Random Assignment and Judge Leniency in US Asylum Outcomes

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Introduction

Are some immigration judges biased in their asylum decisions? The fact that judges' asylum approval rates vary from around 0 to 98% in courts across the country suggests that they are. Differences in the intensity of political persecution by geographic origin explains some of the variance in approval rates. Immigrants from the same areas tend to settle together in certain parts of the US; in turn, their cases tend to be heard at the same courts. Nonetheless, the large range in approval rates among immigration judges also persists *within* immigration courts. At the New York Broadway immigration court, for example, the range of approval rates spans from 3% to 90%.

This broad disparity has motivated a number of studies on the factors influencing asylum outcomes. Raman, Vera, and Manna use counterfactual analysis to infer decision accuracy among immigration judges.[1] Ramji-Nogales, Schoenholtz, and Schrag (2009) run logistic regressions finding the effects of legal representation, judge gender, number of dependents, and prior work experience on asylum outcomes.[2] Chen et al. find negative autocorrelation in judge's asylum decisions.[3] Eagly (2015) examines the effects of video teleconferencing on asylum outcomes.[4] These studies depend on the assumption that judge assignment is random within courts. Because asylum seekers can move around the country, they can effectively take their case to a court of their choosing. Their judge within that court, however, is randomly assigned. This assumption is supported by policy in EOIR's Uniform Docketing Manual, which states that "cases are assigned to each immigration IJ's Master Calendar on a random rotational basis."[5]

Three factors suggest that judge assignment is not as much of a dice roll as the manual would indicate. First, the assignment process occurs across two hearing stages: an initial "Master" hearing where defendants enter relief pleadings, and a subsequent "Individual" or "Merits" hearing where asylum decisions are ultimately made. Since February 2022, initial assignments occur algorithmically through the eCas Interactive Scheduling System based on the next available hearing date. However, IJ assignment often changes between Master and Individual hearings, such that random assignment in the initial stage does not guarantee random assignment in the second stage. Second, there are a

1. Vyoma Raman, Catherine Vera, and CJ Manna, "Bias, Consistency, and Partisanship in U.S. Asylum Cases: A Machine Learning Analysis of Extraneous Factors in Immigration Court Decisions," in *Proceedings of the 2nd ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization*, EAAMO '22 (New York, NY, USA: Association for Computing Machinery, October 2022), 1–14, ISBN: 978-1-4503-9477-2, accessed November 13, 2024, https://doi.org/10.1145/3551624.3555288, https://dl.acm.org/doi/10.1145/3551624.3555288.

2. Jaya Ramji-Nogales, Andrew Ian Schoenholtz, and Philip G. Schrag, *Refugee Roulette: Disparities in Asylum Adjudication and Proposals for Reform* (New York, UNITED STATES: New York University Press, 2009), ISBN: 978-0-8147-7742-8, accessed March 25, 2025, http://ebookcentral.proquest.com/lib/columbia/detail.action?docID=3025621.

3. Daniel Chen, Tobias J Moskowitz, and Kelly Shue, "Decision-Making under the Gambler's Fallacy: Evidence from Asylum Judges, Loan Officers, and Baseball Umpires" [in en].

4. Ingrid V Eagly, "Remote Adjudication in Immigration" [in en], *NORTHWESTERN UNIVERSITY LAW REVIEW*, 2015,

5. *Uniform Docketing System Manual*, 2021, accessed February 6, 2025, https://www.justice.gov/eoir/reference-materials/UDSM122020/dl.

