Attention Constraints and Financial Inclusion

INTERNET APPENDIX

IA. Additional Empirical Results

A. Robustness to high- and low-SES definitions

In our main analyses, we summarize the combined effects of applicant socioeconomic status (SES) by fitting a linear probability model using the full sample, and then we define high- and low-SES status based on whether the fitted value is above or below the sample median.

In this section, we show that this data-driven approach that defines high- and low-SES status is robust when using out-of-sample fitting, and thus our approach is not subject to in-sample bias. Specifically, instead of regressing the approval probability on the six SES labels using the full sample, we fit this linear probability model using only the subsample that includes the first 50% (25%) of the sample period, or a subsample of 50% (25%) of the randomly selected observations. As shown in Table IA1, the estimated coefficients using these alternative subsamples are very similar to those estimated using the full sample, and the fitted values of "Social Status" and "Economic Status" are also very similar. In fact, no matter which sample we use, the high- and low-SES dummy indicators based on whether the fitted "Social Status" and "Economic Status" values are above or below median are always consistent for each loan applicant.

Moreover, we show that our main results remain robust when using such out-of-sample analyses. First, we use the first 50% of the sample to define the high- and low-SES groups, and repeat the main regression analyses using the remaining 50% of the sample. The results are robust, as shown in Tables IA2 and IA3. Moreover, the results are also robust when we apply out-of-sample fitting based on randomly drawn samples. Specifically, after drawing a 50% random subsample to fit the linear probability model and using the fitted values to define the high- and low-SES groups, we run our main regression analyses using only the remaining 50% subsample. We repeat this random-draw procedure 100 times and in Figure IA1 present the empirical distribution of the key regression coefficients estimated over these 100 iterations. As shown in the figure, the coefficients for ***BusynessDecile***, $High - SES(Social) \times BusynessDecile$, and $High - SES(Economic) \times BusynessDecile$ are all qualitatively and quantitatively similar to the baseline estimations. In particular, consistent with the prediction based on our attention-driven mechanism, the values of the two interaction terms are significantly greater than zero, with p-values under 0.001. We also note

that all these results remain similar if we use a 25% subsample to fit the linear probability model and the remaining observations for the regression analyses. Space limitations prevent us from reporting those additional results.

[**Table** IA1 about here.]

[**Table** IA2 about here.]

[**Table** IA3 about here.]

[**Figure** IA1 about here.]

B. Credit Quality of Applicants by Social/Economic Statuses

Under the state when loan officers are *not* attention constrained, a lower approval rate faced by borrowers in the low-SES group could simply be driven by their higher average credit risk. However, not only this pure risk-driven effect cannot explain the difference-in-difference results we presented earlier in this section, but also even the average difference in attention allocation and approval rates across the high- versus low-SES borrower groups seems too large to be fully justified by differences in credit risk.

Regarding attention allocation, the median (average) time that officers spend reviewing an application with low social status is only 12.17 (24.53) minutes, which is approximately 50% (33%) lower than that for high status applicants who receive 24.86 (37.42) minutes. Similarly, the median (average) time that officers spend reviewing an application with low economic status is 16.12 (28.76) minutes as opposed to 25.16 (37.41) minutes for applicants accorded high economic status. Regarding the lending decision, when we compare the approval rates reported in Panel B of Table I, we can see that on average the gaps between high- and low-SES groups are large. Specifically, the low social (economic) status groups experience average approval rates of only 18.1% (25.4%), while the high social (economic) status groups experience much higher approval rates of 51.9% (65.5%).

These cross-sectional differences are so large such that they cannot be easily explained alone by the limited difference in average credit quality across borrower groups. In Figure IA2, we plot the distribution of each major credit risk metric for borrowers in the high- versus low-SES groups respectively. These credit quality distributions mask substantial overlap. In addition, the appendix Table IA4 present further numerical details about the extent of the overlap: among the

applicants with low social (economic) status who are rejected, 47% (44%) earn income higher than the median high-status applicant who are approved, and 32% (35%) exhibit lower leverage ratios. The fact that these numbers are only slightly below 50% implies that the low-SES group demonstrates comparable credit quality as the high-SES group based on the key metrics.

[**Figure** IA2 about here.]

[**Table** IA4 about here.]

To verify that our findings are not driven by the variation in borrower credit risk, we utilize propensity score matching to identify the most closely-matched borrowers in the low- and high-SES groups and test whether our difference-in-difference results remain robust even after accounting for the potential influence of borrower credit risk. Tables IA5 and IA6 result resemble those of our main analyses, except that we match applicants from high- and low-SES groups that have similar backgrounds. Specifically, we use the full set of application controls applied before as matching variables to pair the high-SES application with the single nearest neighbor low-SES application and rerun the main analyses by using the matched sample.

[**Table** IA5 about here.]

[**Table** IA6 about here.]

C. Additional Evidence of Differential Attention Allocation: Extra Due Diligence Inferred from Cited Rejection Reasons

This section provides additional suggestive evidence of differential officer attention allocation to high- and low-SES applicants. At the bank we study, a loan officer must select from a list of reasons when she renders a rejection. Out of the total of 127 rejection reasons from which she can choose, some indicate that the officer makes rejection decisions based on information already in hand (e.g., high leverage or bad credit history), while some others indicate that the loan officer, before rejecting, attempted *further due diligence* to gain information beyond that readily available in the application package. For example, the loan officer can indicate that she also called the applicant's reference but found inconsistent information. We use this as another indicator for loan officer attention allocation in addition to their review time.

In Table IA7, we find that loan officers are more likely to conduct extra due diligence on applications with more SES labels. More importantly, the effect of social and economic statuses on

officer due diligence is more pronounced when loan officers are busier. As discussed in Section A, we measure loan officer business by the number of applications she processes in a day. As in Table IV, we sort officer busyness into deciles and estimate a regression of an officer due diligence indicator on social and economic status indicators and busyness deciles as well as their interactions. When loan officers are busier, applicants from groups with lower social or economic status receive significantly less due diligence, but the effect is minor or non-existent for the high-socioeconomic-status applicants. From columns (4) to (9), we further verify that the results are robust to using the two loan officer busyness instruments in Section A. Overall, these results are consistent with the parallel findings where we measure attention allocation using loan officer review time (Table IV). One caveat is that the due diligence measure is indirect and imperfect, as it is based on short commented quotes by loan officers only on rejected loans. Thus, we should only consider these additional evidence as suggestive.

[**Table** IA7 about here.]

D. Additional Details Regarding the Instrumented Busyness Measures

We present additional details and robustness checks regarding the two officer busyness instruments introduced in Section A.

1. Figure IA3 replicates the patterns shown in Figure 4 by using each of the two instrumented busyness measures instead of raw busyness. We show that loan officers work longer hours and are more likely to work overtime when they are more attention-constrained, as measured by the two instrumented busyness measures.

2. With Table IA8, we verify that assignments do not depend on officer backlogs. This alleviates the concern that loan officers could influence their own assignments indirectly by working more quickly or slowly.

3. With Table IA9, we verify that the instrumented busyness measures are not correlated with applicant and loan characteristics.

4. Tables IA10 and IA11 resemble those of our main analyses, except that we use the demeaned assignment to capture only residual variations after controlling for the week, bank branch, and loan-type fixed effects.

[**Figure** IA3 about here.]

[**Table** IA8 about here.]

[**Table** IA9 about here.]

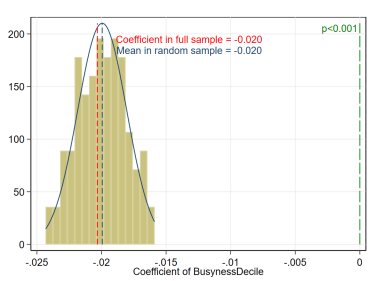
[**Table** IA10 about here.]

[**Table** IA11 about here.]

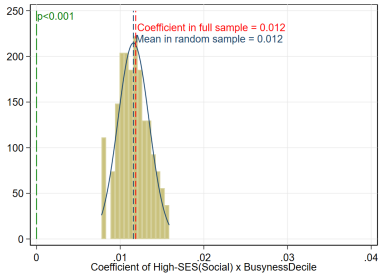
Figure IA1. **Coefficients using Out-of-Sample Fitted SES**

This figure presents the results of robustness checks of the key regression coefficients reported in Tables IV and V. We first employ a linear probability model on a 50% randomly selected subsample to fit each applicant's SES. We then use the non-selected 50% of the subsample for the regression analyses. This random-draw process is repeated 100 times. The distribution of each key coefficient over 100 iterations is presented. In Panel A we reports the effects of officer attention constraints on review time. In Panel B we report the effects of officer attention constraints on approval decisions. For the sake of brevity, we present the results based on LOO-predicted busyness. The results are very similar when we use actual or predicted busyness.

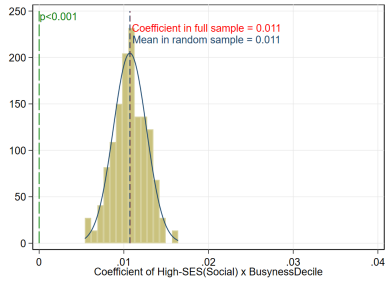
Panel A. Effects of officer attention constraints on review time



(a) $BusynessDecile$

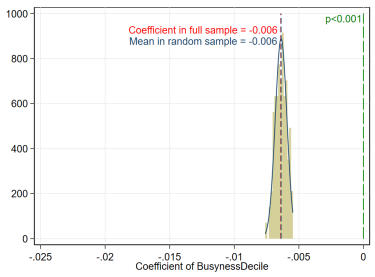


(b) $High^-SES(Social) \times BusynessDecile$

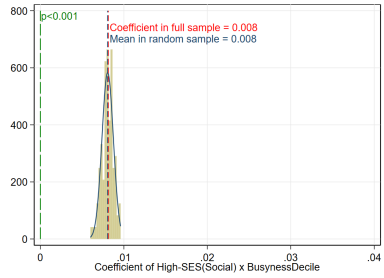


(c) $High^-SES(Economic) \times BusynessDecile$

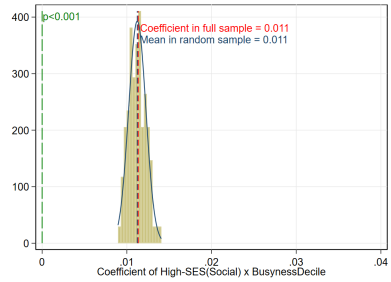
Panel B. Effects of officer attention constraints on approval decisions



