive asylum policies affect the behavior of both foreign nationals and bureaucrats using a game-theoretic model. Our model takes into account three stylized features of the asylum admission process. First, foreign nationals' threat of political persecution shapes their incentives to seek security in the asylum-granting country. However, despite the conceptually straightforward and neutral criterion of a threat of political persecution, this

characteristic is the applicant's private information and impossible to verify. Second, there is a specialized bureaucracy tasked with deciding to either accept or reject an asylum application. These bureaucrats, acting as gatekeepers, wish to grant asylum only to applicants who are eligible. Third, there exists a level of political persecution that is serious enough to make the applicant eligible for asylum. This is the standard against which bureaucrats evaluate applications for asylum.

In the baseline model, there are two players: a foreign national contemplating whether or not to apply for asylum, and a bureaucrat who, if the foreign national applies, is tasked with granting or rejecting the application. The bureaucrat's preferences are such that the bureaucrat wishes to grant asylum to applicants who are eligible and not to grant asylum to ineligible ones. The exact costs of granting admission to an ineligible applicant relative to the costs of not granting asylum to an eligible applicant are known only to the bureaucrat. However, the distribution from which they are drawn is commonly known, and we refer to this distribution as the agency's reputation. The foreign national is attracted by the level of security in the destination country but faces costs when applying. If the foreign national does not apply, the foreign national earns a wage in the home country. Our key assumptions are that the wage earned in the home country is a decreasing function of the threat of political persecution (when facing persecution, participating in the home economy is more difficult) and that the threat of political persecution is the foreign national's private information.

In the model, the uncertainty about the level of threat faced by a foreign national creates incentives for some foreign nationals to apply for asylum even though they are ineligible according to the destination country's asylum standard. In equilibrium, there exists a threshold level of political persecution at which foreign nationals are indifferent between applying and not applying for asylum. Consequently, those below the equilibrium threshold do not apply while types above this threshold do apply, hoping that the bureaucrat will accept them—even though some of them are not eligible for asylum. The bureaucrat's decision to accept or reject an application depends on the bureaucrat's beliefs about the likelihood that an applicant is eligible for asylum. As the incentives to apply depend on the foreign national's level of political persecution, receiving an application is informative about the eligibility of an applicant. In equilibrium, a bureaucrat's belief that the foreign national is eligible for asylum is always higher *after* receiving an application than *before*. The extent to which the bureaucrat's belief changes depends on the attractiveness of applying for asylum: the lower the attractiveness of applying, the greater the informational effect of receiving an application and, hence, the change in the bureaucrat's belief that a foreign national is eligible.

This dependency between the attractiveness of applying for asylum and the bureaucrat's beliefs about the applicant's eligibility renders the effects of restrictive policies ambiguous. When politicians implement policies to make it harder to apply for asylum (e.g., building a border wall) or reduce the payoff when admitted (e.g., by limiting access to the labor market),[1] two consequences follow. On the one hand, some applicants are deterred from applying (*deterrence effect*). On the other hand, a bureaucrat receiving an application will be more certain that the foreign national is eligible (*credibility effect*). In other words, while restrictive policies always reduce the number of applications, they may or may not reduce the number of admitted refugees. In some instances, the decline in applications will not result in a lower number of admitted refugees as, among the remaining applicants, a higher fraction is admitted.

In our baseline model, there is no friction between the bureaucrat and the foreign national: asylum applications of foreign nationals that decide to leave their home country always reach the bureaucrat; applicants have no means to enter the destination country irregularly; and the bureaucrat's decision is perfectly enforced. We relax these assumptions in our extensions, showing that the ambiguous effect of restrictive asylum policies is a robust feature of the asylum process.

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[1]We focus on such demand-oriented policies whose consequences have been the focus of empirical research (e.g., Massey *et al.*, 2016; Marbach *et al.*, 2018), but we also briefly discuss supply-oriented policies that directly interfere with bureaucratic decision-making in the Supplementary Materials (SM).

First, we consider a situation in which the bureaucrat's choice is imperfectly enforced and not all rejected applicants are deported. Many countries do not enforce immigration decisions and hence do not return those foreign nationals that remain without authorization in their territory (de Haas *et al.*, 2020, p. 260). For example, in the European Union, about 422,400 non-EU citizens were ordered to leave in an administrative or judicial procedure in 2022. However, fewer than a quarter of those (94,970) returned.[2] Research suggests that planned deportations are not implemented for various reasons, including a lack of co-operation by immigrants' home countries (Ellermann, 2008). We show that when there is imperfect enforcement, restrictive asylum policies become more effective compared with the baseline model. The reason is that the deterrence effect is relatively more important than the credibility effect for determining outcomes. Intuitively, imperfect enforcement diminishes the bureaucrat's gatekeeping role. This suggests that countries with less enforcement capacity are more likely to opt for restrictive asylum policies. Increasing enforcement is also often argued to increase deterrence, i.e., increasing the probability with which deportations take place should lead to a decrease in asylum applications.[3] We show that this is not always true—it depends on how the foreign national type who is indifferent between applying or not evaluates the informal wage in the destination country, i.e., the wage that is earned when an asylum application is rejected but enforcement does not take place. When this informal wage is very low, increasing the likelihood of deportations can actually increase asylum applications. This is consistent with existing research showing that there is no robust correlation between deportations and asylum application (Wong, 2015, Chapter 5).

Second, scholars of immigration have long debated if and how countries are able to effectively control immigration (e.g. Hollifield *et al.*, 2014). At the heart of this debate is the observation that in many polities, unauthorized immigration happens regularly. Pew estimates that about 3.9–4.8 million unauthorized immigrants lived in Europe in 2017 and about 10.5 million lived in the United States at the same time.[4] In our model, when foreign nationals can also pursue irregular migration, restrictive asylum policies can have subtle distributional effects. For example, suppose an employment ban is implemented. This policy does not always reduce the probability of the foreign national being admitted as a refugee because, as before, the bureaucrat responds by assessing the eligibility of the foreign national to be higher than before. However, even if it does reduce the number of admitted refugees, it may simultaneously increase the probability that a could-be asylum applicant attempts to enter the country without authorization. We also investigate the consequences of tightening the border for irregular migrants, showing that this decreases attempts to enter irregularly but increases asylum applications—which are then more often rejected.

Third, we consider a model variation in which the attempt to apply for asylum may fail. Many asylum seekers face natural barriers like oceans before being able to apply for asylum. Based on recovered bodies and reported crossings, the International Organization for Migration (IOM) estimates that before the pandemic almost 5 percent of everyone using the Central Mediterranean route to reach Europe died.[5] Our central results about the ambiguity of restrictive asylum policies remain unchanged in a model in which some applicants might die before being able to apply for asylum. The reason is that the bureaucrat is still more likely to grant asylum the lower the likelihood that the foreign national applies. However, we also show that as the probability of death increases, the lower the likelihood that the foreign national (who is assumed to be informed about the risk) will apply,

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[2]Eurostat, May 2023, "Statistics Explained: Enforcement of Immigration Legislation Statistics."

[3]For example, the conservative Center for Immigration Studies in the US writes that immigration control should "reduce the number of new illegal arrivals and persuade a large share of illegals already here to give up and deport themselves" (quoted in Wong, 2015, p. 144).

[4]See Pew Research Center, November 13, 2019, "Europe's Unauthorized Immigrant Population Peaks in 2016, Then Levels Off" and Pew Research Center, April 13, 2021, "Key Facts about the Changing U.S. Unauthorized Immigrant Population."