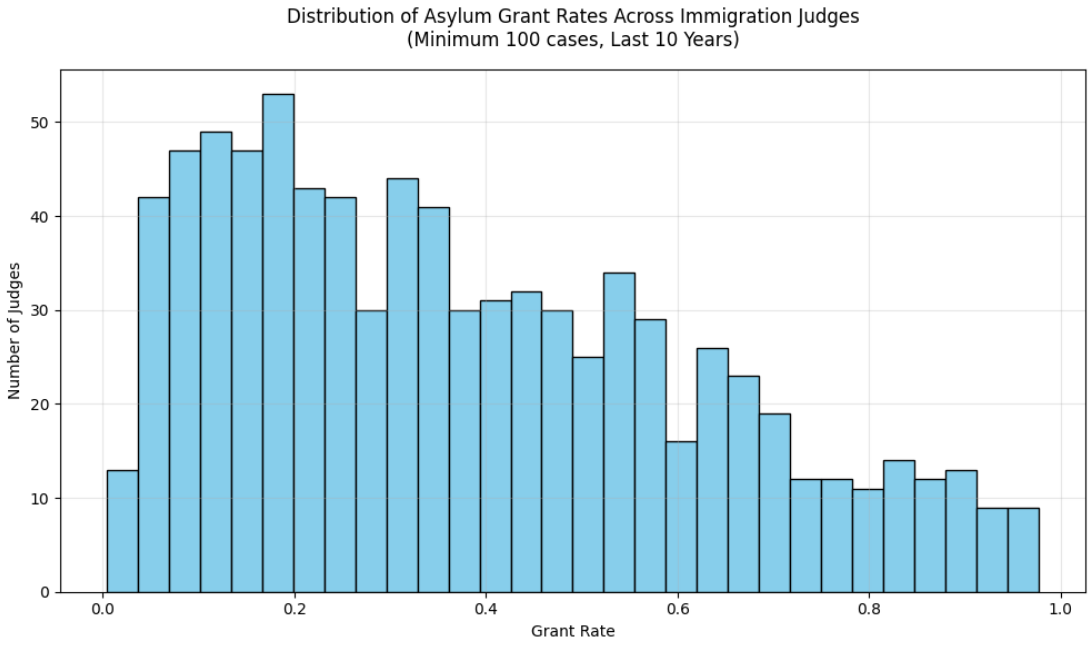

Figure 1: Distribution of asylum approval rates by judge over the past ten years.

variety of "priority" dockets at the court. Cases are assigned to these dockets for a variety of reasons such as being detained, having children, arriving to the US recently, and being a juvenile. Within a court, one or two judges will work cases on these dockets, narrowing the pool of judges a case on the priority docket can be assigned to. For example, if there are ten total judges working at an immigration court, a detained individual may realistically only be assigned to one or two of them. Third, courts assign cases ready for individual hearing to judges in a manner that maintains caseload parity.[6] A case ready for individual hearing is therefore more likely to be assigned to the judge with a lighter caseload and a sooner hearing date. These factors suggest that the judge assignment process is conditionally random on priority docket status and caseload parity.

This paper begins by testing the randomness of judge assignment in four immigration courts around the US. We find significant, but small non-random variation in the judge assignment process due to caseload and next available hearing date. It then proposes a model for estimating judge leniency by adding in caseload and next available hearing date controls, and estimating judge fixed effects within a given immigration court. The rank of judge leniency produced by these fixed effects estimates differs drastically from the rank provided by a simple estimation of asylum approval rates.

Data

The immigration court publishes an anonymized version of its CASE database on a monthly basis.[7] The data contains the procedural records for around 12 million immigrants who have been in immigration proceedings in the US since 1996. The database also includes certain demographic

6. A judge who stopped working in 2025 indicated that national guidance from EOIR on caseload parity was issued in 2022.

7. *EOIR Case Data* [in eng], March 2025, accessed May 12, 2025, https://catalog.data.gov/dataset/eoir-case-data; It should be noted that this data may not record every application decision, see: *After EOIR Fixes Most Egregious Data Errors, TRAC Releases New Asylum Data - But with a Warning*, September 2020, accessed May 12, 2025, https://tracreports.org/immigration/reports/624/.

information about the immigrants, including their nationality, language, age, and gender. The procedural information includes records of a Respondent's applications for relief, scheduled hearings, filed motions, legal representation, length of proceedings, and detention status. Most importantly for this analysis, the data records judge's decisions to grant or deny asylum applications.

To examine the randomness of judge assignments within a given immigration court, we assemble a sequential list of individual hearings scheduled at that court in order of their scheduling date and time. These hearing records include a database identification number linking the record to a given case, the assigned judge, the date and time of scheduling, the date and time of the hearing, and information on case adjournment.[8] We aggregate the list of judges scheduled at the court and build point-in-time estimates of each judge's caseload and next available hearing date at the moment every individual hearing is scheduled at the court. Case attributes like detention status, number of family members, date of docketing at the immigration court, juvenile status, legal representation status, nationality, and language are then joined to each scheduling record. These attributes are joined mostly as a precaution, however. To ensure we are testing for randomness among the non-priority-docket cases, we restrict the dataset to hearing locations that match the base city of the immigration court.[9]

The asylum dataset is assembled using the application records created from the application table in EOIR's CASE database. The application table only contains information on application type (asylum) and decision, in addition to database keys linking the application to an immigrant and a proceeding at the court. We assemble a filtered dataset containing every asylum application that was either granted or denied by an immigration judge. Applications with a stipulated grant or a denial because of an in-absentia deportation order are not included as they do not reflect a judge's application of asylum laws. The application records are joined with the proceeding table to retrieve the judge, base city, and hearing location. The case, charges, and rider table are also joined to enrich the set of covariates.