(d) $BusynessDecile$



(e) $High^-SES(Social) \times BusynessDecile$

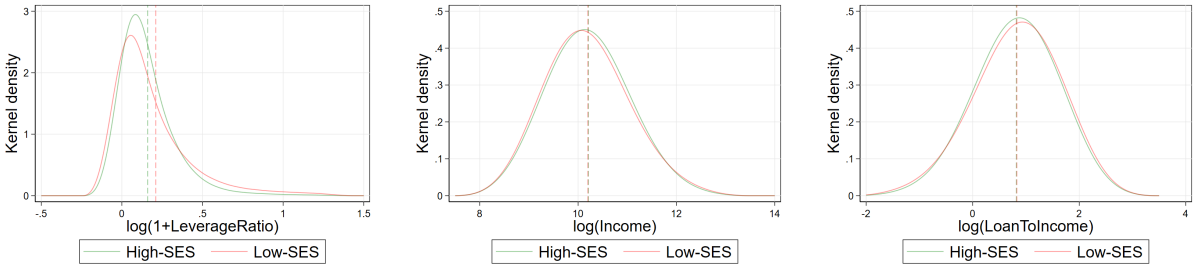


(f) $High^-SES(Economic) \times BusynessDecile$

Figure IA2. **Distribution of Credit Quality: high- and low-SES Applicants**

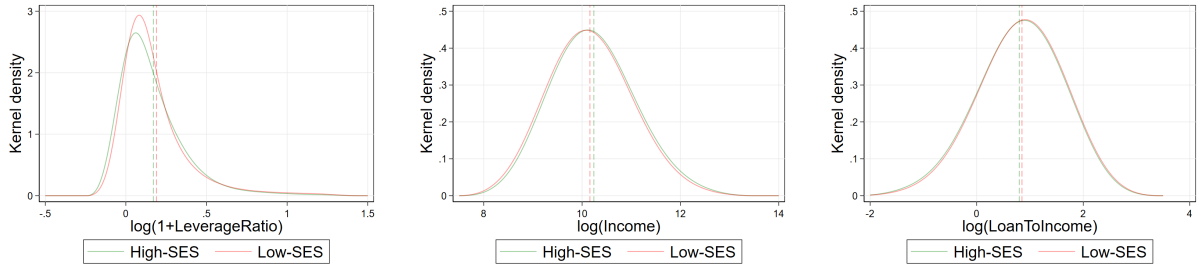
We plot the kernel density distribution of credit quality measures for the high- and low-SES applicant groups. The vertical dashed lines represent the averages for each group. Panel A compares applicants with high and low social statuses. Panel B compares applicants with high and low economic statuses. The definitions of these groups are provided in Section C. From left to right, the plots examine the logarithm of the leverage ratio, income, and the ratio of applied-for loan amounts to applicant income for the applicants, respectively.

Panel A. Distribution of credit quality by applicant *social status*



(a) log(1+LeverageRatio) **(b) log(Income)** **(c) log(LoanToIncome)**

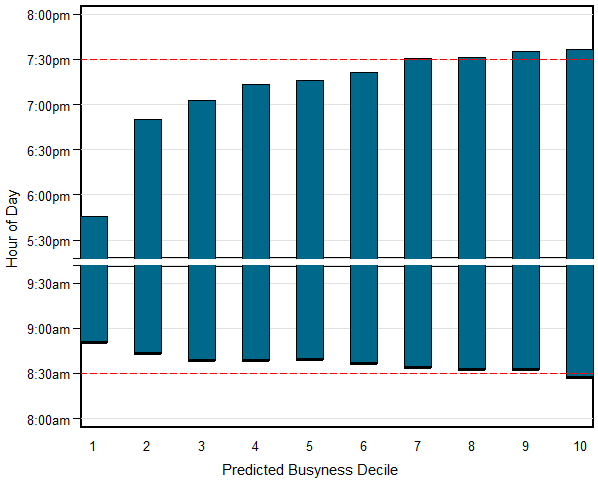
Panel B. Distribution of credit quality by applicant *economic status*



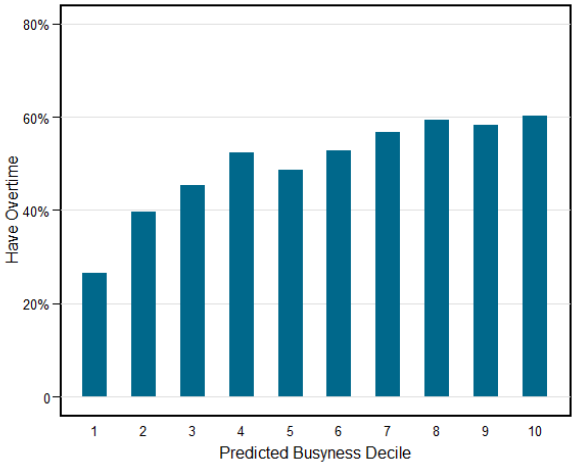
(d) log(1+LeverageRatio) **(e) log(Income)** **(f) log(LoanToIncome)**

Figure IA3. **Robustness: Loan Officer Busyness and Work Schedule**

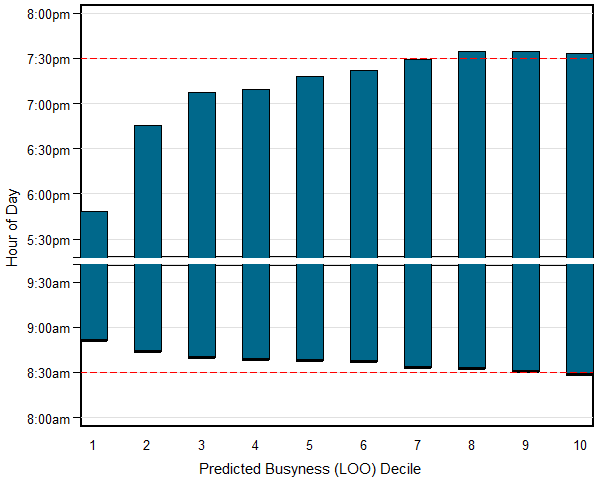
This figure replicates Figure 4, except that we sort loan officer busyness by each of the two instrumented measures. For Panels (a) and (b), we sort the sample into deciles using *predicted busyness*. For Panels (c) and (d), we sort by *LOO-predicted busyness*. The two instruments for officer busyness are described in Section A. The left panels plot the average time at which officers start and end a work day. The right panels plot how frequently officers work overtime, defined as working before 8:30 a.m. or after 7:30 p.m. (the red dashed lines in the left panels).



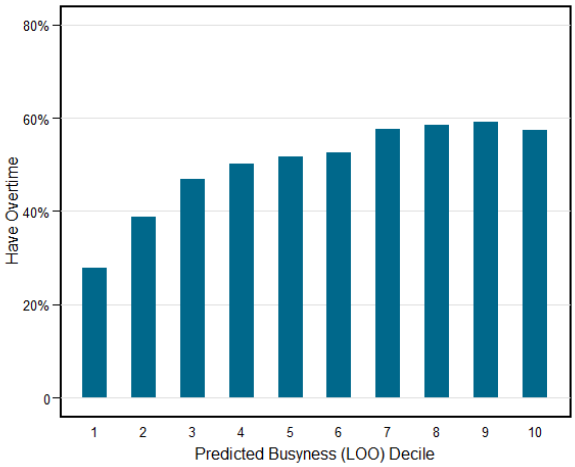
(a) Work Schedule by Predicted Busyness



(b) Overtime by Predicted Busyness



(c) Work Schedule by LOO-Predicted Busyness



(d) Overtime by LOO-Predicted Busyness

Table IA1. **Out-of-sample Fitting for Socioeconomic Status**

In this table, we report the results obtained after adopting multuple approaches to regressing approval probability on socioeconomic labels. In addition to using the full sample to fit the linear probability model as in our main analyses, we also consider fitting the model using only a subsample from an earlier part of the sample period, and a randomly selected subsample. In Panels A and C we report the fitted coefficients using social status and economic status labels, respectively. In Panels B and D we report summary statistics for the fitted values of "Social Status" and "Economic Status". T-statistics are reported in the parentheses. $^{***}p < 1\%$, $^{**}p < 5\%$, $^{*}p < 10\%$

Panel A: Estimated coefficients by social status

Sample:	Approval				
	Full	Time		Random	
	100%	50%	25%	50%	25%
	1	2	3	4	5
PublicEmployee	0.098***	0.087***	0.056***	0.089***	0.091***
	(12.828)	(8.595)	(4.962)	(10.171)	(7.862)
LocalResident	0.452***	0.421***	0.369***	0.449***	0.451***
	(28.729)	(22.007)	(19.376)	(96.931)	(77.851)
Application Controls	Y	Y	Y	Y	Y
Local Busyness Controls	Y	Y	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y
Observation	145,982	72,997	36,890	72,997	36,890
Adjusted R-squared	0.268	0.249	0.255	0.270	0.272

Panel B: Predicted approval rates by social status

	N	Mean	SD	10%	25%	50%	75%	90%
Predicted Approval (Full sample)	145,982	0.342	0.159	0.195	0.195	0.195	0.495	0.495
Predicted Approval (First half of the sample)	145,982	0.323	0.146	0.188	0.188	0.188	0.464	0.464
Predicted Approval (First 25% of the sample)	145,982	0.291	0.139	0.162	0.162	0.162	0.430	0.430
Predicted Approval (Randomly chosen half of the sample)	145,982	0.343	0.159	0.197	0.197	0.197	0.496	0.496
Predicted Approval (Randomly chosen 25% of the sample)	145,982	0.341	0.161	0.193	0.193	0.193	0.491	0.491

Panel C: Estimated coefficients by economic status

Sample:	Approval				
	Full	Time		Random	
	100%	50%	25%	50%	25%
	1	2	3	4	5
EmploymentCert	0.399***	0.359***	0.304***	0.385***	0.393***
	(22.789)	(16.531)	(12.532)	(52.979)	(41.129)
IncomeCert	0.088***	0.094***	0.091***	0.102***	0.092***
	(5.712)	(4.644)	(3.755)	(13.634)	(9.122)
RegularPay	0.113***	0.138***	0.202***	0.112***	0.110***
	(9.521)	(7.507)	(9.275)	(10.268)	(8.457)
HomeOwner	0.179***	0.165***	0.157***	0.188***	0.182***
	(17.394)	(12.266)	(11.459)	(22.780)	(18.768)
Application Controls	Y	Y	Y	Y	Y
Local Busyness Controls	Y	Y	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y
Observation	145,982	72,997	36,890	72,997	36,890
Adjusted R-squared	0.369	0.331	0.328	0.372	0.372

Panel D: Predicted approval rates by economic status

	N	Mean	SD	10%	25%	50%	75%	90%
Predicted Approval (Full sample)	145,982	0.342	0.269	0.009	0.009	0.489	0.489	0.690
Predicted Approval (First half of the sample)	145,982	0.323	0.253	0.011	0.011	0.465	0.465	0.668
Predicted Approval (First 25% of the sample)	145,982	0.303	0.243	0.010	0.010	0.423	0.423	0.682
Predicted Approval (Randomly chosen half of the sample)	145,982	0.344	0.270	0.010	0.010	0.489	0.489	0.695
Predicted Approval (Randomly chosen 25% of the sample)	145,982	0.341	0.268	0.008	0.008	0.490	0.490	0.677

Table IA2. ***Robustness using Out-of-Sample Fitted SES:*** **Effects on Review Time**

For this table, we report the robustness of Table IV, where we report results indicating how loan officer attention constraints affect the time they spend on reviewing each loan application. All the specifications are the same, except that we use the first half of the sample to fit applicant SES by regressing approval probability on socioeconomic labels and the remaining half to run the regression analysis as in Table IV. *BusynessDecile* is the officer's daily busyness measure, defined as the number of applications processed on a given day, sorted into deciles. Application controls are similar to those included in earlier regressions. T-statistics are reported in parentheses. Standard errors are double-clustered at the week and officer levels. $^{***}p < 1\%$, $^{**}p < 5\%$, $^{*}p < 10\%$.