[5]IOM, 2023, GMDAC Briefing Series, "Calculating Death Rates in the Context of Migration Journeys: Focus on the Central Mediterranean."

suggesting that increasing the journey risks deters (informed) applicants. This is consistent with observations of declining asylum applications in Australia after its navy started turning around asylum seekers' boats at sea as part of Australia's "Pacific Solution."[6]

In the last section, we ask which asylum policies a populist, refugee-skeptic politician would actually choose when in office. Assuming that such politicians care about the number of admitted refugees, we show that the deterrence and credibility effects critically shape optimal asylum policy.[7] Specifically, the politician will either choose the least restrictive or the most restrictive policy, effectively choosing between two distinct policy regimes: when choosing the former policy, the politician opts for "gate-keeping." Here, the politician allows for relatively high number of applicants. These applicants have consequently low credibility, and are hence likely to be rejected. By contrast, when opting for the most restrictive policy, the politician sharply restricts access while accepting that the conditional probability of admission is relatively high, due to the high credibility that applicants enjoy. Having endogenized asylum policy, we explore how policy choices depend on the political context and the politician's objectives. We first discuss politicians that are operating in different political contexts, i.e., who face agencies that are more or less strict, showing that an agency's reputation has an ambiguous effect on the politician's policy choice. We then analyze politicians with different types of interests in a single context. For example, we show that when there is imperfect enforcement, politicians allied with business interests may choose less restrictive policies.

Our paper contributes to several literatures. Although there is a growing number of formal models on the politics of emigration (Gehlbach, 2006; Clark *et al.*, 2017; Sellars, 2019), formal models of immigrant admission similar to ours are largely absent from the literature, despite ample evidence that highlights the role of bureaucrats' and judges' beliefs in asylum decision-making (Rottman *et al.*, 2009; Brodeur and Wright, 2019; Emeriau, 2021; Gundacker *et al.*, 2021; Shiff, 2021; Spirig, 2021). Within the scholarship that is more explicitly concerned with immigration outcomes, the bulk of the literature considers the country-correlates of asylum application numbers, changes in immigrant stocks, and bilateral immigration flows. A key question in this literature is if governments can successfully deter unwanted immigrants using policy (see for example, Neumayer, 2005; Brücker and Schröder, 2011; Helbling and Leblang, 2019). While the empirical literature has documented mixed findings on this question, one common explanation for deterrence failure is that potential asylum applicants are not aware of these policies (Crawley and Hagen-Zanker, 2019). Our model highlights that, even if foreign nationals do know the policies in place, a deterrence effect may only be observable with respect to the number of submitted asylum applications but not necessarily with respect to changes in stocks and flows (i.e., the number of admitted applicants). Therefore, empirical studies on immigration deterrence should carefully consider which outcomes to study.

Our paper also contributes to the literature on populism, addressing how populist politicians challenge the establishment's legitimate authority (Mudde and Kaltwasser, 2017; Norris and Inglehart, 2019). We highlight the pivotal role of public bureaucrats—who are often attacked by populists as being the culprits behind societal problems. Our analysis reveals that the policy decisions of populist politicians are influenced by bureaucrats' preferences. We show that, under some conditions, policy choices are more extreme the more lenient bureaucrats' preferences are. Thus, due to the strategic interaction we consider, anti-refugee politicians' behavior is more extreme whenever the establishment is, in fact, more lenient. This is different from other formal populism models where establishment concerns are either assumed or abstracted away from (Acemoglu *et al.*,

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[6]See, for example, Sherrell, 2022, "The Central Role of Cooperation in Australia's Immigration Enforcement Strategy" Migration Policy Institute.

[7]Our assumption that refugee-skeptic politicians care about the number of admitted refugees is motivated by statements of populist politicians who seem to be interested in reducing overall immigration. For example, during a Roundtable on Immigration and Border Security on April 5, 2019, Donald Trump said: "Whether it's asylum, whether it's anything you want—it's illegal immigration—can't take you anymore. We can't take you. Our country is full. Our area's full. The sector is full—can't take you anymore. I'm sorry—can't happen, so turn around."

2013; Serra, 2018; Buisseret and Weelden, 2020; Sasso and Morelli, 2021). Nonetheless, our model aligns with some aspects of existing populism models, such as anti-minority sentiments and state-independent preferences (Sasso and Morelli, 2021).

Finally, we also contribute to the bureaucratic politics literature, which is traditionally focused on analyzing bureaucratic drift which occurs when agencies' preferences diverge from those of elected officials (Bendor and Meirowitz, 2004; Gailmard and Patty, 2012). Our model differ from these accounts in three ways. First, it incorporates a foreign national anticipating the bureaucrat's asylum decision, compelling the principal to consider the strategic interaction between both actors.[8] Second, unlike typical models where all actors are from the same polity, ensuring accountability, our politicians are not answerable to foreign asylum seekers. Third, in a departure from models with both actors having state-dependent preferences, we follow Horz and Simpson (2023) by pairing a bureaucrat with state-dependent and a politician with state-independent preferences.

1. Background

In the last few years, the number of people seeking protection from political violence in other countries has increased drastically. While most displaced persons are displaced internally (i.e., within the country they lived in before), the number of internationally displaced persons has increased from 17 million to 34 million in the last two decades. Three notable recent displacement events are the European refugee crisis of 2015/16 during which Syrian and other nationals filed about 2.4 million asylum applications in Europe and the exodus of almost 4 million Venezuelans and 6 million Ukrainians to neighboring countries.[9]

The legal origin of the current refugee regime is the 1948 Universal Declaration of Human Rights, which recognizes the right of any person to seek asylum from political persecution in other countries. Building on this declaration, the 1951 Refugee Convention (or Geneva Convention of July 28, 1951) defines a refugee as a person who, "owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country." Some international regimes, such as the European Union, also recognize a need for (temporary) protection due to war even in the absence of personal persecution.[10]

In some circumstances, countries may award protection to all persons with a particular nationality—as the European Union did with respect to Ukrainians after the Russian invasion of 2022—but, typically, asylum applications are evaluated on a case-by-case basis. To determine eligibility for protection, most countries maintain specialized bureaucracies that receive and evaluate each asylum application individually. These applications are costly because they typically entail migrating to the destination country, filing paperwork, and being subjected to the asylum procedure (which, for example, could limit applicants' freedom of movement).[11] If someone qualifies for protection, the person is officially recognized as a refugee. If an application is denied, the applicant may be forcefully deported unless the individual leaves the country voluntarily.

National laws typically regulate where and how applicants can file an application, applicants' rights and responsibilities during the review process, and applicants' access to the legal system to

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[8]This is similar to the service delivery literature in which the behavior of politicians, voters, and bureaucrats is jointly analyzed (Grossman and Slough, 2022).

[9]UNHCR Refugee Data Finder: unhcr.org/refugee-statistics/download/?url=IjZ8l1.

[10]Below we focus on the bureaucrat's choice to grant asylum, but our model is also consistent with describing this choice as granting a different kind of protection status, e.g., the European Union's subsidiary protection.

[11]In the past, some countries allowed applicants to submit an asylum application at a country's embassy (Noll, 2005). Many countries also participate in resettlement programs of the United Nations High Commissioner for Refugees (UNHCR), pledging to relocate a certain number of refugees from protracted refugee situations.

appeal rejections. While these differences are clearly important, our model focuses on the common core features of most national procedures: foreign nationals have to apply for asylum and bureaucrats decide on their cases.

2. A model of the asylum process

The players are a foreign national, E, and a bureaucrat, B. The bureaucrat could be an officer from a border protection agency tasked with making an initial assessment about the foreign national's asylum case. Alternatively, the bureaucrat could be an immigration judge who is in charge of making a final decision regarding the applicant's asylum case.[12]

We denote the foreign national's (eventual) location by $L \in \{0,1\}$, where $L = 1$ means that the foreign national is admitted as a refugee and in a safe destination country while $L = 0$ means that the foreign national is in the home country. E chooses to apply for asylum ($e = 1$) or not ($e = 0$). If E chooses to apply, B chooses to grant asylum ($a = 1$) or not ($a = 0$). Thus, the foreign national is in the safe destination country if and only if the foreign national applies and is granted asylum, i.e., $L = ea$.