Empirical Strategy

Our empirical approach proceeds in two stages. First, we test the critical identifying assumption of random judge assignment. Second, using scheduling controls generated in the first stage, we estimate judge-specific effects on asylum decisions using a value-added model framework adapted from the education literature.

Testing judge Assignment Randomness

We begin by testing our empirical understanding of judge assignment mechanisms by estimating the following linear probability model:

$$\begin{aligned}\text{Assigned}_{it} = \beta_0 &+ \beta_1 \text{TimeToNext}_{it} + \beta_2 \text{Caseload}_{it} + \beta_3 \text{NoCases}_{it} \\ &+ \beta_4 \text{PreviouslyAssigned}_{it} + \beta_5 \text{LengthOfProceedings}_{it} \\ &+ \gamma X_{it} + \alpha_{my} + \varepsilon_{it} \end{aligned} \tag{1}$$

Where:

- Assigned_{it} is an indicator of whether judge i is assigned to case t

8. Case adjournment indicates the result of a hearing. For example, it will indicate whether a judge made a decision or if the hearing was rescheduled.

9. A case that is on the detained docket, for example, will have a scheduled hearing location indicating the priority docket status that is different from the base city of the hearing.

- Caseload_{it} is the judge caseload at time of assignment
- TimeToNext_{it} is the time in seconds between next available hearing date for judge and scheduling date
- NoCases_{it} is a dummy variable indicator for when judge's caseload is 0
- $\text{LengthOfProceedings}_{it}$ is the time between docketing at immigration court and scheduling date
- $\text{PreviouslyAssigned}_{it}$ is a dummy variable for whether judge was the last judge assigned at the court
- $\text{AssignedThroughout}_{it}$ is a dummy variable for whether judge was same as judge at Master hearing
- X_{it} is a vector of case characteristics including language, nationality, lawyer, detention status, and casetype
- α_{my} is a month-year fixed effect
- ε_{it} is the error term

If the randomization policies outlined in the Uniform Docketing Manual hold, we should expect all of the independent variables in equation 1 to be insignificant. If, however, there is some non-random variation, we should expect there to be a statistically significant relationship between assignment and caseload and time to next available hearing.

IJ Leniency

We continue by estimating the regression models to estimate the effect of judge bias on asylum outcome. We take inspiration from value-added model (VAM) specifications from the education literature.[10] While traditionally used to estimate teacher effects on student test scores, we adapt this methodology to study judge effects on asylum decisions. Like teachers affecting student outcomes, judges can systematically influence asylum grant rates through their individual interpretation and application of immigration law. We estimate variants of the following equation:

$$Y_{icjt} = \beta_0 + \theta_j + \pi_c + \tau_t + \beta_1 Caseload + \beta_2 TimeToNext + \beta_3 NoCases + \varepsilon_{it} \tag{2}$$

This specification includes several key elements to capture the institutional features of immigration courts. The judge fixed effects (θ_j) measure persistent differences in judge leniency, analogous to teacher effects in education VAMs. Court fixed effects (π_c) account for systematic differences across jurisdictions, while month-year fixed effects (τ_t) control for national policy changes and trends in asylum adjudication. Caseload, TimeToNext, and NoCases are our scheduling controls.

The identifying assumption is as follows: after controlling for scheduling factors, cases are randomly assigned within immigration courts. Immigrants have some control over what court their case is heard before – they can choose to enter the country at a specific port of entry or, once inside the country, they can move to a favorable jurisdiction. However, once their case is docketed at an immigration court, they cannot choose their judge or influence the judge assignment process in any way.

