Online Supporting Information
The Role of Judge Gender and Ideology in Hiring Female Law Clerks

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Abstract

Law clerks play a vital role in the development and implementation of the law. Yet, women remain underrepresented in these positions. We suggest that one reason for this underrepresentation may be biases in hiring practices among judges in the federal judiciary. Specially, we hypothesize that male judges and conservative judges may be less likely to hire female law clerks than female judges and liberal judges, and for two reasons. First, due to a shared concern for enhanced representation women and liberal judges may be more likely to hire women clerks. Second, due to ideological asymmetries between the law clerk pool and judges in the federal judiciary, conservative judges and male judges may be less likely to hire women law clerks. Using data on clerks hired in the federal judiciary between 1995 and 2005, we find support for both mechanisms.

Keywords: Judicial Politics; Women and Politics; Law Clerks; Representation

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Alternative Imputation of Missing Judge Ideology Scores

The CF scores established by Bonica and Sen (2017) include imputed scores for judges who do not have any campaign donation data. For judges without scores this imputation uses demographic information such as gender. This introduces a potential endogenity issue. If women judges' CF scores are imputed to be lower this creates a situation in which they may better match women law clerk's ideology score not due to an actual ideological match but because of the method of imputation. If this was true this would potentially invalidate our results.

To make sure our results are robust to these potential problems, we provide an estimate CF scores of imputed CF scores that do not rely on a judge's gender. We estimate a CF scores using a simple model that accounts for the judge's judicial common space score (Epstein et al. 2007) and the president who appointed them. The correlation between the Bonica and Sen (2017) scores and this estimation are r =.76.

With the alternatively estimated imputed CF scores we re-estimate the models presented in the manuscript. These are presented here in Table 1, Figure AF2, Figure AF3, Figure AF4, Figure AF5, Figure AF6, Figure AF7. The results to these alterative models align with those presented in the manuscript and our key results are replicated. This eases concerns of potential endogenity issues introduced through the method used by Bonica and Sen (2017) to impute missing CF scores.

Another way we can ensure how results are robust is to compare how gender is associated observed cf scores based on campaign donations and how gender is associated with imputed score cf scores. If gender is much more strongly associated with imputed cf scores than observed cf scores, this would be evidence that the cf scores imputed with gender as a predictor bias the scores. However, if gender is associated the imputed and observed scores to a similar extent this would show that the imputation method appropriately considers the observed breakdown of the interaction between gender and ideology that is an observable fact. To show that gender is equally associated with observed and imputed ideology scores we estimate two linear regression modes. One predicts observed CF scores based

Table 1: Regressions: Alternative Imputation of Judge Ideology

	(1) Replicates Table 1	(2) Replicates Table 2	(3) Replicates Table
Female Judge	0.137**	0.138**	−0.0479*
	(0.0416)	(0.0422)	(0.0215)
Judge Conservatism (CF Alt imputation)	−0.143***	−0.145***	0.447***
	(0.0279)	(0.0310)	(0.0144)
Female Judge × Judge Conservatism		0.0126	
		(0.0704)	
Female Clerk			0.00698
			(0.0166)
Female Judge × Female Clerk			−0.0206
			(0.0336)
Female Clerk × Judge Conservatism			0.216***
			(0.0234)
Same Law School	0.101*	0.101*	−0.0253
	(0.0400)	(0.0400)	(0.0159)
Clerk Conservatism			−0.332***
			(0.00764)
Promoted			−0.0490
			(0.0737)
Total Clerk Years			−0.0338***
			(0.00743)
Constant	−0.519***	−0.519***	0.746***
	(0.0648)	(0.0649)	(0.0249)
Year Fixed-Effects	Yes	Yes	Yes
Court Fixed-Effects	Yes	Yes	Yes
Observations	14429	14429	5880

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

on campaign donations, the other predicts the imputed scores. The results are presented in Table 2. The results to the regressions show that gender is roughly equally associated with both. Therefore the imputed scores do not overly rely on gender when imputing ideology scores and instead accurately reflects the observed breakdown of ideology based on campaign donations.