Dependent variable:	StandardizedReviewTime								
Busyness measure:	Actual Busyness			Predicted Busyness			LOO-Predicted Busyness		
	1	2	3	4	5	6	7	8	9
β_1BusynessDecile	-0.059***	-0.052***	-0.064***	-0.026***	-0.017***	-0.025***	-0.015***	-0.011***	-0.019***
	(-14.757)	(-17.857)	(-13.662)	(-7.918)	(-6.036)	(-7.006)	(-4.151)	(-3.281)	(-6.274)
β_2High-SES(Social)	0.277***		0.242***	0.375***		0.343***	0.378***		0.347***
	(6.686)		(5.735)	(12.613)		(11.437)	(12.447)		(12.742)
β_3High-SES(Social) × BusynessDecile	0.030***		0.032***	0.022***		0.019***	0.017***		0.018***
	(4.822)		(5.032)	(5.402)		(4.490)	(4.018)		(4.711)
β_4High-SES(Economic)		0.204***	0.129***		0.266***	0.190***		0.270***	0.195***
		(8.602)	(5.980)		(9.345)	(6.558)		(9.582)	(7.083)
β_5High-SES(Economic)× BusynessDecile		0.019***	0.021***		0.012***	0.014***		0.011***	0.013***
		(5.640)	(5.829)		(2.991)	(3.193)		(2.684)	(3.387)
Application Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Local Busyness Controls	N	N	N	N	N	N	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observation	72,983	72,983	72,983	72,983	72,983	72,983	72,983	72,983	72,983
Adjusted R-squared	0.067	0.042	0.074	0.067	0.040	0.071	0.064	0.040	0.071
$\beta_1 + \beta_3$	-0.028***		-0.032***	-0.003		-0.006***	0.002		-0.001
P-value of $(\beta_1 + \beta_3)$	(0.000)		(0.000)	(0.128)		(0.008)	(0.392)		(0.827)
$\beta_1 + \beta_5$		-0.032***	-0.043***		-0.005*	-0.012***		0.000	-0.006*
P-value of $(\beta_1 + \beta_5)$		(0.000)	(0.000)		(0.072)	(0.000)		(0.874)	(0.058)
First-stage F-Statistics				39.1	39.1	39.1	15.6	15.6	15.6

Table IA3. ***Robustness Using Out-of-Sample Fitted SES:*** **Effects on Approval Decisions**

In this table, we report results that confirm the robustness of Table V, where we report results indicating how loan officer attention constraints affect approval decisions on loan applications. All the specifications are the same, except that we use the first half of the sample to fit applicant SES by regressing approval probability on socioeconomic labels and the remaining half to run the regression analysis as in Table V. *BusynessDecile* is the officer's daily busyness measure, defined as the number of applications processed on a given day, sorted into deciles. Application controls are similar to those included in earlier regressions. T-statistics are reported in parentheses. Standard errors are double-clustered at the week and officer levels. $^{***}p < 1\%$, $^{**}p < 5\%$, $^{*}p < 10\%$.

Dependent variable:	Approval								
Busyness measure:	Actual Busyness			Predicted Busyness			LOO-Predicted Busyness		
	1	2	3	4	5	6	7	8	9
β_1BusynessDecile	-0.006***	-0.009***	-0.005***	-0.000	-0.002**	-0.002**	-0.001	-0.002	-0.002**
	(-3.090)	(-5.109)	(-3.061)	(-0.357)	(-1.979)	(-2.292)	(-0.383)	(-1.612)	(-1.976)
β_2High-SES(Social)	0.463***		0.431***	0.468***		0.425***	0.474***		0.431***
	(18.267)		(19.156)	(39.197)		(41.976)	(38.601)		(46.805)
β_3High-SES(Social) × BusynessDecile	0.002		0.001	0.002		0.002	0.001		0.001
	(0.588)		(0.229)	(0.803)		(1.203)	(0.278)		(0.659)
β_4High-SES(Economic)		0.444***	0.406***		0.459***	0.398***		0.463***	0.402***
		(20.328)	(21.247)		(32.628)	(30.142)		(32.851)	(29.979)
β_5High-SES(Economic)× BusynessDecile		0.007***	0.003*		0.006***	0.006***		0.005***	0.005***
		(3.395)	(2.029)		(3.172)	(2.956)		(2.859)	(2.961)
Application Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Local Busyness Controls	N	N	N	N	N	N	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observation	72,983	72,983	72,983	72,983	72,983	72,983	72,983	72,983	72,983
Adjusted R-squared	0.294	0.244	0.377	0.301	0.251	0.385	0.301	0.251	0.385
$\beta_1 + \beta_3$	-0.004*		-0.005**	0.001		-0.000	0.000		-0.001
P-value of $(\beta_1 + \beta_3)$	(0.066)		(0.029)	(0.204)		(0.785)	(0.952)		(0.173)
$\beta_1 + \beta_5$		-0.002	-0.002		0.004***	0.003***		0.003***	0.003**
P-value of $(\beta_1 + \beta_5)$		(0.389)	(0.336)		(0.002)	(0.003)		(0.007)	(0.021)
First-stage F-Statistics				39.1	39.1	39.1	15.6	15.6	15.6

Table IA4. **Credit Quality of high- and low-SES Applicants**

For this table, we compare the credit quality of applicants with high versus low social or economic status. As explained in Section C, the high-SES group is defined as applicants whose level of *SocialStatus* (equation (3)), or *EconomicStatus* (equation (4)) is above the sample median. *LeverageRatio* is defined as the debt-to-income ratio in the applicant's credit report, and *NoCreditHistory* is a dummy indicator that equals one for those without credit histories. *LoanToIncome* is the loan-amount-to-income ratio. We report, by applicant SES group and approcal decision, summary statistics of the residual credit quality measures after regressing out the fixed effects and adding back the sample mean. In the last column, we report the fraction of low-SES applicants that are rejected with higher credit quality than the median high-SES applicant that is approved.

Panel A. Credit quality Statistics by applicant social status and approval

Credit quality measure	Group	N	Mean	SD	10%	25%	50%	75%	90%	% better
log(1+LeverageRatio)	Low-SES&Rejected	34,173	0.221	0.361	-0.037	0.025	0.117	0.288	0.570	31.5%
	High-SES&Approved	43,386	0.139	0.247	-0.045	0.020	0.097	0.197	0.329	
NoCreditHistory	Low-SES&Rejected	49,319	0.300	0.429	-0.066	0.011	0.083	0.779	1.007	40.2%
	High-SES&Approved	49,318	0.128	0.327	-0.140	-0.023	0.055	0.123	0.797	
log(Income)	Low-SES&Rejected	49,319	10.156	0.774	9.238	9.640	10.104	10.609	11.130	46.4%
	High-SES&Approved	49,318	10.231	0.777	9.309	9.706	10.170	10.691	11.219	
log(LoanToIncome)	Low-SES&Rejected	49,319	0.866	0.703	-0.008	0.459	0.912	1.333	1.683	47.7%
	High-SES&Approved	49,318	0.822	0.713	-0.076	0.401	0.876	1.303	1.657	

Panel B. Credit quality statistics by applicant economics status and approval

Credit quality measure	Group	N	Mean	SD	10%	25%	50%	75%	90%	% better
log(1+LeverageRatio)	Low-SES&Rejected	40,209	0.217	0.345	-0.020	0.038	0.125	0.272	0.513	35.1%
	High-SES&Approved	43,842	0.167	0.257	-0.045	0.016	0.110	0.247	0.416	
NoCreditHistory	Low-SES&Rejected	52,991	0.252	0.407	-0.086	0.011	0.085	0.191	1.001	36.4%
	High-SES&Approved	52,990	0.162	0.360	-0.132	-0.024	0.048	0.133	0.906	
log(Income)	Low-SES&Rejected	52,991	10.116	0.797	9.168	9.577	10.058	10.594	11.132	43.6%
	High-SES&Approved	52,990	10.246	0.786	9.313	9.705	10.179	10.700	11.261	
log(LoanToIncome)	Low-SES&Rejected	52,991	0.881	0.733	-0.041	0.450	0.930	1.368	1.745	45.4%
	High-SES&Approved	52,990	0.791	0.721	-0.126	0.377	0.852	1.279	1.631	

Table IA5. ***Robustness Using Propensity Score Matching:*** **Effects of Officer Attention Constraints on Review Time**

For this table, we report results pertaining to the propensity score analysis of how loan office attention constraints affect their approval decisions on loan applications by applicants from high and low socioeconomic backgrounds. The regression specification is the same as in Table IV, except that we utilize the matched sample for high- and low-SES applicants. The propensity matching is calculated by the single nearest neighbor method applied to the full set of application controls. *BusynessDecile* is the officer's daily busyness measure, defined as the number of applications processed on a given day, sorted into deciles. Application controls are similar to before. T-statistics are reported in parentheses. Standard errors are double-clustered at the week and officer levels. $^{***}p < 1\%$, $^{**}p < 5\%$, $^{*}p < 10\%$.