The foreign national can be interpreted as a representative citizen of a foreign country. In this polity, each citizen faces an expected threat of future violence denoted by v. We take the quantity v to measure the level of individual persecution.[13] We assume that v is private information to the foreign national (and, therefore, unknown to the asylum-granting bureaucrat) and drawn from a commonly known distribution F. The justification for this assumption is that v is difficult to verify as it depends on other actors' (future) behavior. E's utility function is

$$U_E = Lw_1 + (1 - L)w_0(v) - ec,$$

where c is the cost of applying for asylum (which might include the costs of emigrating to the destination country as discussed above) and w_L is the wage—or more generally the quality of life—when the foreign national is living in L. Importantly, we assume that, when remaining in the home polity, the foreign national's payoff is strictly decreasing in the level of individual persecution.

The bureaucrat's utility function, described in Table 1, depends on κ, which parametrizes the bureaucrat's concern for Type-I and Type-II errors. The bureaucrat wishes to make the correct decision. Given an asylum standard $\bar{v}$, the foreign national is eligible for asylum if the level of persecution is larger than $\bar{v}$. For reasons that will become apparent below, we interpret lower values of κ as representing a more lenient bureaucrat. One interpretation of κ could be that there are some bureaucrats that care much less about someone's eligibility for asylum, but rather prioritize their own understanding of deservingness. We assume that κ is the bureaucrat's private information, drawn from a distribution with cumulative distribution function H and associated density h. Thus, we assume that the foreign national does not know the exact payoff function of the bureaucrat. We sometimes refer to H as the agency's reputation.

The bureaucrat's utility function depends on the agency's mission and individual characteristics. Generally speaking, for signatory states of the 1951 Refugee Convention, the agency's mission is to accept eligible individuals and reject non-eligible ones—but the exact standard ($\bar{v}$) may vary across polities. The bureaucrat may have internalized this standard, and mistakes may be differentially punished through diminished career prospects. Importantly, we assume that mistakes (as

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[12]While judges are not part of the executive branch, we use the label "bureaucrat" for simplicity. The modeling of judges in the literature is consistent with our approach (e.g., Fox and Stephenson, 2011).

[13]An alternative interpretation is that the bureaucrat observes the level of violence, but there is uncertainty about the extent to which it is the result of targeting of a particular social group (e.g., LGBTQ+ members, women) or if the government is unable or unwilling to provide protection. From that perspective, the parameter v represents the extent to which the observed violence is targeted, and the state is able and willing to provide protection.

Table 1. The bureaucrat's preferences

u_{av}	$v \geq \overline{v}$	$v < \overline{v}$
$a = 1$	0	$-\kappa$
$a = 0$	$-(1 - \kappa)$	0

parametrized by κ) depend only on eligibility, not on the exact distance between the applicant's v and the standard $\overline{v}$. The empirical literature has studied bureaucrats' decisions, showing that they are affected by the media environment (Spirig, 2021), their moral schemas (Shiff, 2021), and anti-Muslim biases (Emeriau, 2021). To some extent, we capture these considerations with different specifications of H. For notational simplicity, we do not add a separate parameter that represents the bureaucrat's bias. However, as long as this parameter is not too large, this does not affect our substantive conclusions.

Summarizing, the sequence of moves by the players is as follows:

1. Nature draws the type of the foreign national v from the distribution F.
2. The foreign national applies for asylum ($e = 1$) or not ($e = 0$).
3. Nature draws the concern for incorrect decisions κ from the distribution H.
4. If there is an application, the bureaucrat grants asylum ($a = 1$) or not ($a = 0$).

To facilitate the analysis, we impose several assumptions on the primitives. We assume that the functions F, H, and w_0 are continuously differentiable, with F having full support on $\mathbb{R}$ ($v < 0$ may be the perpetrators of violence) and H having full support on $[0,1]$. The density h is assumed to have a single interior peak and satisfies $h(1) < 1$. Furthermore, we assume that the function w_0 is strictly decreasing in v and that parameter values are such that $\lim_{v \to -\infty} w_0(v) > w_1 - c$, which means that there are some types of the foreign national who do not have an incentive to apply even if the probability of admission is 1. However, we do assume that $w_0(\overline{v}) < w_1 - c$, which means that the type who is just eligible, $\overline{v}$, finds it attractive to apply.

Our model is deliberately stylized. Both the foreign national and the bureaucrat make binary choices. This implies that the bureaucrat learns only from application decisions—it is impossible to gather further information about the foreign national's type through, for example, an interview. We abstract away from interviews (and other procedures designed to gather additional information) to focus on the essential choices of the players. However, our results are robust to allow the revelation of additional information (via an exogenous signal about eligibility) as long as communication is not too precise.

We also abstract away from demographic variables such as skill, education, and religion. We could incorporate them by indexing all the parameters of the model with a specific subset of demographic variables. For example, c, w_1, and $w_0(v)$ might all depend on the foreign national's skill level. However, because our focus is on dynamics that hold for all demographic strata, we do not include these characteristics.

Here, we assume that the eligibility threshold is common knowledge. In the SM, we consider a variation in which there is uncertainty about the asylum eligibility standard. In this version, foreign nationals have to average over potential eligibility thresholds, and the bureaucrat's inferences become somewhat weaker, but our substantive conclusions are unchanged. More generally, in the SM, we consider a number of alternative variations to the baseline model (see SM-G), including a complete information version and versions with one-sided incomplete information. The upshot from analyzing these variations is that restrictive asylum policy choices have an ambiguous effect whenever the bureaucrat is *responsive* to the foreign national's application strategy.

Our model resembles existing models in which individuals are hired by or join a firm or organization and are assessed for some characteristic (e.g., Bolton and Dewatripont, 2004; Bueno De Mesquita, 2005; Spaniel, 2018). Our contribution is to consider the political

persecution variable v and how it affects the foreign national's payoffs, i.e., that higher levels of it decrease the utility of not applying. By contrast, ideology or skill may (positively) affect the utility of being admitted as well. These differences in payoff can result in equilibria with different properties. In addition, our extensions incorporate additional outcomes that are closely linked to the politics of asylum. Nevertheless, it is useful to begin with a model that does not incorporate these outcomes to study the players' fundamental incentives.

3. Equilibrium of baseline model

Our solution concept is Perfect Bayesian Equilibrium. Specifically, we look for an equilibrium in which both players employ interior threshold rules. In such an equilibrium, the foreign national applies if and only if $v \geq \hat{v}^*$, and the bureaucrat grants asylum if and only if $\kappa \leq \hat{\kappa}^*$, and both $\hat{v}^*$ and $\hat{\kappa}^*$ are real numbers. Such a semi-separating equilibrium is empirically plausible; however, it is worth pointing out that our model also admits a pooling equilibrium in which no type applies for asylum. As we detail in the SM, this equilibrium requires that the bureaucrat's belief about eligibility is relatively low. Finally, there is no pooling equilibrium in which all types apply for asylum because there are some types that do not wish to leave their home polity even if the probability of admission is 1.

To begin with, the bureaucrat's expected utility of choosing $a = 1$ is $-\kappa[1 - \Pr(v \geq \overline{v}|e = 1)]$, where $\Pr(v \geq \overline{v}|e = 1)$ is the bureaucrat's belief that the foreign national is eligible, conditional on having received an asylum application. Moreover, the bureaucrat's expected utility of choosing $a = 0$ is $-(1 - \kappa)\Pr(v \geq \overline{v}|e = 1)$. Thus, the bureaucrat grants admission if

$$\Pr(v \geq \overline{v}|e = 1) \geq \kappa.$$

Intuitively, for the bureaucrat to grant asylum, the probability of eligibility needs to be sufficiently large relative to the concern about granting admission when the applicant is not eligible, κ. Now, suppose that the foreign national chooses to apply if and only if $v \geq \hat{v}$, where $\hat{v}$ is a finite threshold to be determined in equilibrium. Then:

$$\Pr(v \geq \overline{v}|e = 1) \equiv q(\hat{v}) = \begin{cases} \frac{1-F(\overline{v})}{1-F(\hat{v})} & \text{if } \hat{v} < \overline{v} \\ 1 & \text{if } \hat{v} > \overline{v}. \end{cases}$$

Using this notation, the bureaucrat grants asylum if

$$q(\hat{v}) \geq \kappa. \tag{1}$$

An important effect concerns how the bureaucrat's posterior belief reacts to an increase in the threshold employed for applying. Formally, when $\hat{v} < \overline{v}$:

$$\frac{\partial q}{\partial \hat{v}} = -\frac{[1 - F(\overline{v})]}{[1 - F(\hat{v})]^2}\left[-f(\hat{v})\right] = q(\hat{v})\frac{f(\hat{v})}{1 - F(\hat{v})} > 0.$$

Thus, when fewer types of the foreign national apply, the posterior belief of eligibility increases. Moreover, the strength of this effect depends on the existing posterior belief.