As previously discussed, non-random variation in the assignment process is the main threat to identification for any study of judge leniency. In addition to priority docket and caseload parity

10. For a thorough review of value-added models, see: Cory Koedel, Kata Mihaly, and Jonah E. Rockoff, "Value-added modeling: A review," *Economics of Education Review* 47 (August 2015): 180–195, ISSN: 0272-7757, accessed January 30, 2025, https://doi.org/10.1016/j.econedurev.2015.01.006, https://www.sciencedirect.com/science/article/pii/S0272775715000072.

considerations, it is the author's experience that some judges may take a special interest in cases from a certain country. A judge in Boston EOIR seemed to be assigned to most Azerbaijanian cases. The case burden for Azerbaijan is much smaller than the case burden for Guatemala or for Venezuela, for example. So especially for countries with high numbers of asylum seekers, selection is unlikely. A final consideration is that courts have specialized dockets like the detained docket (IJs who only hear cases for detained individuals) and the dedicated docket (immigrants who have been placed into accelerated proceedings). Individuals assigned to these dockets are likely to differ systematically from other immigrants in removal proceedings. Outside of these exceptions, it is highly plausible that cases are randomly assigned.

Results

IJ Assignment

The results of our judge assignment model calculated for the Houston S. Gessner court from February 11, 2022 through March 2025 are shown in Table 1. Caseload, no cases (a dummy for caseload being 0), and time to next are highly significant. However, these variables explain very little of the variance in assignment probability. That the caseload and time to next variables are positive is counterintuitive. We expected an increase in caseload to be correlated with a decrease in assignment probability. This may be a result of outlier judges in training or assistant immigration judges who have lower caseloads by design. Perhaps time to next is also reflective of caselaod, a greater time to next hearing indicates a higher caseload.

The fact that variables associated with the priority dockets – length of proceedings, detained, unaccompanied child, and family – are all near zero and insignificant indicates our data filtering was successful. The scheduling records examined here were likely not assigned to priority dockets. That having a lawyer, national identity, and language all have essentially zero effect suggests these case attributes do not raise selection concerns.

These findings indicate that judge assignment is random conditional on factors related to caseload parity among judges – caseload, next available hearing, and whether or not a judge is active. By filtering out data from the priority dockets, our analysis at the Houston S. Gessner court indicates that the caseload parity system appears to have a non-random influence on judge assignment. Given that caseload parity is a national policy for the court, we should expect to find similar results in other immigration courts.

Because the caseload and time to next variables need to be engineered from the dataset, it is likely that these variables are proxies for a judge's true caseload and next available hearing. These variables might be available to the administrators assigning individual hearings to judges at the court. Further investigation should attempt to obtain the EOIR CASE database manual via FOIA request to understand exactly how cases are scheduled. A better calculation of these features will hopefully lead to a model which explains more of the variance in judge assignment.

IJ Leniency

Using our model from equation 2, we estimate judge fixed effects with and without the scheduling controls to see if the non-random variation we identified in the previous section has an influence on our estimates of judge leniency. The results are shown in Figure 2.

In Figure 2, distance from the forty-five degree line indicates a disparity in the judge fixed effects estimates generated by the models with and without scheduling controls. The tighter the observations are to the forty-five degree line indicates there are fewer concerns about non-random variation in judge assignment at that court, while the more dispersed observations indicate higher levels of randomness. Of the four courts examined, Chicago has the least disparity between the models, while

Table 1: IJ Assignment Linear Probability Models - Houston S. Gessner

	(1) Base	(2) w/Length	(3) Priority	(4) Lawyer	(5) Language & Nat.
Caseload	0.000071***	0.000071***	0.000071***	0.000071***	0.000071***
	(0.000001)	(0.000001)	(0.000001)	(0.000001)	(0.000001)
Time to Next	7.57e-10***	7.57e-10***	7.57e-10***	7.57e-10***	7.57e-10***
	(2.50e-11)	(2.50e-11)	(2.50e-11)	(2.50e-11)	(2.50e-11)
Previously Assigned	0.001	0.001	0.001	–	–
	(0.001)	(0.001)	(0.001)		
No Cases	-0.036***	-0.036***	-0.036***	-0.036***	-0.036***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Length of Proceedings	–	7.10e-08	7.57e-08	–	–
		(4.25e-07)	(4.30e-07)		
Priority Docket Variables:					
Detained	–	–	0.001	–	–
			(0.005)		
Unaccompanied Child	–	–	-0.000	–	–
			(0.003)		
Family	–	–	0.000	–	–
			(0.001)		
Legal Representation:					
Lawyer	–	–	–	0.000	–
				(0.001)	
Language Indicators:					
Spanish	–	–	–	–	-0.000
					(0.002)
English	–	–	–	–	0.000
					(0.003)
Nationality Indicators:					
Venezuela	–	–	–	–	-0.000
					(0.001)
Mexico	–	–	–	–	0.000
					(0.002)
Honduras	–	–	–	–	-0.000
					(0.001)
El Salvador	–	–	–	–	-0.000
					(0.002)
Cuba	–	–	–	–	-0.000
					(0.001)
Observations	312,016	312,016	312,016	312,016	312,016
R^2 Within	0.024	0.024	0.024	0.024	0.024