Dependent variable:	StandardizedReviewTime								
Busyness measure:	Actual Busyness			Predicted Busyness			LOO-Predicted Busyness		
	1	2	3	4	5	6	7	8	9
β_1BusynessDecile	-0.057***	-0.057***	-0.064***	-0.019***	-0.029***	-0.036***	-0.020***	-0.020***	-0.028***
	(-12.720)	(-15.349)	(-10.216)	(-4.059)	(-5.598)	(-5.051)	(-4.759)	(-4.001)	(-3.821)
β_2High-SES(Social)	0.426***		0.230***	0.463***		0.271***	0.488***		0.277***
	(11.938)		(7.741)	(17.986)		(6.183)	(18.934)		(5.079)
β_3High-SES(Social)× BusynessDecile	0.015***		0.019***	0.007*		0.014**	0.009**		0.013*
	(3.067)		(3.222)	(1.853)		(2.332)	(2.303)		(1.789)
β_4High-SES(Economic)		0.245***	0.123***		0.245***	0.144***		0.245***	0.146***
		(11.823)	(5.802)		(7.923)	(4.796)		(7.617)	(4.341)
β_5High-SES(Economic)× BusynessDecile		0.014***	0.015***		0.014***	0.011**		0.014***	0.011**
		(4.689)	(4.399)		(3.107)	(2.244)		(3.052)	(2.250)
Application Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Local Busyness Controls	N	N	N	N	N	N	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observation	105,195	57,201	40,953	105,195	57,201	40,953	105,195	57,201	40,953
Adjusted R-squared	0.066	0.038	0.047	0.062	0.042	0.056	0.071	0.042	0.056
$\beta_1 + \beta_3$	-0.042***		-0.046***	-0.012***		-0.021***	-0.011***		-0.015***
P-value of $(\beta_1 + \beta_3)$	(0.000)		(0.000)	(0.000)		(0.000)	(0.000)		(0.000)
$\beta_1 + \beta_5$		-0.043***	-0.050***		-0.014***	-0.025***		-0.006**	-0.017***
P-value of $(\beta_1 + \beta_5)$		(0.000)	(0.000)		(0.000)	(0.000)		(0.021)	(0.000)
First-stage F-Statistics				99.3	99.3	99.3	41.7	41.7	41.7

Table IA6. ***Robustness Using Propensity Score Matching:*** **Effects of Attention Constraints on Approval Decisions**

For this table, we report results pertaining to the propensity score analysis of how loan office attention constraints affect the time they spend on reviewing each loan application by high- and low-SES applicants. The regression specification is the same as in Table V, except that we utilize the matched sample for high- and low-SES applicants. The propensity matching is calculated by the single nearest neighbor method applied to the full set of application controls. *BusynessDecile* is the officer's daily busyness measure, defined as the number of applications processed on a given day, sorted into deciles. Application controls are similar to before. T-statistics are reported in parentheses. Standard errors are double-clustered at the week and officer levels. $^{***}p < 1\%$, $^{**}p < 5\%$, $^{*}p < 10\%$.

Dependent variable:	Approval								
Busyness measure:	Actual Busyness			Predicted Busyness			LOO-Predicted Busyness		
	1	2	3	4	5	6	7	8	9
β_1BusynessDecile	-0.008***	-0.013***	-0.015***	-0.003***	-0.006***	-0.009***	-0.004***	-0.008***	-0.012***
	(-6.357)	(-9.564)	(-8.572)	(-2.818)	(-4.339)	(-5.172)	(-3.809)	(-4.652)	(-6.788)
β_2High-SES(Social)	0.451***		0.301***	0.437***		0.299***	0.446***		0.297***
	(-28.180)		(-17.883)	(48.230)		(21.537)	(50.278)		(21.158)
β_3High-SES(Social) × BusynessDecile	0.006***		0.006***	0.009***		0.005**	0.007***		0.005***
	(-2.871)		(-2.751)	(6.283)		(2.223)	(5.127)		(2.661)
β_4High-SES(Economic)		0.355***	0.260***		0.359***	0.254***		0.358***	0.256***
		(-21.076)	(-19.318)		(21.224)	(15.306)		(20.827)	(15.369)
β_5High-SES(Economic)× BusynessDecile		0.014***	0.011***		0.013***	0.012***		0.013***	0.012***
		(-6.554)	(-7.624)		(5.644)	(5.465)		(5.792)	(5.346)
Application Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Local Busyness Controls	N	N	N	N	N	N	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observation	105,195	57,201	40,953	105,195	57,201	40,953	105,195	57,201	40,953
Adjusted R-squared	0.271	0.227	0.259	0.277	0.235	0.265	0.275	0.235	0.265
$\beta_1 + \beta_3$	-0.002		-0.008***	0.006***		-0.004**	0.003***		-0.007***
P-value of $(\beta_1 + \beta_3)$	(-0.188)		(0.000)	(0.000)		(0.012)	(0.000)		(0.000)
$\beta_1 + \beta_5$		0.000	-0.003***		0.006***	0.003**		0.005***	-0.000
P-value of $(\beta_1 + \beta_5)$		(-0.809)	(-0.037)		(0.000)	(0.046)		(0.000)	(0.994)
First-stage F-Statistics				99.3	99.3	99.3	41.7	41.7	41.7

Table IA7. **Effects of Attention Constraints on Due Diligence**

For this table, we estimate how loan officer attention constraints affect their extra due diligence efforts on loan applications by high- versus low-SES applicants. The outcome variable is an indicator that equals one if the loan officer's rejection reason suggests that she has engaged in further due diligence, and zero otherwise. *High-SES(Social)* and *High-SES(Economic)* are dummy variables indicating whether *SocialStatus* and *EconomicStatus* are above the median, respectively. For columns (1) through (3), *BusynessDecile* is the officer's daily busyness, defined as the number of applications processed on a given day, sorted into deciles. For columns (4) through (9), *BusynessDecile* is the officer's instrumented daily busyness, defined as the number of applications processed on a given day sorted into deciles and instrumented by the total or leave-one-out (LOO) number of applications assigned to the loan officer over the preceding three working days. For columns (4) through (6), we use assignment-predicted busyness; for columns (7) through (9), we use LOO assignment-predicted busyness. As in Table V, we control for applicant-level characteristics and officer × month-year, week, bank-branch, and loan-type fixed effects. Standard errors are double-clustered at week and officer levels. $^{***}p < 1\%$, $^{**}p < 5\%$, $^{*}p < 10\%$.

Dependent variable:	Loan officer due diligence								
Busyness measure:	Actual Busyness			Predicted Busyness			LOO-Predicted Busyness		
	1	2	3	4	5	6	7	8	9
β_1BusynessDecile	-0.002*	-0.002*	-0.003***	-0.005***	-0.005***	-0.006***	-0.002*	-0.002*	-0.003***
	(-1.693)	(-1.655)	(-2.755)	(-4.188)	(-4.250)	(-5.326)	(-1.693)	(-1.655)	(-2.755)
β_2High-SES(Social)	0.144***		0.134***	0.152***		0.133***	0.144***		0.134***
	-13.447		-12.774	-13.898		-12.191	-13.447		(12.774)
β_3High-SES(Social) × BusynessDecile	0.004**		0.003**	0.003*		0.004**	0.004**		0.003**
	-2.348		-2.052	-1.886		-2.217	-2.348		(2.052)
β_4High-SES(Economic)		0.197***	0.182***		0.194***	0.179***		0.197***	0.182***
		-12.477	-10.442		-11.756	-10.513		-12.477	(10.442)
β_5High-SES(Economic)× BusynessDecile		0.009***	0.008***		0.009***	0.009***		0.009***	0.008***
		-3.774	-3.357		-3.658	-3.372		-3.774	(3.357)
Application Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Local Busyness Controls	N	N	N	N	N	N	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observation	96,009	96,009	96,009	96,009	96,009	96,009	96,009	96,009	96,009
Adjusted R-squared	0.130	0.130	0.149	0.133	0.130	0.149	0.131	0.130	0.150
$\beta_1 + \beta_3$	-0.006***		-0.007***	-0.002*		-0.002**	0.002*		0.000
P-value of ($\beta_1 + \beta_3$)	(-0.005)		(-0.001)	(-0.070)		(-0.015)	(-0.079)		(0.710)
$\beta_1 + \beta_5$		-0.001	-0.002		0.004**	0.003*		0.006***	0.005***
P-value of ($\beta_1 + \beta_5$)		(-0.841)	(-0.505)		(-0.011)	(-0.090)		(0.000)	(0.001)
First-stage F-Statistics				95.6	95.6	95.6	38.2	38.2	38.2

Table IA8. **Relationship between Assignments and Existing Backlogs**

We estimate the relationship between the number of new applications assigned to a loan officer and her existing backlogs. Observations are reported at the officer-day level. The dependent variable, *Assignment*$_{j,d}$, is the number of applications assigned to officer j on day d by the workload dispatcher algorithm. *Backlog*$_{j,d}$ is the number of applications assigned to but not yet reviewed by officer j at the beginning of day d *before* new applications are assigned. The regressions control for officer-month-year and day fixed effects and standard errors are clustered at those levels. T-statistics are reported in parentheses. $^{***}p < 1\%$, $^{**}p < 5\%$, $^{*}p < 10\%$.

Dependent Variable:	Assignment$_{j,d}$			
	1	2	3	4
Backlog$_{j,d}$	−0.016	−0.016	−0.016	−0.016
	(−1.133)	(−1.138)	(−1.139)	(−1.136)
Backlog$_{j,d-1}$		0.005	0.005	0.005
		(1.613)	(1.627)	(1.634)
Backlog$_{j,d-2}$			0.000	0.000
			(0.123)	(0.113)
Backlog$_{j,d-3}$				0.001
				(0.407)
Officer-Month-Yr FE	Y	Y	Y	Y
Day FE	Y	Y	Y	Y
Observation	9,235	9,235	9,235	9,235
Adjusted R-squared	0.604	0.604	0.604	0.604

Table IA9. Relationship Between Applicant Characteristics and Predicted Busyness

Officer busyness is defined as the number of applications processed by an officer on a given day. As explained in Section A, we use the total or leave-one-out number of applications assigned to officers to create instrumented versions of busyness, which we call *predicted busyness* and *leave-one-out (LOO) predicted busyness*. In each of the two panels, we regress each applicant or loan characteristic on deciles (1 through 10) of predicted and LOO-predicted busyness. As with the regression results reported in Tables IV and V, we control for officer × month-year fixed effects, week fixed effects, origination-bank-branch fixed effects, and loan-type fixed effects. Local busyness controls include loan officer assignments from the same province. T-statistics are reported in parentheses and standard errors are double-clustered at the week and officer levels. Variable definitions are presented in Table B1. $^{***}p < 1\%$, $^{**}p < 5\%$, $^{*}p < 10\%$.