Table 2: Comparing Gender's Effect on Observed and Imputed Ideology

	(1) Observed	(2) Imputed
Female Judge	-0.222^{**}	-0.221^{***}
	(0.0716)	(0.0332)
Democratic President	-0.609^{***}	-0.615^{***}
	(0.116)	(0.0556)
Judicial Common Space	0.646^{***}	0.626^{***}
	(0.140)	(0.0670)
Constant	0.359^{***}	0.289^{***}
	(0.0695)	(0.0318)
Observations	488	658

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

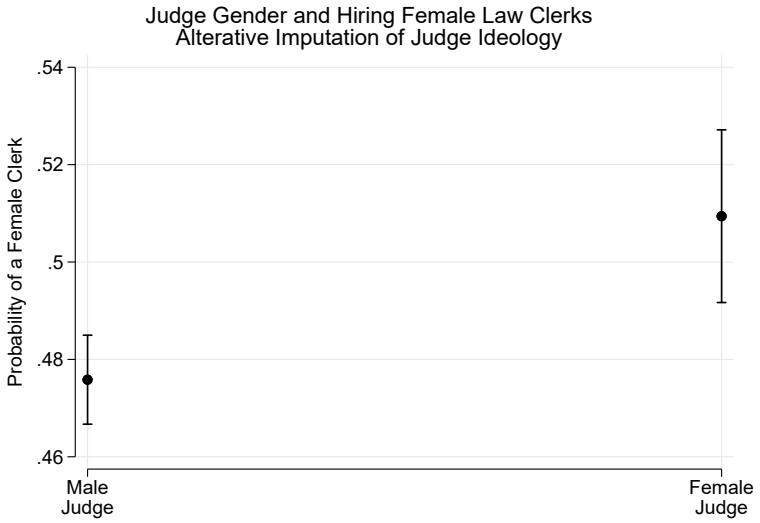


Figure 1: Replicates Figure 2 in Manuscript

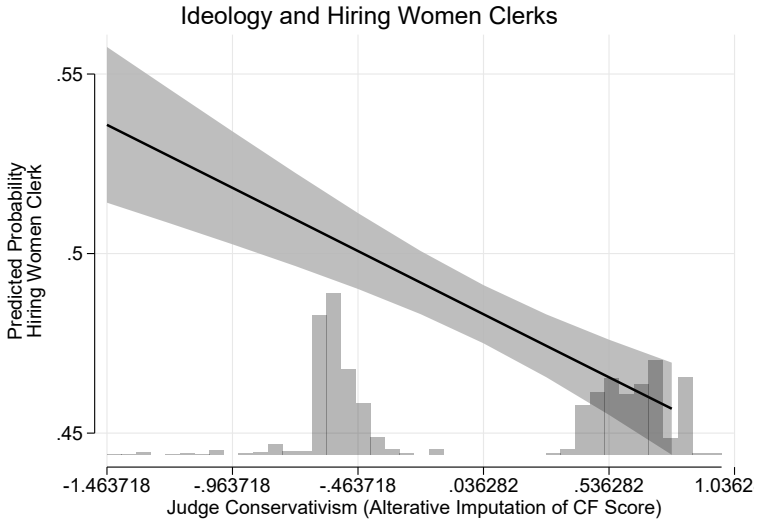


Figure 2: Replicates Figure 3 in Manuscript

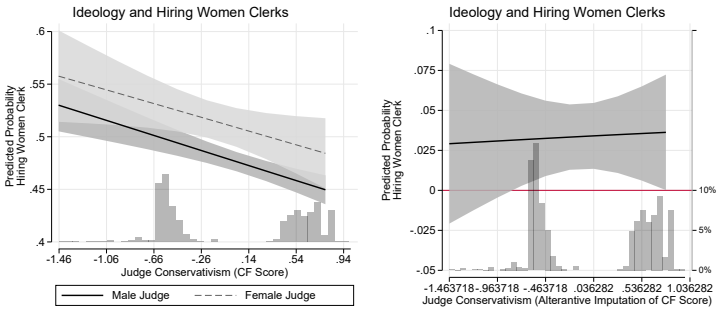
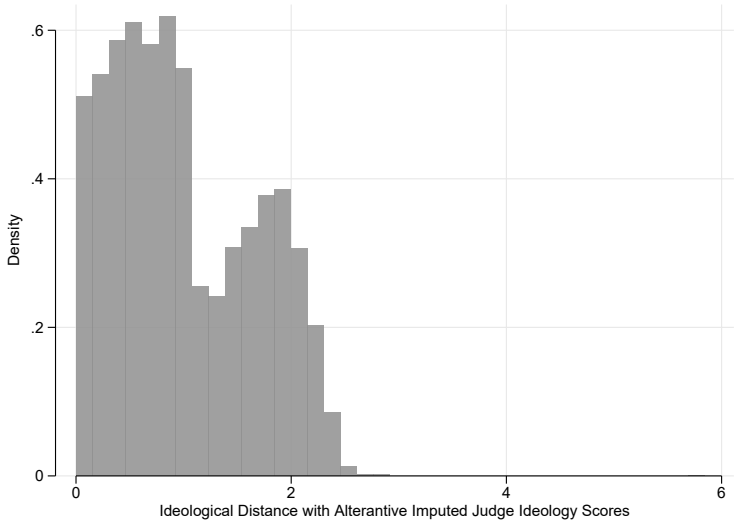