Now consider the foreign national's decision rule, and let p be the probability that the bureaucrat grants asylum (to be determined in equilibrium). Then, the foreign national chooses to apply if $pw_1 + (1 - p)w_0(v) - c \geq w_0(v)$, or

$$p \geq \frac{c}{w_1 - w_0(v)}. \tag{2}$$

The right-hand side is decreasing in v, confirming that the foreign national chooses to apply if and only if $v \geq \hat{v}$. Examining the foreign national's decision rule, it is useful to define $\underline{v}$ as the solution to

$$1 = \frac{c}{w_1 - w_0(\underline{v})}.$$

Here, $\underline{v}$ is the type that is indifferent between applying or not *when the bureaucrat grants asylum for sure*. It represents the demand for asylum. Note that $\underline{v} < \overline{v}$, i.e., the type that is just indifferent is not eligible.

An equilibrium involves a consistency condition of Expressions 1 and 2. From the foreign national's perspective, the probability of achieving asylum is $H(q(\hat{v}))$, which is increasing in $\hat{v}$ because both H and q are increasing. The equilibrium threshold is then determined by the following condition:

$$H\big(q(\hat{v}^*)\big) = \frac{c}{w_1 - w_0(\hat{v}^*)}. \tag{3}$$

The left-hand side is increasing in $\hat{v}$ while the right-hand is decreasing in $\hat{v}$. Thus, if there is a solution to the expression, it will be unique (all proofs are included in the SM):

Proposition 1. There is unique semi-separating equilibrium, with a finite application threshold characterized by Equation 3. The bureaucrat's decision rule is characterized by Expression 1, evaluated at $\hat{v}^*$.

Figure 1 illustrates the equilibrium. The left panel displays the interpretation of foreign applicant types in equilibrium. The right panel illustrates the equilibrium condition as a function of potential thresholds for applying. The gray line is the probability with which the bureaucrat grants admission as a function of different thresholds for applying (the left-hand side of Expression 3). The black line represents the costs of applying for asylum adjusted by the stakes of admission, i.e., the change of living standard when the applicant is in the safe destination polity rather than the unsafe home polity (the right-hand side of Expression 3). The intersection of these lines determines the equilibrium threshold for applying, $\hat{v}^*$.

Before continuing the analysis, we briefly relate our model to existing empirical findings. Reviewing the literature on push and pull factors behind asylum applications to industrialized countries, Hatton (2020) concludes that the most important origin-country variables are political terror and lack of civil liberties, while there is weaker evidence that declines in origin-country income per capita lead to more asylum applications. In the SM, we show that a reduction in origin-country wages increases the probability that the foreign national applies, which is consistent with the empirical correlation between per capita income and the number of asylum applications in destination countries (see SM-B). We also show that intensifying violence does not necessarily increase the probability that the foreign national will apply for asylum. Suppose the level of political persecution is on average higher. Keeping the threshold of an asylum application fixed, the probability of an application is higher because more types are threatened. However, in equilibrium, the threshold may increase or decrease when violence intensifies. The reason is that intensifying violence increases both the prior probability of eligibility and the probability of an application (for a fixed candidate threshold), inducing competing effects in the bureaucrat's posterior belief of eligibility (which is the ratio of these two probabilities). However, intensifying violence is more likely to increase applications if the prior probability of eligibility is relatively low.
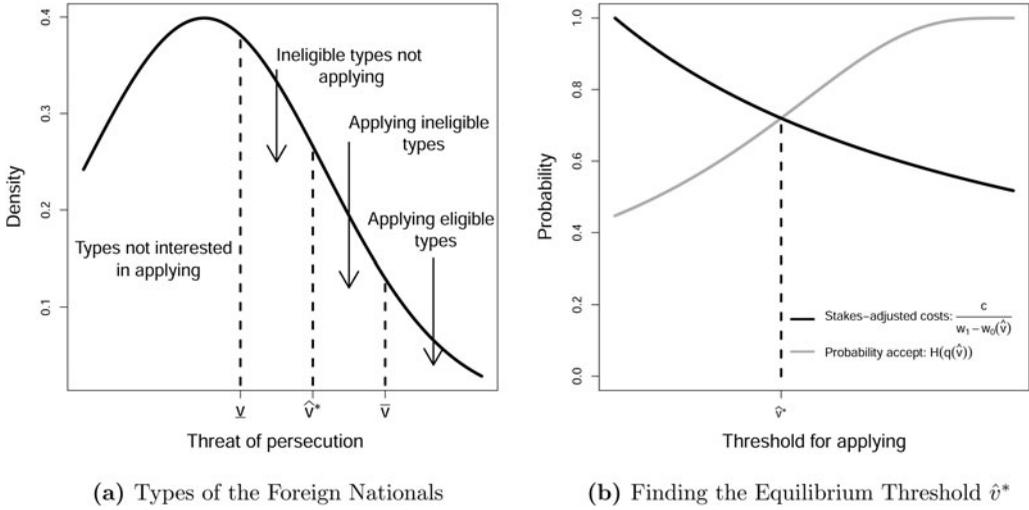
Figure 1. Overview of the equilibrium. Parameter values: $w_1 = 1$, $w_0(v) = 1.1 - v$, $c = 1.5$, $F = \mathcal{N}(2, 1)$, and $H = \mathcal{B}(2, 5)$. (a) Types of the Foreign Nationals. (b) Finding the Equilibrium Threshold $\hat{v}^*$.

4. The effect of restrictive asylum policies

The above model considers a situation in which foreign nationals and bureaucrats interact without interference by politicians. But empirical research highlights that politicians have various opportunities to interfere (see, e.g., Hatton, 2017). In this section, we introduce a new variable, denoted by $t \in [\underline{t}, \overline{t}]$, which represents specific asylum policies. We interpret larger values of t as a more restrictive policy choice that can take different forms.

We distinguish between two distinct types of policies. On the one hand, policies can manipulate the costs of applying for asylum (c) and/or the foreign national's wages in the home and destination polity (w_0 and w_1, respectively). We refer to these types of policies as demand-oriented asylum policies. Such policies may take the form of (i) reduced wages due to employment restrictions in the destination country ($w_1(t)$ is decreasing in t); (ii) increased wages in the origin country through foreign aid ($w_0(v, t)$ is increasing in t); or (iii) increased costs of applying because of a border wall ($c(t)$ is increasing in t). We assume that, in all cases, the relevant function is continuously differentiable. On the other hand, policies can manipulate the standards and procedures of the bureaucracy. Such supply-oriented policies can directly alter the asylum standard or aim to affect bureaucrats' preferences through the hiring process.[14]

Our typology differs from the typology in Hatton (2017), who groups asylum policies based on the stage of the asylum process that they affect: rules and policies related to border and the ease of filing an application (access rules), policies related to the standards and procedures of the asylum application review (processing rules), and policies related to the rights and benefits of applicants and refugees (rights and benefit rules). In our model-driven typology, processing rules are supply-side policies while access and rights and benefit rules are demand-side policies.