Panel A. Applicant characteristics by predicted busyness

Dependent variable:	StateOfficial	LocalResident	Employment Cert	IncomeCert	RegularPay	HomeOwner	log(1+LeverageRatio)
	1	2	3	4	5	6	7
PredictBusynessDecile	−0.402	−1.976	−2.049	−1.155	0.205	−0.431	0.666
	(−1.179)	(−1.324)	(−1.122)	(−0.901)	(0.582)	(−0.562)	(1.576)
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y	Y
Observation	145,982	145,982	145,982	145,982	145,982	145,982	145,982
Adjusted R-squared	0.045	0.345	0.090	0.317	0.392	0.387	0.042

Dependent variable:	NoCredit History	log(1+OverdueMonth)	log(1+CreditInqury)	HasInvestmentAcc	SocialSecurity	Litigation	Peasant
	1	2	3	4	5	6	7
PredictBusynessDecile	−0.819	0.954	0.518	0.042	0.396	−0.055	−0.207
	(−1.111)	(1.207)	(0.239)	(0.308)	(0.840)	(−0.640)	(−0.471)
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y	Y
Observation	145,982	145,982	145,982	145,982	145,982	145,982	145,982
Adjusted R-squared	0.061	0.031	0.114	0.010	0.082	0.011	0.459

Dependent variable:	NonCollege	Female	log(Age)	log(Income)	log(LoanTo Income)	ShortTerm	log(Interest Rate)
	1	2	3	4	5	6	7
PredictBusynessDecile	0.479	0.522	−0.159	−0.717	0.481	0.141	−0.008
	(0.879)	(0.965)	(−0.506)	(−0.526)	(0.424)	(0.492)	(−0.728)
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y	Y
Observation	145,982	145,982	145,982	145,982	145,982	145,982	145,982
Adjusted R-squared	0.117	0.010	0.056	0.489	0.412	0.785	0.868

Panel B. Applicant characteristics by leave-one-out (LOO) predicted busyness

Dependent variable:	StateOfficial	LocalResident	Employment Cert	IncomeCert	RegularPay	HomeOwner	log(1+LeverageRatio)
	1	2	3	4	5	6	7
LOOPredictBusynessDecile	−0.179	−0.705	−0.650	−0.094	0.767*	−0.184	0.247
	(−0.487)	(−0.489)	(−0.364)	(−0.080)	(1.785)	(−0.240)	(0.575)
Local Busyness Controls	Y	Y	Y	Y	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y	Y
Observation	145,982	145,982	145,982	145,982	145,982	145,982	145,982
Adjusted R-squared	0.045	0.346	0.091	0.317	0.392	0.387	0.042

Dependent variable:	NoCredit History	log(1+OverdueMonth)	log(1+CreditInqury)	HasInvestmentAcc	SocialSecurity	Litigation	Peasant
	1	2	3	4	5	6	7
LOOPredictBusynessDecile	−1.176	−0.300	0.498	0.022	−0.019	−0.083	−0.180
	(−1.619)	(−0.351)	(0.255)	(0.170)	(−0.036)	(−0.863)	(−0.372)
Local Busyness Controls	Y	Y	Y	Y	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y	Y
Observation	145,982	145,982	145,982	145,982	145,982	145,982	145,982
Adjusted R-squared	0.061	0.031	0.114	0.010	0.082	0.011	0.459

Dependent variable:	NonCollege	Female	log(Age)	log(Income)	log(LoanToIncome)	ShortTerm	log(InterestRate)
	1	2	3	4	5	6	7
LOOPredictBusynessDecile	0.293	0.244	−0.270	−0.350	0.268	0.256	−0.012
	(0.513)	(0.396)	(−0.755)	(−0.286)	(0.263)	(0.758)	(−0.952)
Local Busyness Controls	Y	Y	Y	Y	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y	Y
Observation	145,982	145,982	145,982	145,982	145,982	145,982	145,982
Adjusted R-squared	0.117	0.010	0.056	0.489	0.412	0.785	0.868

Table IA10. Robustness Using Demeaned Assignment: Effects of *Instrumented* Attention Constraints on Review Time

For this table, we estimate how instrumented loan officer attention constraints affect the time they spend reviewing loan applications submitted by high- and low-SES applicants. These results resemble our main analyses in Table IV, except that we use the residual assignment as the instrument after demeaning for the week, bank branch, and loan-type fixed effects. The dependent variable is the standardized application review time, defined as the logarithm of the excess time an officer spends reviewing each application (equation (6)). *High-SES(Social)* and *High-SES(Economic)* are dummy variables indicating, separately, whether *SocialStatus* and *EconomicStatus* are above the median. *BusynessDecile* is the officer's instrumented daily busyness, defined as the number of applications processed on a given day sorted into deciles and instrumented by the residual of the total or leave-one-out (LOO) number of applications. For columns (1) to (3), we use demeaned-assignment-predicted busyness; for columns (4) to (6), we use demeaned-LOO assignment-predicted busyness. For the effect of loan office attention constraints on groups with high social or economic status, we calculate the sum of two groups of coefficients $(\beta_1 + \beta_3)$ and $(\beta_1 + \beta_5)$, and report the P-values of their T-tests. The regressions include officer $\times$ month-year fixed effects, week fixed effects, origination bank branch fixed effects, and loan-type fixed effects. Application controls include log(*Income*), log(*Loan/Income*), log(1+*LeverageRatio*), log(1+*OverdueMonth)*, log(1+*CreditInqury)*, *HasInvestmentAcc*, *Female*, log(*Age*), *Peasant*, *NonCollege*, *SocialSecurity*, *Litigation*, *ShortTerm*, and log(*InterestRate*). Local busyness controls include loan officer assignments from the same province. See Table B1 for the variable definitions. T-statistics are reported in parentheses. Bootstrapped standard errors are double-clustered at the week and officer levels. $^{***}p < 1\%$, $^{**}p < 5\%$, $^{*}p < 10\%$.

Dependent variable:	StandardizedReviewTime					
Busyness measure:	Predicted Busyness			LOO-Predicted Busyness		
	1	2	3	4	5	6
β_1BusynessDecile	-0.020***	-0.016***	-0.022***	-0.013***	-0.009***	-0.015***
	(-8.592)	(-8.627)	(-8.903)	(-5.923)	(-4.992)	(-6.256)
β_2High-SES(Social)	0.468***		0.442***	0.477***		0.451***
	(30.676)		(29.648)	(31.201)		(31.216)
β_3High-SES(Social) $\times$ BusynessDecile	0.014***		0.014***	0.012***		0.012***
	(5.796)		(5.920)	(5.343)		(5.544)
β_4High-SES(Economic)		0.305***	0.231***		0.309***	0.236***
		(14.618)	(10.782)		(14.048)	(11.019)
β_5High-SES(Economic)$\times$ BusynessDecile		0.009***	0.009***		0.008***	0.008***
		(3.158)	(2.928)		(2.682)	(2.896)
Application Controls	Y	Y	Y	Y	Y	Y
Local Busyness Controls	N	N	N	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y
Observation	145,982	145,982	145,982	145,982	145,982	145,982
Adjusted R-squared	0.074	0.044	0.081	0.075	0.044	0.081
$\beta_1 + \beta_3$	-0.006***		-0.013***	-0.001		-0.007***
P-value of $(\beta_1 + \beta_3)$	(0.000)		(0.000)	(0.671)		(0.004)
$\beta_1 + \beta_5$		-0.007***	-0.008***		-0.001	-0.003*
P-value of $(\beta_1 + \beta_5)$		(0.001)	(0.000)		(0.453)	(0.065)
First-stage F-Statistics	156.4	156.4	156.4	122.9	122.9	122.9

Table IA11. **Robustness Using Demeaned Assignment: Effects of *Instrumented* Attention Constraints on Approval Decisions**

For this table, we estimate how instrumented loan officer attention constraints affect their approval decisions for loan applications submitted by high- and low-SES applicants. These results resemble our main analyses in Table V, except that we use the residual assignment as the instrument after demeaning for the week, bank branch, and loan-type fixed effects. The dependent variable is a dummy indicating whether the officer approves the application. *High-SES(Social)* and *High-SES(Economic)* are dummy variables indicating, separately, whether *SocialStatus* and *EconomicStatus* are above the median. *BusynessDecile* is the officer's instrumented daily busyness, defined as the number of applications processed on a given day sorted into deciles and instrumented by the residual of total or leave-one-out (LOO) number of applications. For columns (1) to (3), we use demeaned-assignment-predicted busyness; for columns (4) to (6), we use demeaned-LOO assignment-predicted busyness. For the effect of loan officer attention constraints on groups with high social or economic status, we calculate the sum of two groups of coefficients $(\beta_1 + \beta_3)$ and $(\beta_1 + \beta_5)$, and report the P-values of their T-tests. The regressions include officer $\times$ month-year fixed effects, week fixed effects, origination bank branch fixed effects, and loan-type fixed effects. Application controls include log(*Income*), log(*Loan/Income*), log(1+*LeverageRatio*), log(1+*OverdueMonth)*, log(1+*CreditInqury)*, *HasInvestmentAcc*, *Female*, log(*Age*), *Peasant*, *NonCollege*, *SocialSecurity*, *Litigation*, *ShortTerm*, and log(*InterestRate*). Local busyness controls include loan officer assignments from the same province. See Table B1 for the variable definitions. T-statistics are reported in parentheses. Bootstrapped standard errors are double-clustered at the week and officer levels. $^{***}p < 1\%$, $^{**}p < 5\%$, $^{*}p < 10\%$.

Dependent variable:	Approval					
Busyness measure:	Predicted Busyness			LOO-Predicted Busyness		
	1	2	3	4	5	6
β_1BusynessDecile	-0.001**	-0.001**	-0.002***	-0.002***	-0.001	-0.002***
	(-2.014)	(-2.009)	(-2.712)	(-2.869)	(-1.642)	(-3.674)
β_2High-SES(Social)	0.428***		0.398***	0.428***		0.398***
	(65.296)		(60.452)	(67.947)		(60.394)
β_3High-SES(Social) $\times$ BusynessDecile	0.003***		0.003***	0.003***		0.003***
	(3.369)		(2.649)	(3.398)		(2.906)
β_4High-SES(Economic)		0.429***	0.378***		0.430***	0.377***
		(36.592)	(35.389)		(36.838)	(36.318)
β_5High-SES(Economic)$\times$ BusynessDecile		0.005***	0.003**		0.004***	0.003**
		(2.661)	(1.981)		(2.614)	(2.073)
Application Controls	Y	Y	Y	Y	Y	Y
Local Busyness Controls	N	N	N	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y
Observation	145,982	145,982	145,982	145,982	145,982	145,982
Adjusted R-squared	0.272	0.218	0.341	0.272	0.218	0.341
$\beta_1 + \beta_3$	0.002***		0.002*	0.002***		0.001
P-value of $(\beta_1 + \beta_3)$	(0.000)		(0.064)	(0.008)		(0.187)
$\beta_1 + \beta_5$		0.003***	0.001*		0.003***	0.000
P-value of $(\beta_1 + \beta_5)$		(0.000)	(0.085)		(0.000)	(0.408)
First-stage F-Statistics	156.4	156.4	156.4	122.9	122.9	122.9

IB. Supplemental Empirical Results

In this section, we report supplemental empirical results.