Figure 3: Replicates Figure 4 in Manuscript



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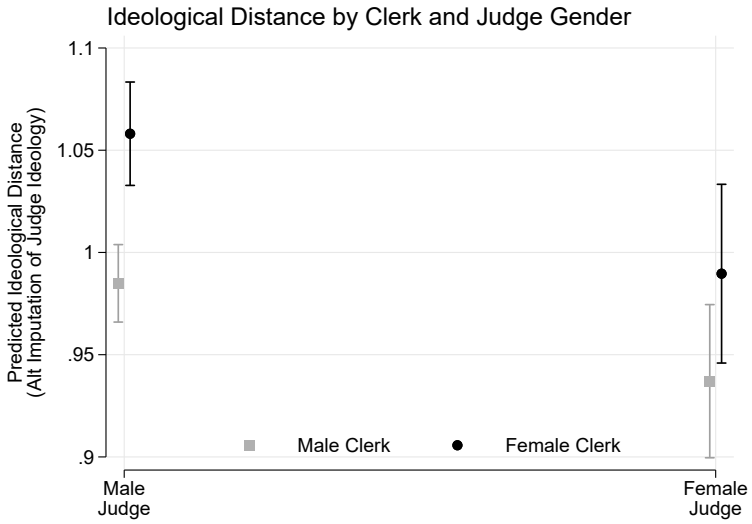

Figure 5: Replicates Figure 6 in Manuscript

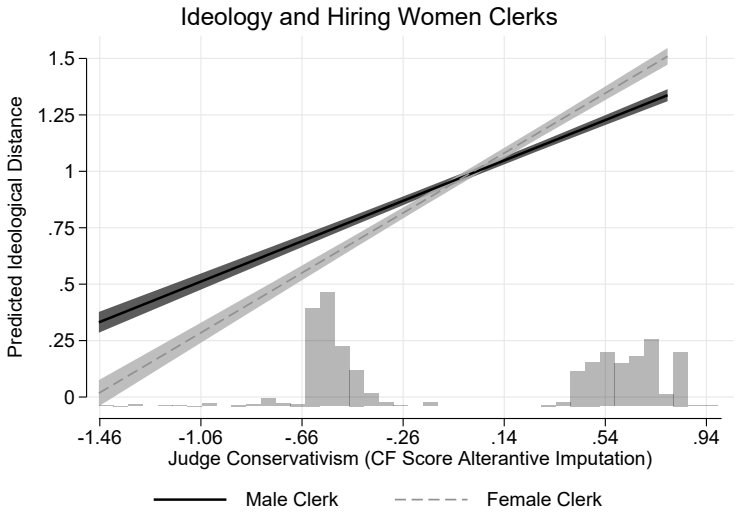

Figure 6: Replicates Figure 7 in Manuscript

Use of Imputed Clerk Ideology Scores

In the manuscript we do not use imputed cf scores for clerks. We do this because in part cf scores for clerks are imputed using gender. This could create a potential for endogeneity. We resolved this potential for endogeneity for judges by demonstrating that the imputed scores do not overly rely on gender. We demonstrated this by showing the regression coefficient for gender was roughly equal across the observed and imputed models. We took this to mean the imputed models accurately reflect the observed data. We take the same approach here with clerks. The results are presented in Table 3. The results here do imply a difference in how gender contributes to the imputed and observed data. The observed coefficient is 1.57 times larger than the imputed coefficient. We take this to mean that the imputed models underestimate how liberal or over estimate how conservative women clerks are. Using the imputed scores could lead to bias. Further, because we have less information on clerks, and there is no alternative measure of clerk ideology we cannot construct an alternative imputation model that does not include gender. With that said, we do replicate our