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[14]While the distinction is conceptually sound, note that there could be interaction effects between demand- and supply-oriented policies. For example, suppose that bureaucrats have (ideological) preferences over the incumbent's choice, t, and can choose to enter and/or exit the public sector (as in Gailmard and Patty, 2007). Even if the policy choice t is purely demand-oriented, it is possible for this to have implications for the preferences of the bureaucrats in equilibrium because it attracts like-minded bureaucrats. However, for simplicity, we abstract away from such interaction effects. In this paper, we also do not analyze policies that affect the behavior of enforcement agencies and hence the probability with which a rejected applicant is deported (but see SM-D).

In our main model, we focus on demand-oriented policies (we present a brief analysis of supply-oriented policies in SM-H). Regardless of the exact specification, when it comes to demand-oriented policies, we can show the following:

Proposition 2. In cases *(i)–(iii)* above, the equilibrium threshold $\hat{v}^*$ is increasing in t. As a result: *(1)* The foreign national is less likely to apply and *(2)* conditional on an application, the applicant is more likely to be admitted.

The first part of the Proposition confirms the conventional logic of asylum-seeker deterrence: employment bans, border walls, and development policy all decrease the probability that the foreign national applies for asylum by making this choice less attractive. However, we also point out that, due to informational effects, conditional on an application, the bureaucrat is more likely to grant admission.

From an *ex ante* perspective, for the semi-separating equilibrium derived above, the probability of admission is given by

$$\underbrace{[1 - F(\hat{v}^*)]}_{\text{Application}} \underbrace{H\big(q(\hat{v}^*)\big)}_{\text{Admission}} .$$

We investigate how an exogenous increase in the variable t affects the equilibrium probability of admission. Differentiating with respect to t yields

$$- \underbrace{f(\hat{v}^*)\frac{\partial \hat{v}^*}{\partial t}H(q(\hat{v}^*))}_{\text{Deterrence}} + \underbrace{[1 - F(\hat{v}^*(t))]h(q(\hat{v}^*))\frac{\partial q}{\partial \hat{v}}\frac{\partial \hat{v}^*}{\partial t}}_{\text{Credibility}} .$$

Thus, a more restrictive asylum policy choice has competing effects on the admission probability. On the one hand, some types are deterred, reducing the probability of the foreign national applying for asylum. This is the *deterrence effect*. On the other hand, for those who do apply, the bureaucrat is less skeptical about their eligibility. This is the *credibility effect*. Due to these competing effects, the relationship between restrictive asylum policies t and the number of admitted refugees is ambiguous in general.

Proposition 3. There are parameter values under which an increase in t increases the probability that the foreign national is admitted as a refugee and there are parameter values under which this probability decreases as t increases.

The proof of Proposition 3 reveals that the effect is negative if the equilibrium probability of eligibility is high. Deterrence is relatively more important here, as the foreign national already enjoys high credibility. This can be the case, for example, when the costs of applying for asylum are relatively high, so that fewer types apply. Figure 2 provides an example. In both panels, we plot, as a function of an application threshold $\hat{v}$, the probability of an application $1 - F(\hat{v})$, the *conditional* probability of an admission given an application $H(q(\hat{v}))$, and the *unconditional* probability of an admission, which is the product of the two preceding expressions. Note that the last function is non-monotone in the application threshold $\hat{v}$. We then consider the changes induced by a binary asylum policy, t, which can be permissive or restrictive, resulting in a wage w_1 that is high or low. In both panels, implementing the more restrictive policy pushes the equilibrium application threshold up. However, in the left panel, the costs of applying are high and so the equilibrium probability of admission goes down. By contrast, in the right panel, the costs of applying are low and the equilibrium probability of admission goes up after choosing the more
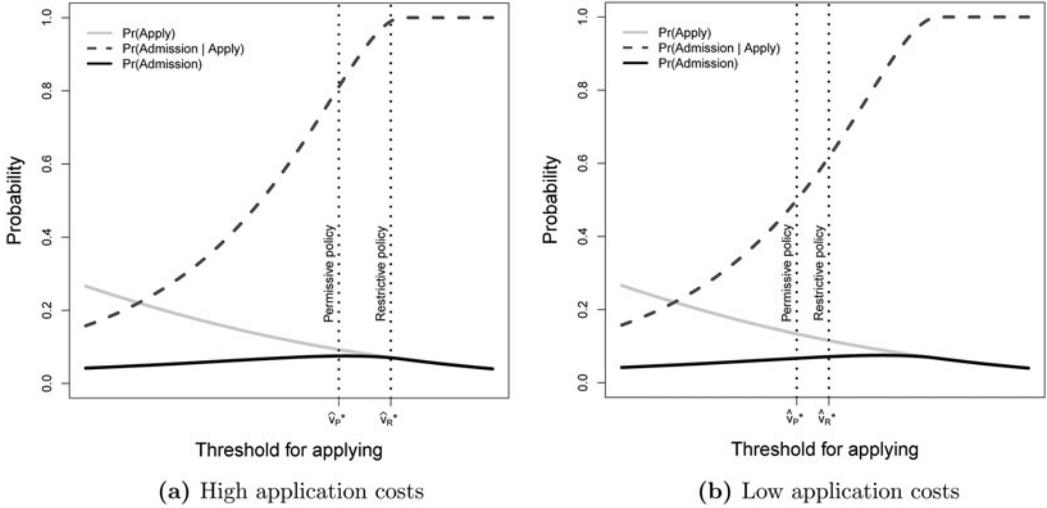
Figure 2. Illustration of Proposition 3 with a binary policy. Parameter values: $F = \mathcal{N}(2, 2)$, $H = \mathcal{B}(2, 2)$, $\bar{v} = 5$, $w_0(v) = 1 - \Phi(\frac{v}{5})$, where Φ is the CDF of the standard normal distribution. Further, $w_1(t) = 1$ for the restrictive policy and 1.2 for the permissive policy. In the left panel, $c = 0.83$. In the right panel, $c = 0.5$. The equilibrium thresholds $\hat{v}_R^*$ (for the restrictive policy) and $\hat{v}_P^*$ (for the permissive policy) are computed from equation 3. (a) High application costs. (b) Low application costs.

restrictive policy. An implication of Proposition 3 is that a politician who is interested in reducing the number of admitted refugees may not choose the most restrictive asylum policy. This is further explored below.

We also briefly examine the implications of restrictive policies for the welfare of the foreign national in SM-C. For concreteness, consider the case of an employment ban, so that $w_1(t)$ is decreasing in t. We show that an employment ban can either increase or decrease the welfare of the foreign national. The intuition is that an employment ban has two competing effects on the foreign national's welfare. First, the bureaucrat has increased confidence that the foreign national is eligible, which increases the probability of admission. Second, conditional on in fact receiving admission, the employment ban hurts the foreign national because of the expected wage decline.

5. Extending the model

In our baseline model, we examined the strategic interaction between the bureaucrat and a foreign national in a frictionless setting, highlighting why restrictive asylum policies have an ambiguous effect on admitted refugee numbers. Next, we extend the model, exploring scenarios in which some rejected applicants are not deported; applicants have the opportunity to enter without authorization; and an asylum application might never reach the bureaucrat. Here, we focus on substantive insights, relegating much of the formal analysis to SM-D.

5.1 Imperfect agency enforcement

As previewed above, many governments struggle to return foreign nationals that remain without authorization in their territory (Wong, 2015; de Haas *et al.*, 2020). We now incorporate this possibility into the baseline model. We assume that once located in the safe destination country, the foreign national either can be formally admitted as a refugee and, hence, can work in the regular,

formal sector ($S = F$), or may be there without formal refugee status and, hence, is able to work only in the informal sector ($S = I$). We denote the wage in sector S by w_1^S and assume that the formal sector offers higher wages, i.e., $w_1^F > w_1^I$. Furthermore, we also assume that the bureaucrat's preferences depend only on the final location of the applicant, i.e., on L but not on S.