1. Figure IB1 shows that, when officers work longer hours in a day, the average review time for each application is shorter.

2. Figure IB2 plots the estimated conditional difference between the high- versus low-SES applicants under each realized busyness decile.[37] For both review time and approval rate, the gap between the high- versus low-SES applicant groups keeps widening almost monotonically when loan officer gets busier and busier.

3. Figures IB3 and IB4 replicate Figure 1 using predicted and leave-one-out (LOO) predicted busyness instead of the actual busyness.

4. Figures IB5 and IB6 are similar to Figure IB2 but based on predicted and LOO-predicted busyness measures rather than realized busyness.

5. In Table IB1 we report results pertaining to the explanatory power of various fixed effects with respect to log officer review time. The final specification provides the basis for constructing the standardized review time measure presented in Section A.

6. In Table IB2 we report results pertaining to the relationship between officer attention constraints and work patterns. When officers are busier, they begin working earlier and/or work late. That is, when officers are busier, they face longer working hours and work more overtime hours.

7. Table IB3 results resemble those of our main analyses reported in Tables II.

8. Table IB4 results resemble those of our main analyses reported in Tables IV and V, except that we estimate the effect of each individual social or economic status label instead of the overall social or economic status measure. For the sake of brevity, we present results using only LOO-predicted busyness. The results obtained using raw or predicted busyness are similar.

[37] That is, we modify regressions in Section B using ten dummy variables to indicate each busyness decile and regress standardized review time or approval on the ten decile dummies, the High-SESindicator, and interaction with each decile dummy. The conditional difference between the high- versus low-SES groups for each busyness decile is then plotted in the figure.

[**Figure** IB1 about here.]

[**Figure** IB2 about here.]

[**Figure** IB3 about here.]

[**Figure** IB4 about here.]

[**Figure** IB5 about here.]

[**Figure** IB6 about here.]

[**Table** IB1 about here.]

[**Table** IB2 about here.]

[**Table** IB3 about here.]

[**Table** IB4 about here.]

Figure IB1. **Review Time by Loan Officer Workday Length**

We plot the average standardized review time by the number of hours that an officer works on a given day. The first bar from the left includes days with less than 5 hours of work and the last bar includes days with more than 11 hours of work. Standardized review time is a measure of officer attention to each application and is defined in Section A.

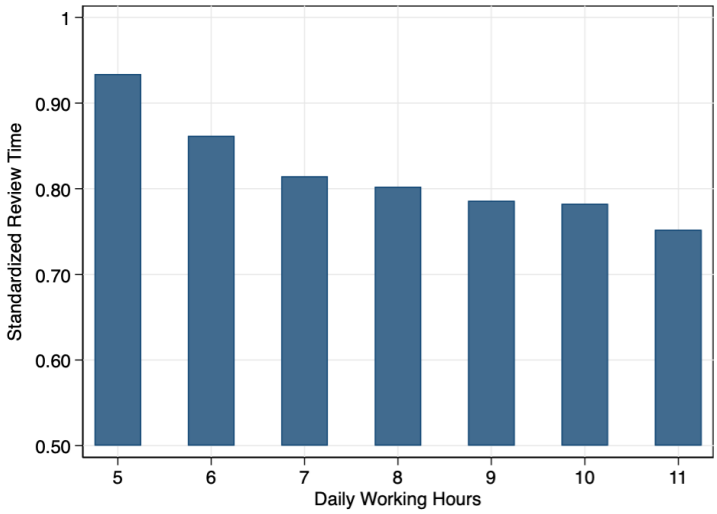
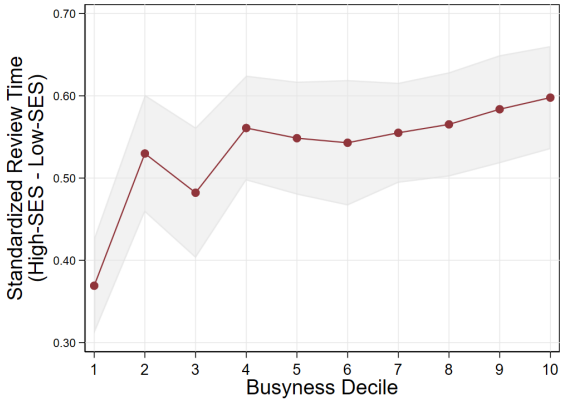
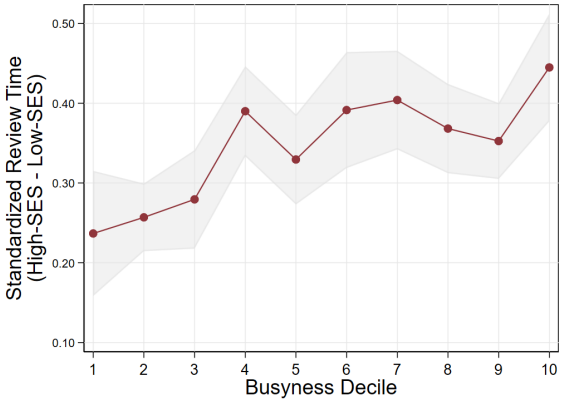


Figure IB2. **Difference-in-Differences Effects of Loan Officer Attention Constraints**

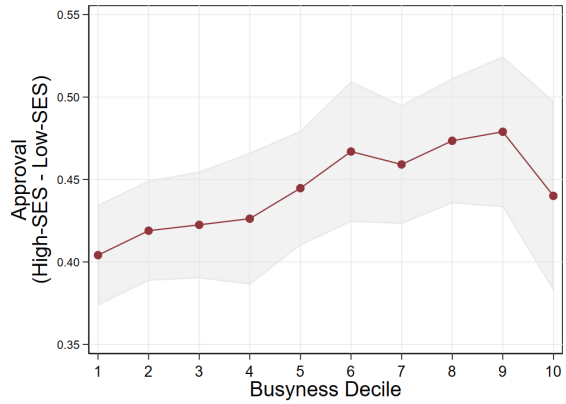
We estimate the differential effects of officer attention constraints, as measured by their busyness, on their attention allocation and approval decision over high- and low-SES applicants. Specifically, we regress officer attention and approval decisions on interaction between an applicant SES indicator and each busyness decile dummy. We then plot estimated coefficients for these interaction terms. The top panels plot the results for officer attention, measured as the standardized review time the loan officer spent on each application. The bottom panels plot the estimations for loan approval. For Panels (a) and (c), applicant SES is measured by their social status. For Panels (b) and (d), applicant SES is measured by their economic status. Fixed effects, controls, and standard error clustering are the same as those in Tables IV and V. The shaded areas represent the 95% confidence intervals for the corresponding regression coefficients.



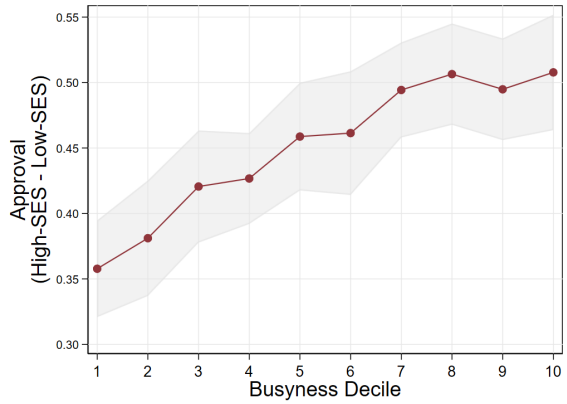
(a) Attention gap across social status



(b) Attention gap across economic status



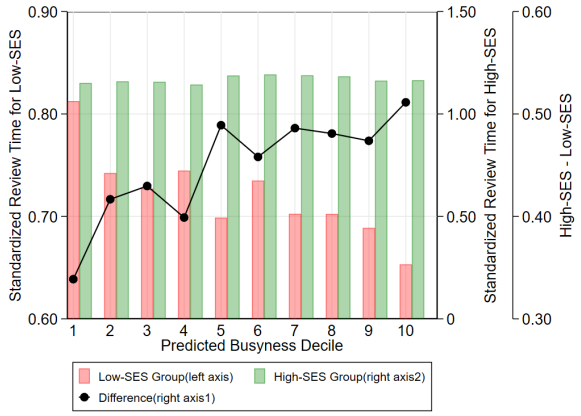
(c) Approval gap across social status



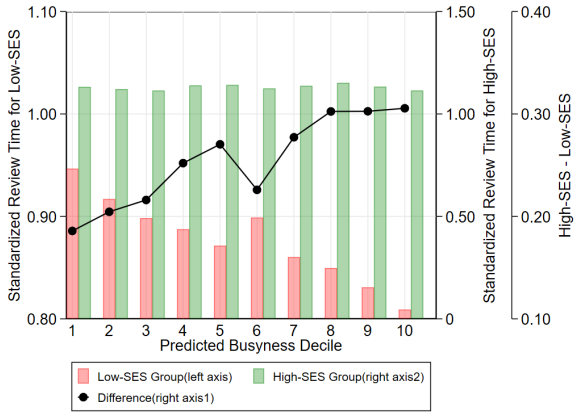
(d) Approval gap across economic status

Figure IB3. Robustness Test of Figure 1: Attention and Approval Rates by Officer Attention Constraints, Instrumented Estimation

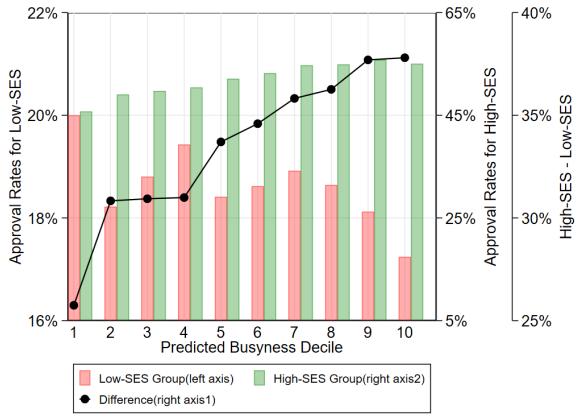
This figure is similar to Figure 1, except that we use loan officers' predicted busyness instrumented by the number of assignments as discussed in Section A. As explained in Section C, we use the possession (or not) of various labels to classify applicants into high- and low-SES groups based on social status (Panels (a) and (c)) or economic status (Panels (b) and (d)). In all panels, we sort the sample into deciles by officer attention constraints measured by their *busyness*, which is defined as the number of applications processed per day. Panels (a) and (b) plot the average officer attention allocation, measured as the standardized review time on each loan in the screening process, by busyness decile. Panels (c) and (d) plot the average loan approval rate by busyness decile. The measurement of standardized review time is explained in Section A. Each red (green) bar graphs the average for the low- (high-) SES group of applicants. The black line plots the differences between the two groups.