Table 3: Regressions: Comparing Imputation of Clerk Ideology

	(1) Imputed	(2) Observed
Female Clerk	-0.235^{***}	-0.368^{***}
	(0.0116)	(0.0220)
Constant	-0.429^{***}	-0.483^{***}
	(0.00805)	(0.0134)
Observations	18004	7406

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

With that said, we do replicate the key findings that rely on clerk ideology in Table 4 and present the results in Figure 7 and Figure 8. The results largely replicate the key findings presented in the manuscript with one exceptions. Women judges observe somewhat more ideological distance when they higher female law clerks. This may very well be due to

the fact that the imputed scores seemingly underestimate the liberalness/overestimate the conservativeness of female law clerks.

Table 4: Ideological Distance: Clerk Ideology Imputations Included

	(1) Ideological Distance
Female Judge	−0.0248 (0.0151)
Judge CF Score (Conservatism)	0.450*** (0.00855)
Female Clerk	−0.0217* (0.00969)
Female Judge × Female Clerk	0.0129 (0.0211)
Female Clerk × Judge CF Score	0.129*** (0.0118)
Clerk CF Score	−0.357*** (0.00572)
Held Lower Clerkship	0.0375 (0.0590)
Years with Judge	−0.0250*** (0.00307)
Same Law School	−0.0344*** (0.00986)
Year Fixed-Effects	Yes
Court Fixed-Effects	Yes
Constant	0.660*** (0.0166)
Observations	14391

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

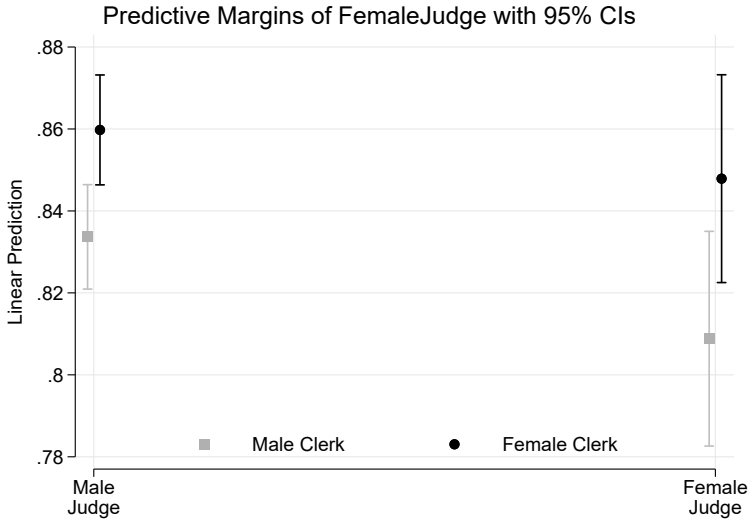

Figure 7: Replicates Figure 6 in Manuscript

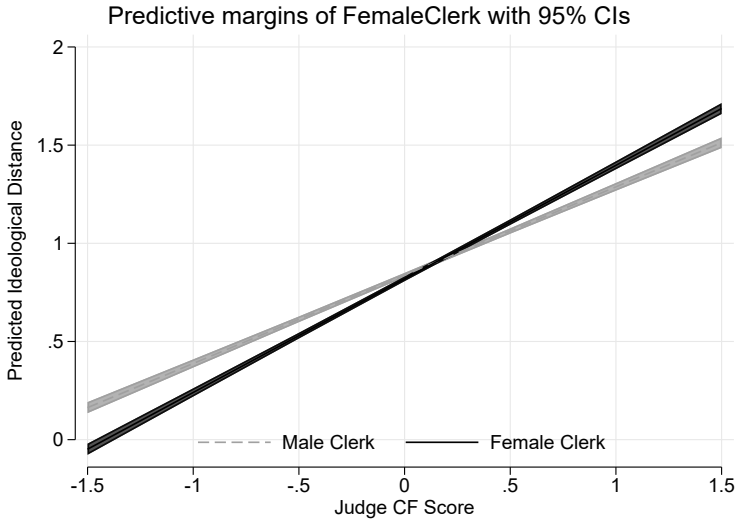

Figure 8: Replicates Figure 7 in Manuscript

Alternative Modelling

Bivariate Relationships

To demonstrate that our results are not model-dependent or due to suppression effects (Achen 2002) of including many control variables, here we present the results to bivariate models. The results to our bivariate models replicate the findings presented in the manuscript. Table 5 presents the logit models predicting whether a clerk is female and Table 6 presents simplified interaction models for the ideological distance outcome. Since interaction model coefficients can be difficult to interpret on their own (Brambor, Clark and Golder 2006), we also provide the substantive effects in Figure 9.