The sequence of moves is the same as before; the only difference is that the bureaucrat's decision is imperfectly enforced. Specifically, when the bureaucrat grants asylum ($a = 1$), then the outcome is $(L, S) = (1, F)$. But when the bureaucrat rejects the application ($a = 0$), then $(L, S) = (1, I)$ with probability $1 - \lambda$, and $L = 0$ with probability λ. Thus, λ is the exogenous probability of deportation (we assumed $\lambda = 1$ above). We discuss possible micro-foundations for this probability below.

The bureaucrat's decision rule is unchanged; the bureaucrat admits the applicant as a refugee if the probability that the foreign national is eligible is larger than the relative concern for admitting an ineligible foreign national, i.e., $\Pr(v \geq \bar{v} \mid e = 1) = q(\hat{v}) \geq \kappa$. Intuitively, while the bureaucrat recognizes the risk that the decision may not be enforced, the bureaucrat has no reason to change the decision calculus. The foreign national anticipates the bureaucrat's behavior and is aware of the possibility of remaining in the safe polity, even if the bureaucrat rejects the application for asylum. Following the reasoning for the baseline model, the equilibrium threshold is, thus, determined by the following equality:

$$H\big(q(\hat{v}^*)\big) = \frac{c - (1 - \lambda)\big[w_1^I - w_0(\hat{v}^*)\big]}{w_1^F - w_1^I + \lambda(w_1^I - w_0(\hat{v}^*))}. \tag{4}$$

We show in the SM that there is a unique interior equilibrium threshold, which is characterized by the preceding expression (see SM-D).

In equilibrium, the effect of t on the admission probability is equal to:

$$\lambda \left[\underbrace{-f(\hat{v}^*)\frac{\partial \hat{v}^*}{\partial t}H(q(\hat{v}^*))}_{\text{Deterrence I}} + \underbrace{(1 - F(\hat{v}^*))h(q(\hat{v}^*))\frac{\partial q}{\partial \hat{v}}\frac{\partial \hat{v}^*}{\partial t}}_{\text{Credibility}} \right] - \overbrace{(1 - \lambda)f(\hat{v}^*)\frac{\partial \hat{v}^*}{\partial t}}^{\text{Deterrence II}}.$$

This generalizes the corresponding expression from the baseline analysis—which featured only the expression in square brackets—and shows that the effect is still ambiguous, although there is an additional term, labeled "Deterrence II," which is negative. Intuitively, in the event of no enforcement (which happens with probability $1 - \lambda$), decreasing the probability with which the foreign national applies is all that matters for reducing the probability of having a refugee admitted. This demonstrates that the parameter λ moderates the strength of the deterrence effect: if λ is sufficiently low, only deterrence matters because the bureaucrat cannot fulfill their gatekeeping role. However, if λ is relatively large, the analysis is qualitatively identical to the baseline case. This suggests that countries that have less enforcement capacity (i.e., λ is smaller) are more likely to rely on deterrence policies all else being equal.

Now consider the effect of λ on the equilibrium threshold. We have:

Remark 1. An increase in the enforcement probability λ increases the equilibrium threshold if $w_1^I > w_0(\hat{v}^*)$ holds, and decreases it if the reverse inequality holds.

This ambiguous effect is consistent with empirical work that finds no systematic relationship between the number of deportations and the number of applications (Wong, 2015). The condition highlighted in Remark 1 is whether the type who is indifferent between applying or not has a home polity wage that is larger or smaller than the informal wage. To see that an increase in enforcement can actually lead to more applicants, suppose that w_1^I is very small and so receiving

it is unattractive even for types with a moderately high level of v. Hence, the outcome in which they are rejected but stay is unattractive and decreasing enforcement (a lower level of λ) would actually decrease the probability of an application.

We assume that the enforcement probability λ is exogenous here. There are two salient ways to endogenize it. First, an enforcement agency could be in charge of exerting effort to deport applicants that are rejected. Second, one can also imagine that political actors are trying to shape the enforcement probability through law-making and lobbying. One frequently mentioned argument is that some firms benefit from low enforcement because they benefit from the prevalence of irregular workers and their low wages (Freeman, 1995). We pursue both extensions in the SM, showing that increasing the funding for an enforcement agency does not always decrease applications and that firms have incentives to lobby for weak enforcement if the profits from inexpensive labor are relatively large (see SM-D).

5.2 Irregular migration

We next explore the consequences of allowing for irregular migration, which is a common occurrence in many polities (Hollifield et al., 2014). Specifically, at the beginning of the game, the foreign national decides to apply for asylum ($e = 1$), to stay in the home polity ($e = 0$), or to attempt to enter the destination country without a formal process ($e = -1$). We assume that when the third option is chosen, with probability π, the foreign national earns an informal wage $w_{-1}^I < w_1^F$; with probability $1 - \pi$, the foreign national is caught by border enforcement agents and sent back, in which case the wage $w_0(v)$ is earned. This assumption implies that the foreign national cannot apply for asylum after having decided to enter the destination country irregularly. We also assume that attempting to enter irregularly incurs costs k.

We search for an equilibrium in which there exist two thresholds, $\hat{v}_{-1}$ and $\hat{v}_1$, such that if $v < \hat{v}_{-1}$, then type v stays in the home polity; if $v \in [\hat{v}_{-1}, \hat{v}_1)$, type v attempts irregular migration; and if $v \geq \hat{v}_1$, type v applies for asylum. Other equilibria may exist, but this is a natural form given our baseline analysis without irregular migration. In the SM, we impose conditions on the model's primitives such that this equilibrium exists. Note that in such an equilibrium, the bureaucrat's posterior belief is again given by $\frac{1-F(\overline{v})}{1-F(\hat{v}_1)} \equiv q(\hat{v}_1)$, and the probability of admission is $H(q(\hat{v}_1))$.

We can immediately pin down the equilibrium threshold value $\hat{v}_{-1}^*$, which is given by the solution to the following equality:

$$\pi = \frac{k}{w_{-1}^I - w_0(\hat{v}_{-1}^*)}. \tag{5}$$

Intuitively, the costs of irregular migration, adjusted for the wage difference, are equal to the probability of successfully migrating. Moreover, following the reasoning above, the second threshold, $\hat{v}_1^*$, is given by the solution to the following equality:

$$H(q(\hat{v}_1^*)) = \frac{c - k + \pi\left[w_{-1}^I - w_0(\hat{v}_1^*)\right]}{w_1^F - w_0(\hat{v}_1^*)}. \tag{6}$$

Now consider the effect of asylum policy, t. The probability of having the foreign national in the destination polity ($L = 1$) is

$$\underbrace{(1 - F(\hat{v}_1^*))H(q(\hat{v}_1^*))}_{\text{Regular status}} + \underbrace{\pi\left[F(\hat{v}_1^*) - F(\hat{v}_{-1}^*)\right]}_{\text{Irregular status}}.$$

The derivative of the preceding expression with respect to asylum policy t is:

$$\underbrace{-f(\hat{v}_1^*)\frac{\partial \hat{v}_1^*}{\partial t}H(q(\hat{v}_1^*))}_{\text{Deterrence}} + \underbrace{(1-F(\hat{v}_1^*))h(q(\hat{v}_1^*))\frac{\partial q}{\partial \hat{v}_1}\frac{\partial \hat{v}_1^*}{\partial t}}_{\text{Credibility}} + \underbrace{\pi\left[f(\hat{v}_1^*)\frac{\partial \hat{v}_1^*}{\partial t} - f(\hat{v}_{-1}^*)\frac{\partial \hat{v}_{-1}^*}{\partial t}\right]}_{\text{Distributional Effects}}.$$

The first part of the expression is the same as in the baseline analysis, showing that our basic insights are robust to allowing for irregular migration in our model. The second part of the expression is new and details the additional costs and benefits when there is irregular migration. Depending on the exact instrument (t) and on the shape of the density f, it can be positive or negative. This demonstrates that subtle distributional effects may be present. For example, consider the case of a sectoral employment ban. When the sectoral employment ban restricts asylum seekers to working only in low-wage jobs, w_1^F is decreasing in t. Suppose that t increases, decreasing w_1^F. This increases $\hat{v}_1^*$ but leaves $\hat{v}_{-1}^*$ unaffected. Thus, some types that previously applied for asylum now attempt to migrate through irregular means. All else equal, this increases the probability of having the foreign national in the polity (this effect is represented by the expression $\pi\frac{\partial \hat{v}_1^*}{\partial t}f(\hat{v}_1^*)$ above).[15]

Turning to the effect of the probability that irregular migration is successful, π, we show the following:

Remark 2. In an equilibrium with thresholds $\hat{v}_{-1}^*$ and $\hat{v}_1^*$ such that $\hat{v}_{-1}^* < \hat{v}_1^*$, holding fixed $\hat{v}_1^*$, the higher π, the more types attempt to enter through irregular means. Conversely, holding fixed $\hat{v}_{-1}^*$, the higher π, the fewer types attempt to enter by applying for asylum.