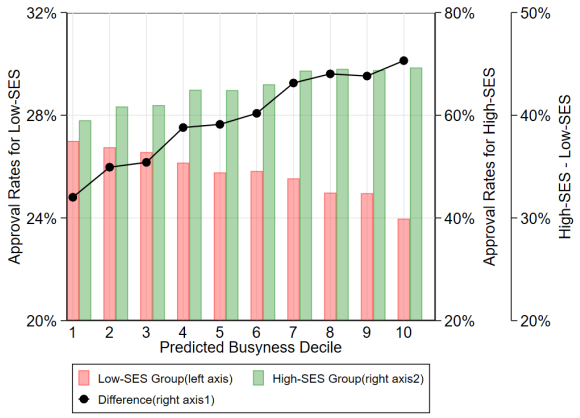
(a) Officer attention allocation by applicant social status



(b) Officer attention allocation by applicant economics status



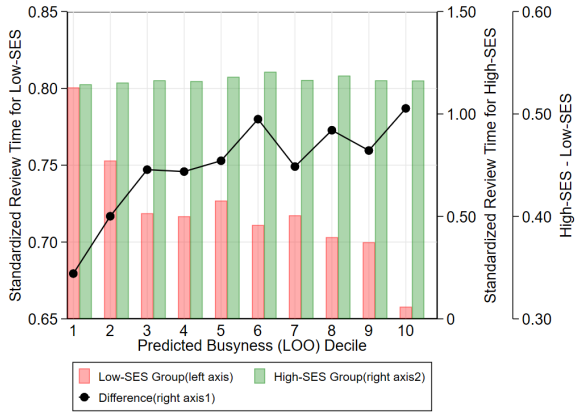
(c) Officer approval decision by applicant social status



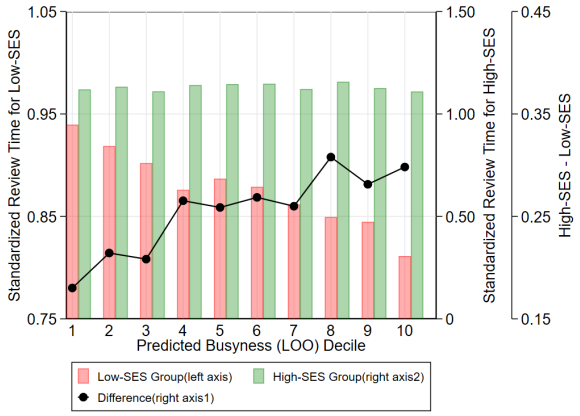
(d) Officer approval decision by applicant economics status

Figure IB4. Robustness Test of Figure 1: Attention and Approval Rates by Officer Attention Constraints, LOO Instrumented Estimation

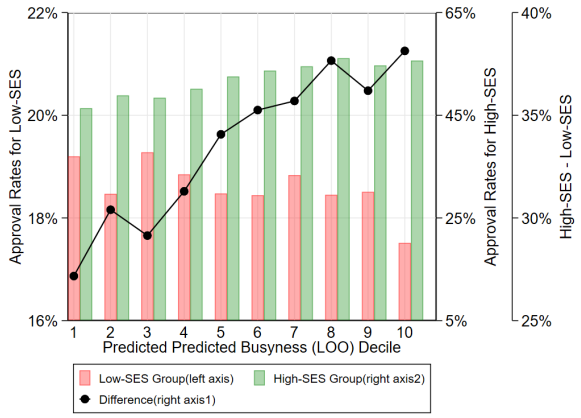
This figure is similar to Figure 1, except that we use loan officers' LOO predicted busyness instrumented by the number of assignments as discussed in Section A. As explained in Section C, we use the possession (or not) of various labels to classify applicants into high- and low-SES groups based on social status (Panels (a) and (c)) or economic status (Panels (b) and (d)). In all panels, we sort the sample into deciles by officer attention constraints measured by their *busyness*, which is defined as the number of applications processed per day. Panels (a) and (b) plot the average officer attention allocation, measured as the standardized review time on each loan in the screening process, by busyness decile. Panels (c) and (d) plot the average loan approval rate by busyness decile. The measurement of standardized review time is explained in Section A. Each red (green) bar graphs the average for the low- (high-) SES group of applicants. The black line plots the differences between the two groups.



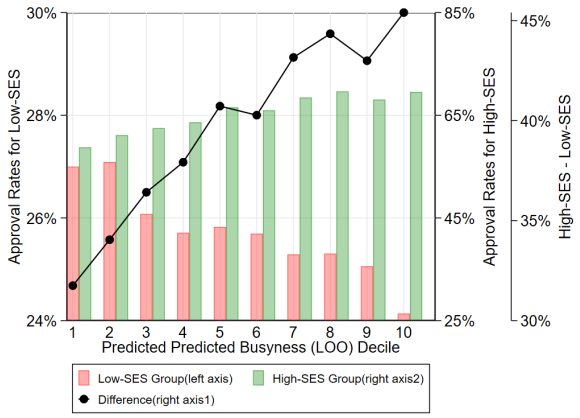
(a) Officer attention allocation by applicant social status



(b) Officer attention allocation by applicant economic status



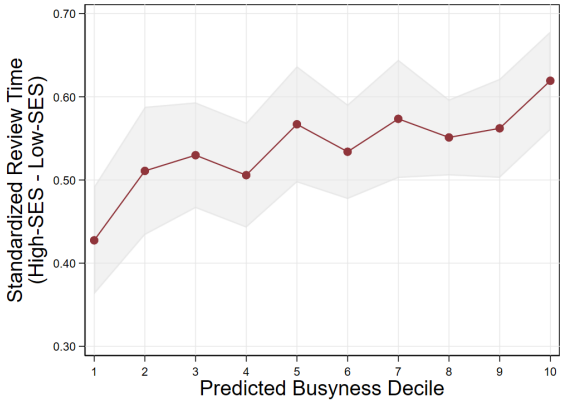
(c) Officer approval decision by applicant social status



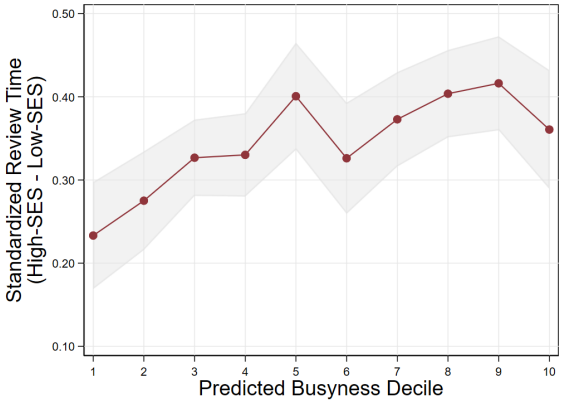
(d) Officer approval decision by applicant economic status

Figure IB5. Difference-in-Differences Effects of Loan Officer Attention Constraints, Instrumented Estimations

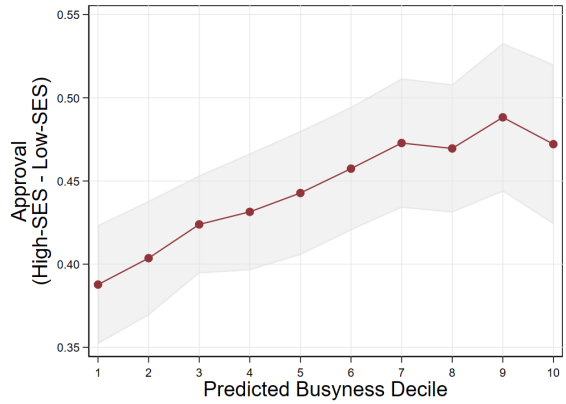
This Figure replicates Figure IB2 except that we use the assignment-predicted busyness to measure loan officer attention constraints. The top panels plot the results for officer attention, measured as the standardized review time the loan officer spent on each application. The bottom panels plot the estimations for loan approval. For Panels (a) and (c), applicant SES is measured by their social status. For Panels (b) and (d), applicant SES is measured by their economic status. Fixed effects, controls, and standard error clustering are the same as those in Tables IV and V. The shaded areas represent the 95% confidence intervals for the corresponding regression coefficients.



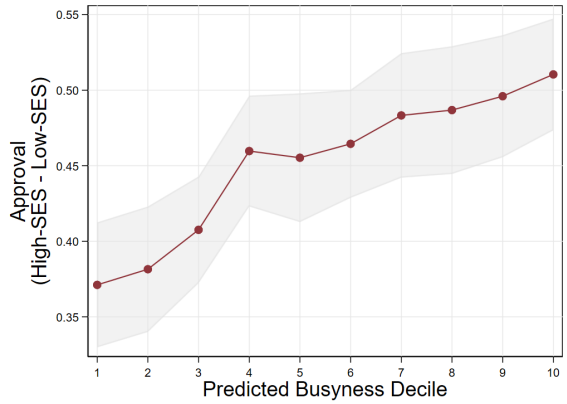
(a) Attention gap across social status



(b) Attention gap across economic status



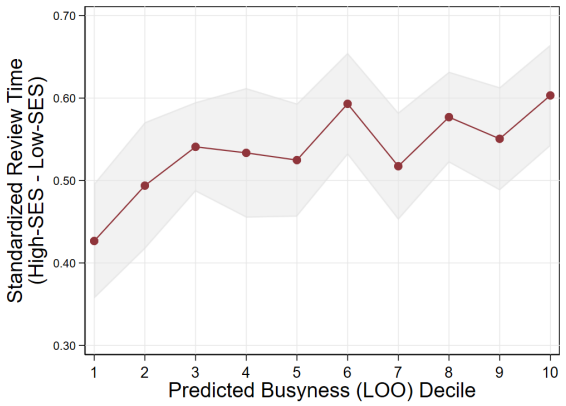
(c) Approval gap across social status



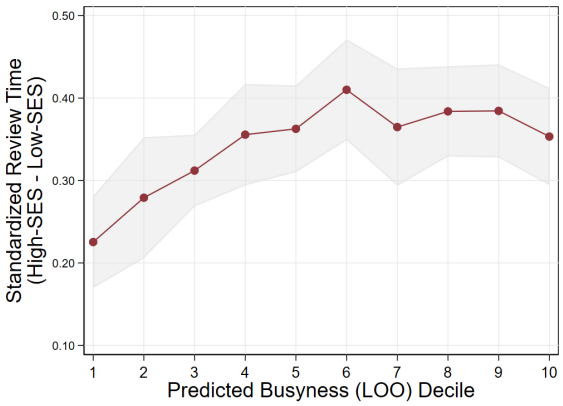
(d) Approval gap across economic status

Figure IB6. Difference-in-Differences Effects of Loan Officer Attention Constraints, LOO Instrumented Estimations