Table 5: Bivariate Logit Regression: Hires Female Clerk

	(1) Female Clerk	(2) Female Clerk	(3) Female Clerk
Female Judge	0.149***		0.0963*
	(0.0367)		(0.0385)
Judge Ideology (Conservatism)		−0.131***	−0.116***
		(0.0205)	(0.0214)
Constant	−0.0977***	−0.0637***	−0.0842***
	(0.0167)	(0.0150)	(0.0171)
Observations	18052	17787	17787

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6: Simplified Linear Regression for Interaction: Ideological Distance between Judge and Clerk

	(1) Ideological Distance	(2) Ideological Distance	(3) Ideological Distance
Female Judge	−0.181***		−0.000980
	(0.0261)		(0.0242)
Female Clerk	0.111***	0.119***	0.133***
	(0.0193)	(0.0152)	(0.0174)
Female Judge × Female Clerk	−0.177***		−0.0609
	(0.0407)		(0.0379)
Judge Ideology		0.356***	0.355***
		(0.0127)	(0.0132)
Female Clerk × Judge Ideology		0.238***	0.228***
		(0.0207)	(0.0216)
Constant	0.987***	0.928***	0.928***
	(0.0116)	(0.00930)	(0.0106)
Observations	7265	7265	7265

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

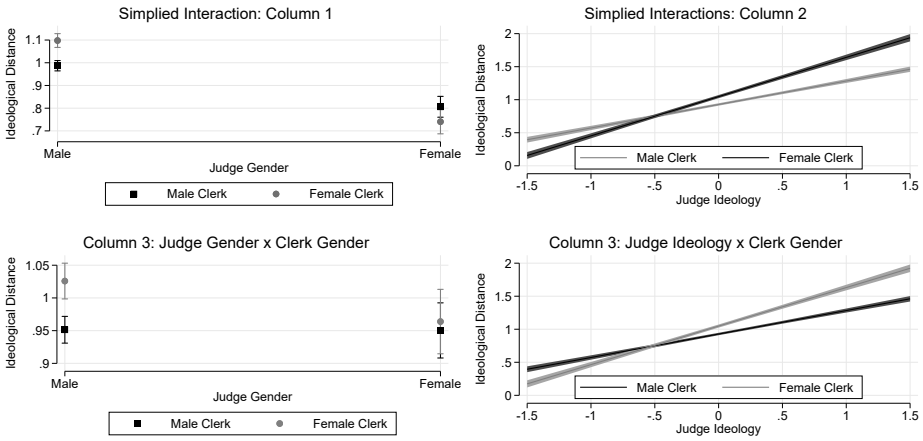

Figure 9: Substantive Results from Table 1 Interactions

Percentage of Female Clerks Hired

In the manuscript, we analyzed whether any given clerk hired by a judge was a female. Here who conduct a secondary analysis using the percentage of female clerks hired by a judge in any given year, rather than examining the individual clerks. These results are displayed in Table 7. The results replicate those presented in the manuscript. Female judges higher roughly 3% more female clerks than male judges and conservative judges hirer roughly 3% fewer female clerks than liberal clerks (moving from the 20th percentile to the 80th percentile of judge ideology).

Table 7: OLS Regression: Percentage of Women Clerks Hired

	(1) % Female Clerk
Female Judge	0.0303**
	(0.0107)
Judge Ideology	−0.0161**
	(0.00598)
% of Clerks from Judge's School	0.0369**
	(0.0117)
Court Type Fixed-Effects	Yes
Year Fixed-Effects	Yes
Constant	0.378***
	(0.0162)
Observations	6413