Substantively, this means that when a border tightening occurs, the probability of an irregular border crossing decreases but the probability of an application for asylum increases. Moreover, due to the bureaucrat's endogenous response, the probability of admission decreases. Thus, our model predicts that a tighter border decreases total attempted migration but may increase or decrease the number of admitted refugees.

5.3 Dangerous journeys

So far, we have assumed that if the applicant applies for asylum, $e = 1$, the application will reach the bureaucrat for sure—and the bureaucrat will make a decision on the case. However, when the foreign national has to engage in a long journey to file an asylum application, this assumption may be too restrictive. For example, the applicant might not be able to reach the territory of a country that provides opportunities to file an asylum application or might die while migrating, as in the case of migrants crossing the Mediterranean Sea. In the model, suppose that if the foreign national chooses $e = 1$, there are two initial outcomes. The foreign national may make it to the destination country and thus successfully apply for asylum. We denote this event by $s = 1$. However, there is also a chance that the attempt is unsuccessful. We denote this event by $s = 0$ and assume that the foreign national's payoff here is $\underline{w}$. Since the foreign national is no longer in the home polity, this parameter is independent of v. We assume that this term is relatively low: $\underline{w} < w_0(\overline{v})$. Note that this includes the case $\underline{w} = 0$, which might be interpreted as the applicant's death. Conditional on $e = 1$, the probability that $s = 1$ is ρ: $\Pr(s = 1 | e = 1) = \rho \in (0, 1)$. The bureaucrat decides to grant asylum or not only if $s = 1$.

In a profile with application threshold $\hat{v}$, if the attempt is successful ($s = 1$), the bureaucrat holds posterior of eligibility $q(\hat{v})$ and grants asylum if $q(\hat{v}) \geq \kappa$. As a result, similar to the baseline

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[15]In SM-D, we consider the case in which asylum policy affects w_{-1}^I.

case, there is a unique equilibrium threshold characterized by

$$H(q(\hat{v}^*)) = \frac{c + (1 - \rho)[w_0(\hat{v}^*) - \underline{w}]}{\rho[w_1 - w_0(\hat{v}^*)]}.$$

Given the equilibrium threshold, we compute the effect of the asylum policy t on the probability of an admitted refugee:

$$- \rho \underbrace{f(\hat{v}^*) \frac{\partial \hat{v}^*}{\partial t} H(q(\hat{v}^*))}_{\text{Deterrence}} + \rho \underbrace{(1 - F(\hat{v}^*)) h(q(\hat{v}^*)) \frac{\partial q}{\partial \hat{v}} \frac{\partial \hat{v}^*}{\partial t}}_{\text{Credibility}}.$$

As in the baseline case, this is ambiguous, with the only difference being that both the deterrence and the credibility effects are scaled by the probability of a successful asylum application, ρ. Intuitively, only if the application reaches the bureaucrat is the foreign national ever admitted.

Turning to an analysis of the effect of ρ on the equilibrium application threshold, we can show:

Remark 3. An increase in the probability of a successful application ρ decreases the equilibrium threshold $\hat{v}^*$.

The result explains the decrease in asylum applications after Australia implemented its "Pacific Solution," in which boats transporting asylum seekers were turned around by its coast guard. It also explains some of the dilemmas of asylum politics more broadly: a low level of success deters potential applicants for asylum, but, conditional on an application, a low ρ means a higher likelihood of bad outcomes for the applicants. Moreover, conditional on the bureaucrat having received the application, a low level of ρ means that the bureaucrat is more likely to admit the applicant. While an analysis of an endogenous ρ is beyond the scope of this paper, our results provide a stepping stone for future work on this.

6. Endogenous asylum policies

What kinds of asylum policies do politicians actually choose? Suppose that, before the interaction between the bureaucrat and the foreign national unfolds, an incumbent politician can affect the admission process through a policy choice $t \in [\underline{t}, \overline{t}]$, inducing the same changes in the environment as above. We focus on a populist, refugee-skeptic politician who receives a payoff of 0 if the foreign national applies and is granted asylum, i.e., if $L = 1$, and 1 in the event that $L = 0$. In the remainder, we refer to the politician as a as refugee-skeptic politician. The politician's payoff function is consistent with a policy-seeking politician who intrinsically values reducing the number of refugees admitted. Of course, a variety of electoral considerations may also motivate a politician to choose particular asylum policies. In this paper, we abstract away from electoral politics, but we discuss this issue further in the conclusion. Finally, we assume that the politician does not internalize the costs of implementing specific policies, even though the policy chosen may be costly to implement.

As a consequence of the results derived above, we can write the politician's optimization problem as follows:

$$\max_{t \in [\underline{t}, \overline{t}]} 1 - \underbrace{(1 - F(\hat{v}^*(t))) H(q(\hat{v}^*(t)))}_{\text{Probability Admitted}}$$

The derivative of the objective function is:

$$\underbrace{f(\hat{v}^*) \frac{\partial \hat{v}^*}{\partial t} H(q(\hat{v}^*(t)))}_{\text{Deterrence}} - \underbrace{(1 - F(\hat{v}^*(t))) h(q(\hat{v}^*)) \frac{\partial q}{\partial \hat{v}} \frac{\partial \hat{v}^*}{\partial t}}_{\text{Credibility}}.$$

This is precisely the change in the probability of the foreign national being admitted as a refugee. As we detailed before, this change is influenced by two effects: the deterrence effect, which pushes the politician to choose a more restrictive policy ($t \uparrow$), and the credibility effect, which pushes the politician to choose a less restrictive policy ($t \downarrow$). Recalling that $\frac{\partial q}{\partial \hat{v}} = q(\hat{v}) \frac{f(\hat{v})}{1 - F(\hat{v})}$, we can further rearrange the derivative to obtain the following:

$$\underbrace{f(\hat{v}^*) \frac{\partial \hat{v}^*}{\partial t} \left[H\big(q(\hat{v}^*(t))\big) - h(q(\hat{v}^*(t)))q(\hat{v}^*(t)) \right]}_{\text{Deterrence–Credibility}}. \tag{7}$$

As seen in Proposition 3, the deterrence effect can be larger or smaller than the credibility effect. As a result, when considering a (marginally) more restrictive asylum policy, the change in the probability of the foreign national being admitted as a refugee can be positive or negative. Hence, due to the bureaucrat's changing beliefs, the politician here faces an endogenous cost when choosing a marginally higher level of asylum policy t.

We show in SM-E that the derivative of the politician's objective function is negative for low values of t and positive for large values of t. As a result, the politician's optimal choice is a corner solution: he chooses either the least restrictive policy $\underline{t}$ or the most restrictive policy $\bar{t}$.[16] Intuitively, by choosing $t^* = \underline{t}$, the politician allows a high number of applicants, trusting that the bureaucrat assesses them as ineligible and rejects them ("gate-keeping"). Alternatively, by choosing $t^* = \bar{t}$, the politician focuses on "deterrence." Here, the politician sharply limits access to asylum, accepting that the relatively few remaining applicants have a relatively high likelihood of being eligible and are, hence, likely to be admitted by the bureaucrat.