Notes: All models include month-year fixed effects. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

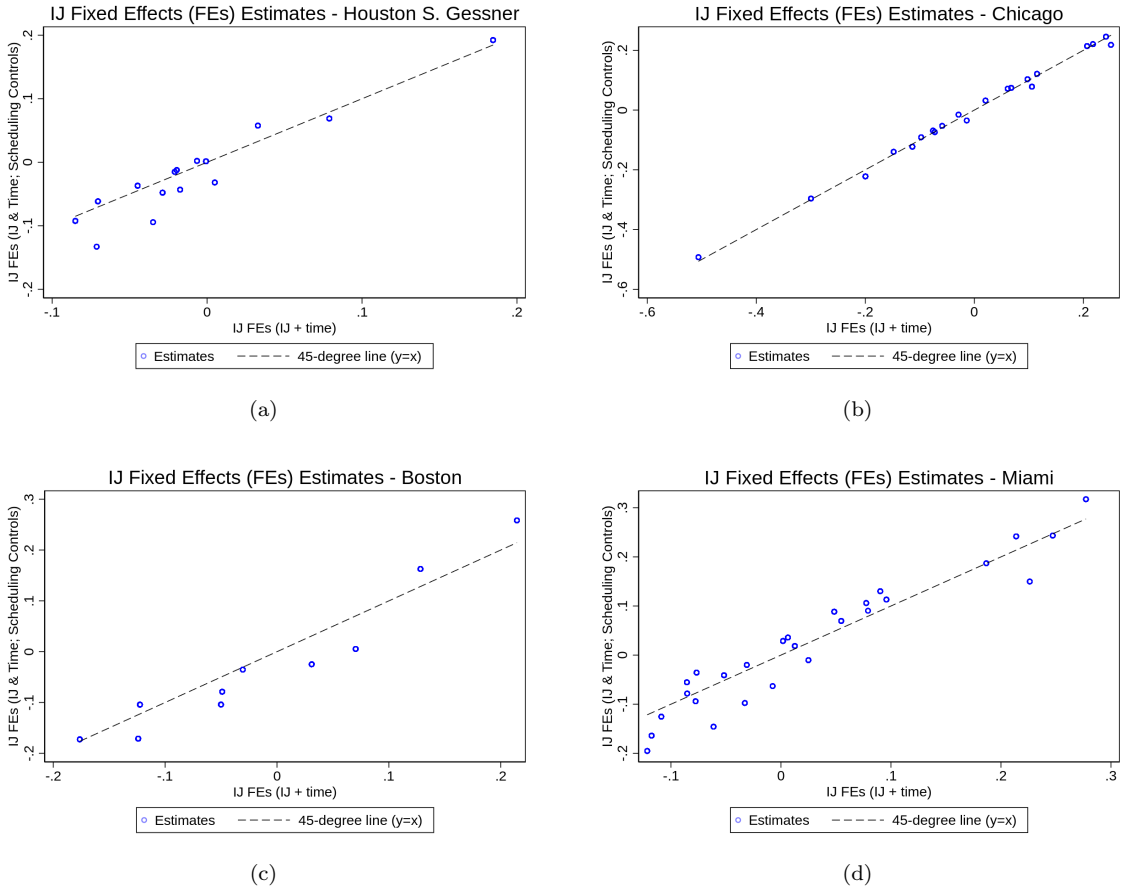

Figure 2: Judge leniency estimates with and without scheduling controls for four immigration courts around the country.

Miami has the most. This is an important indicator that the effects of the judge assignment process is different at courts around the country.