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

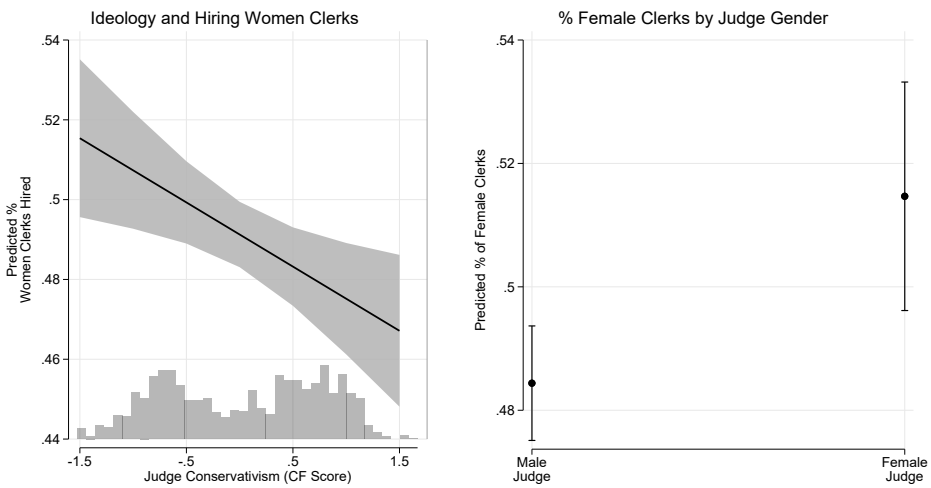

Figure 10: Percentage of Female Clerks Hired

Hiring All Male Clerks

As an alternative to the results presented so far, we investigate a more extreme form of gender bias. A situation in which a judge hires no female law clerks. We estimate a logit model predicting whether a judge's clerks for a year where all male. These results are presented in Table 8 and Figure 11. The results demonstrate that women judges are less likely to hire an all male clerk team. The probability of a women judge hiring an all male team is .18 while a male judge has a predicted probability of .22 of hiring an all male team. Conservative judges were also more likely to hire all male clerk teams. The probability conservative judges (80% of ideology score) is .23 while the probability of liberal judges (20% of ideology score) is .19.

Table 8: Logit Regression Model: All Male Law Clerks

	(1) All Male Clerk Team
Female Judge	−0.228** (0.0824)
Judge Conservatism	0.157*** (0.0440)
% of Clerks from Judge's School	−0.179* (0.0910)
Court Type Fixed-Effects	Yes
Year Fixed-Effects	Yes
Constant	−1.351*** (0.118)
Observations	6413

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

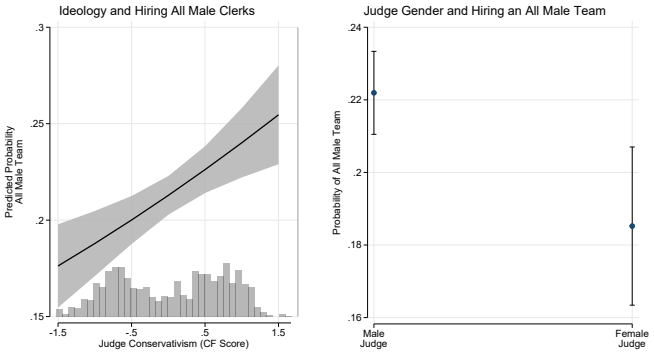

Figure 11: All Male Clerks

Hiring All Female Clerks

We also investigate whether a judge's ideology and gender influences their probability of hiring an all female team of clerks. The results are presented in Table 9 and Figure 12. The results demonstrate that there are no ideological biases when it comes to hiring a team of all female clerks. Liberals and conservatives are equally likely to hire all female teams. However, women are somewhat more likely to hire an all female compared to male judges.

Table 9: Logit: All Female Team

	(1) All Female Team
Female Judge	0.157*
	(0.0787)
Judge CF Score	0.00592
	(0.0450)
% Clerks from Judge's Law School	0.206*
	(0.0830)
Court Type Fixed-Effects	Yes
Year Fixed-Effects	Yes
Constant	−2.807***
	(0.149)
Observations	6345

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

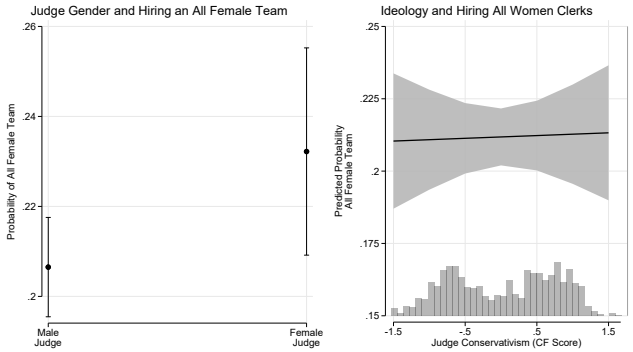

Figure 12: All Female Clerks

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