To state the politician's optimal choice, define the difference in utility between the most restrictive and the least restrictive policy:

$$\Delta \equiv 1 - \big(1 - F(\hat{v}^*(\bar{t}))\big)H(q(\hat{v}^*(\bar{t}))) - \left[1 - \big(1 - F(\hat{v}^*(\underline{t}))\big)H(q(\hat{v}^*(\underline{t}))) \right].$$

The politician's optimal choice is $t^* = \bar{t}$ if $\Delta \geq 0$ and $t^* = \underline{t}$ otherwise. Below, we consider how the quantity Δ, which represents the incentives to choose the most restrictive policy, varies depending on the political context and on the politician's objectives.

6.1 Explaining variation in asylum policies

Politicians facing different bureaucracies. What are the consequences of a change in the agency's preferences, i.e., when bureaucrats become (on average) more concerned about preventing ineligible applicants from receiving asylum? To answer this question, we introduce a variable $\sigma \geq 0$ that shifts the distribution $H_\sigma(\kappa)$ from which the bureaucrat's preference parameter κ is drawn. A higher value of σ means that the bureaucrat is stricter, on average.

Consider first the subgame after the politician has chosen a specific policy t. The foreign national knows that when the agency becomes stricter, the prospects for admission decline. As a result, by Expression 3, when the agency is stricter, the equilibrium threshold increases and fewer foreign nationals apply. As a consequence, endogenously, the credibility of the remaining foreign national types increases. However, this effect is not enough to overcome the direct effect of a stricter bureaucrat: in equilibrium, the probability of admission is lower.

Next, consider how the change in the agency's reputation affects the politician's incentives to choose policy. As before, the politician chooses either the least or most restrictive policy. A stricter agency induces two changes: first, conditional on an application, the probability of admission

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[16]With a cost function for asylum law, this result no longer holds in general. Here, the option to choose the most restrictive policy is replaced with the option to choose an interior policy.

is lower. This effect is more valuable when the bureaucrat is more likely to act—which is naturally the case when the politician allows a greater number of applicants under the permissive policy. As a result, the incentives to choose the most restrictive policy are generally decreased (see SM-F for details). Second, as discussed above, when the agency becomes stricter, some types of foreign national are deterred, which means that the threshold for applying increases. With respect to policy-making, this means that the incentives to choose the most restrictive policy *increase*. This is because under the permissive policy, an increase in credibility causes a larger increase in the probability of admission than under the most restrictive policy. Hence, incentives to implement the least restrictive policy decrease.

The literature has shown that populist politicians often employ anti-refugee and anti-elitist rhetoric on the campaign trail (Mudde and Kaltwasser, 2017; Norris and Inglehart, 2019). Our model paints a more nuanced picture between agency reputation and the incentives of refugee-skeptic politicians to choose restrictive policies. Specifically, we point out that when in office, agency reputation has both a complementary and a substitutative effect on the incentives to choose restrictive policies.

Politicians focused on numbers. So far, we assumed that the politician's payoff only depends on the final location of the foreign national. As a result, the politician cares about the number of admitted refugees. However, politicians might care differentially about the number of asylum applications lodged and the number of deportations. This seems plausible in contexts where such numbers are widely reported by the media and are used as yardsticks in public discussions about the success or failure of policy choices. To take such political dynamics into account, we generalize the politician's utility function and introduce two new parameters: if the foreign national does not apply, the politician's payoff is $\gamma_N > 0$. When the foreign national applies but is rejected and eventually deported, the politician receives a payoff of $\gamma_D > 0$. In the SM, we show that increasing the politician's concern about applications leads an increase in the incentives to choose the most restrictive asylum policy, while increasing the concern about more deportations leads to increased incentives to choose the least restrictive asylum policy. One implication of this analysis is that, depending on the saliency of one or the other metric in public discussions, politicians react differently when choosing asylum policies. In contexts where deportation numbers are more salient, asylum policy should become less restrictive. By contrast, if application numbers are more salient, policy should become more restrictive.

Captured politicians. In the literature on the politics of immigration, one key question is why some immigration policy regimes are more liberal than others. Existing theoretical accounts point to organized interests and in particular businesses welcoming high levels of immigration to fill vacancies at lower wages as one explanation (Freeman, 1995). When the populist, refugee-skeptic politician is allied with such businesses, the politician may have an incentive to limit the number of admitted refugees but, simultaneously, allow some imperfect enforcement to ensure a steady supply of low-wage labor to businesses. What type of asylum policies will such a captured politician choose? In the context of the limited enforcement model, assume that the politician receives 1 if $e = 0$ or $e = 1$, $a = 0$, and a deportation takes place. If $e = 1$ and $a = 1$, the politician receives 0. If $e = 1$, $a = 0$, and a deportation does not take place, the politician receives $\alpha \in [0, 1)$. We interpret a higher level of α as closer alignment with business interests. In the SM, we show that the greater the alignment, the fewer the incentives to choose the most restrictive policy. This suggests that populist, refugee-skeptic politicians that are captured by business interests have fewer incentives to use restrictive asylum policies.

Compassionate politicians. Some politicians may wish to prevent asylum seekers from drowning. There could be political reasons for such goals, e.g., to avoid public outcry, or these politicians wish to avoid a feeling of failure of not having done enough to prevent human suffering. In the context of the dangerous journey model, assume that the politician receives a payoff of 1 if

$e = 0$ or $e = 1$ and $a = 0$. If $e = 1$ and $a = 1$, the politician receives 0. If the application "fails," the politician receives $\beta \in [0,1)$. In this version of the model, we can show the following: the greater the payoff for a failed application, the fewer the incentives to choose the most restrictive asylum policy. Hence, having a lower payoff for a failed application ("feeling worse when the applicant dies") leads to a more restrictive asylum policy. The intuition is that a politician who really wants to avoid drownings at sea really does not want asylum seekers to attempt to come. This highlights that it is not straightforward to infer politicians' motives from their observed actions: politicians choosing highly restrictive asylum policies could be motivated either by wanting to avoid drownings or by wanting to reduce the number of admitted refugees.

7. Conclusion

When politicians make applying for asylum more difficult or less attractive, a country will have to host fewer refugees as some asylum seekers will be deterred. Although this reasoning is common, it is incomplete. Using a game-theoretic model, we emphasized the importance of the bureaucracy in shaping asylum outcomes and in particular the strategic interaction between asylum applicants and bureaucrats. Our analysis shows that the deterrence of some asylum applicants may be offset by a higher fraction of admitted refugees among the remaining applicants. This is because a bureaucrat's belief about the eligibility of an applicant is higher, the higher the (net) costs of applying for asylum.

Our analysis abstracts away from several features of the typical national asylum process. For example, bureaucrats often follow well-defined procedures to elicit additional information from applicants. Politicians can manipulate these procedures, too: they may mandate lengthy procedures to delay application decisions or split the review among multiple bureaucrats. Future work may enrich our model by taking these additional features into account and explore politicians' incentives to manipulate them. Moreover, our predictions regarding policy choices evidently depend on the validity of our assumptions about politicians' preferences. Future work should explicitly incorporate electoral politics to endogenize the political incentives that politicians face when deciding on asylum policies.

Finally, our model highlights that politicians' incentives to use restrictive asylum policies, and their effectiveness in reducing refugee numbers, strongly depend on the distribution of preferences among bureaucrats. Unfortunately, the empirical literature on asylum bureaucracies has not yet explicitly investigated the distribution of preferences among asylum-granting bureaucrats. While existing work has revealed that bureaucrats make different decisions on seemingly similar cases, explicit surveys of bureaucrats are not available. Fielding such surveys among bureaucrats is an important avenue for future work.

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