These fixed effects estimates have big implications for traditional assessments of judge leniency which depend on calculating the percentage of applications a judge has approved or denied. Figure 3 shows a ladder ranking judge's from most (top) to least (bottom) lenient, comparing three ranking metrics – the fixed effects estimates without scheduling controls, those with scheduling controls, and the raw application approval percentage. The dramatic shift across models (indicated by the thick red lines in the figure) suggest that analyses based on approval rate alone miss critical factors that effect a judge's application of asylum law.

Conclusion

This paper provides evidence that immigration judge assignment is not purely random but is systematically influenced by administrative factors related to caseload distribution. While these scheduling controls explain a relatively small portion of the variance in judge assignment, they significantly alter our estimates of judge-specific leniency. The traditional method of assessing judge bias through raw grant rates fails to account for these administrative selection mechanisms, potentially

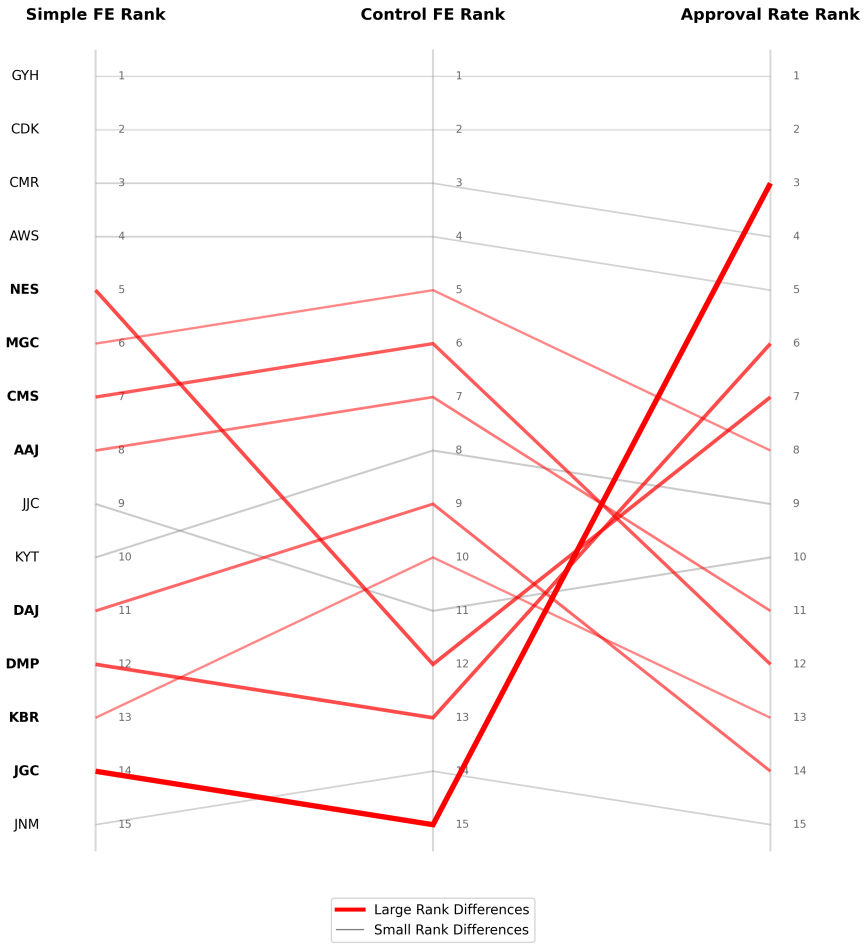

Figure 3: Change in judge leniency rank across the leniency model without scheduling controls, with scheduling controls, and a baseline ranking by application approval percentage. For judges at Houston S. Gessner immigration court February 11, 2022 through February 28, 2025.

mischaracterizing judges as unusually strict or lenient. Our results suggest that researchers studying immigration court outcomes should be cautious when invoking random assignment assumptions without empirical verification. The stark differences in leniency rankings across our models highlight the importance of accounting for selection mechanisms in studies of judicial behavior. These findings have important implications for policy discussions around asylum adjudication fairness and for future research on judge-specific effects in other court systems. Limitations of our study include the possibility of unobserved selection mechanisms beyond those captured by our scheduling variables. Future work should investigate the relationship between scheduling controls and case characteristics to further validate the conditional randomness assumptions that underpin causal identification in studies of asylum outcomes at the immigration court.

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