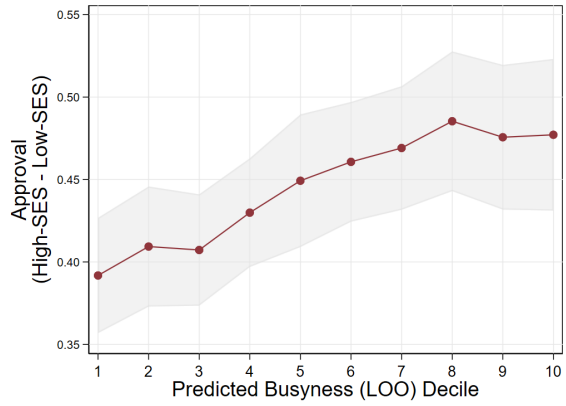
This Figure replicates Figure IB2 except that we use the leave-one-out (LOO) assignment-predicted busyness to measure loan officer attention constraints. The top panels plot the results for officer attention, measured as the standardized review time the loan officer spent on each application. The bottom panels plot the estimations for loan approval. For Panels (a) and (c), applicant SES is measured by their social status. For Panels (b) and (d), applicant SES is measured by their economic status. Fixed effects, controls, and standard error clustering are the same as those in Tables IV and V. The shaded areas represent the 95% confidence intervals for the corresponding regression coefficients.



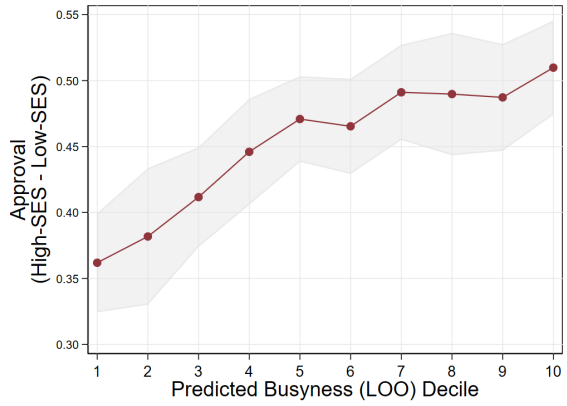
(a) Attention gap across social status



(b) Attention gap across economic status



(c) Approval gap across social status



(d) Approval gap across economic status

Table IB1. **Explaining Variations in Loan Officer Review Time**

In this table, we report the R^2s from estimations that regress log application review time (in minutes) on various sets of fixed effects. For columns (1), (2), and (3), we include loan-type fixed effects, bank-branch fixed effects, and officer-year-month fixed effects, respectively. For column (4) we use interactions between all of the above-mentioned fixed effects.

Dependent Variable:	log(ReviewTime)			
	1	2	3	4
Officer-Month-Yr FE	N	N	Y	N
Branch FE	N	Y	N	N
Loan type FE	Y	N	N	N
Loan type $\times$ Branch $\times$ Officer-Month-Yr FE	N	N	N	Y
Observation	145,982	145,982	145,982	145,982
R-squared	0.003	0.005	0.065	0.360

Table IB2. **The Relationship between Officer Busyness and Work Hour Patterns**

In this table, we report results pertaining to the relationship between officer attention constraints and work hour patterns. The results for the first three dependent variables are reported in hour units: *PunchInHour* marks the hour or time when an officer begins work; *PunchOutHour* is the time when an officer submits the last review of a given day; *DailyWorkingHours* is the total number of working hours in a given day. *HaveOverTime* is a dummy variable that equals one if the officer started work before 8:30 a.m. or finished work after 7:30 p.m. Application controls are similar to before. Local busyness controls include loan officer assignments from the same province. Standard errors are double-clustered at the week and officer levels. T-statistics are reported in parentheses. $^{***}p < 1\%$, $^{**}p < 5\%$, $^{*}p < 10\%$.

Dependent variable:	PunchInHour	PunchOutHour	DailyWorkingHours	HaveOvertime
	1	2	3	4
BusynessDecile	-0.046***	0.355***	0.404***	0.041***
	(-11.767)	(12.261)	(14.339)	(13.759)
Application Controls	Y	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y
Week FE	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y
Observation	9,235	9,235	9,235	9,235
Adjusted R-squared	0.252	0.256	0.276	0.218

Dependent variable:	PunchInHour	PunchOutHour	DailyWorkingHours	HaveOvertime
	1	2	3	4
PredictedBusynessDecile	-0.028***	0.238***	0.274***	0.030***
	(-8.214)	(7.084)	(7.992)	(7.426)
Application Controls	Y	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y
Week FE	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y
Observation	9,235	9,235	9,235	9,235
Adjusted R-squared	0.279	0.273	0.287	0.249

Dependent variable:	PunchInHour	PunchOutHour	DailyWorkingHours	HaveOvertime
	1	2	3	4
LOOPredictedBusynessDecile	-0.029***	0.197***	0.232***	0.030***
	(-7.444)	(5.480)	(6.461)	(6.580)
Application Controls	Y	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y
Week FE	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y
Observation	9,235	9,235	9,235	9,235
Adjusted R-squared	0.275	0.278	0.293	0.259

Table IB3. **Higher Approval Probability for Applicants with More Social/Economic Labels**

In this table, we estimate the relationship between loan approval probability and applicants' social and economic labels. The outcome variable equals one if the loan application is approved and zero otherwise. As discussed in Section C, *PublicEmployee* and *LocalResident* are indicators of applicant social status, while the other four indicators are applicant economic-status labels. Application-level controls include log(*Income*), log(*Loan/Income*), log(1+*LeverageRatio*), log(1+*OverdueMonth)*, log(1+*CreditInqury)*, *HasInvestmentAcc*, *Female*, log(*Age*), *Peasant*, *NonCollege*, *SocialSecurity*, *Litigation*, *ShortTerm*, and log(*InterestRate*). See Table B1 for variable definitions. Standard errors are double-clustered at the week and officer levels. $^{***}p < 1\%$, $^{**}p < 5\%$, $^{*}p < 10\%$.

Dependent variable:	Approval										
	1	2	3	4	5	6	7	8	9	10	11
PublicEmployee	0.246***						0.098***		0.020***	0.023***	
	(17.062)						(12.828)		(2.956)	(3.312)	
LocalResident		0.467***					0.452***		0.161***	0.145***	
		(28.719)					(28.729)		(7.524)	(5.961)	
EmploymentCert			0.527***					0.399***	0.286***	0.278***	
			(30.703)					(22.789)	(12.942)	(10.824)	
IncomeCert				0.395***				0.088***	0.042**	0.034**	
				(23.722)				(5.712)	(2.516)	(2.123)	
RegularPay					0.419***			0.113***	0.159***	0.163***	
					(22.675)			(9.521)	(12.228)	(10.936)	
HomeOwner						0.460***		0.179***	0.217***	0.222***	
						(27.833)		(17.394)	(17.502)	(14.873)	
log(1+LeverageRatio)	-0.265***	-0.185***	-0.133***	-0.211***	-0.254***	-0.239***	-0.186***	-0.139***	-0.141***	-0.145***	-0.267***
	(-36.742)	(-22.642)	(-13.175)	(-26.171)	(-34.237)	(-29.286)	(-22.489)	(-13.045)	(-13.255)	(-12.365)	(-37.740)
NoCreditHistory	-0.267***	-0.131***	-0.055***	-0.174***	-0.240***	-0.216***	-0.130***	-0.051***	-0.049***	-0.059***	-0.280***
	(-22.899)	(-17.220)	(-8.751)	(-18.105)	(-20.400)	(-21.334)	(-17.290)	(-8.288)	(-8.204)	(-10.379)	(-22.940)
log(1+OverdueMonth)	-0.050***	-0.018***	0.001	-0.030***	-0.041***	-0.036***	-0.019***	0.001	0.000	-0.001	-0.049***
	(-17.593)	(-7.701)	(0.464)	(-11.750)	(-16.738)	(-15.057)	(-8.042)	(0.303)	(0.122)	(-0.614)	(-17.610)
log(1+CreditInqury)	-0.000	-0.007***	-0.009***	-0.002	0.002	-0.007***	-0.007***	-0.010***	-0.011***	-0.010***	0.001
	(-0.113)	(-2.865)	(-4.170)	(-0.909)	(0.957)	(-3.042)	(-2.931)	(-4.602)	(-4.899)	(-5.099)	(0.204)
HasInvestmentAcc	-0.037***	-0.034***	-0.029**	-0.031**	-0.029**	-0.038***	-0.036***	-0.031***	-0.033***	-0.035***	-0.032**
	(-2.729)	(-2.784)	(-2.608)	(-2.500)	(-2.068)	(-2.869)	(-2.988)	(-2.737)	(-2.868)	(-2.920)	(-2.274)
SocialSecurity	0.029***	0.049***	0.041***	0.053***	0.059***	0.042***	0.037***	0.037***	0.034***	0.035***	0.060***
	(8.607)	(15.401)	(12.385)	(16.513)	(17.137)	(11.853)	(12.355)	(10.842)	(11.264)	(11.986)	(16.875)
Litigation	-0.090***	-0.056**	-0.030	-0.070***	-0.076***	-0.062**	-0.055**	-0.021	-0.019	-0.042*	-0.097***
	(-3.594)	(-2.522)	(-1.372)	(-3.232)	(-3.191)	(-2.540)	(-2.432)	(-0.948)	(-0.834)	(-1.765)	(-3.962)
Peasant	-0.014***	-0.016***	-0.014***	-0.015***	-0.012**	-0.013***	-0.016***	-0.013***	-0.014***	-0.025***	-0.013***
	(-3.092)	(-4.603)	(-4.630)	(-3.354)	(-2.631)	(-3.103)	(-4.656)	(-4.487)	(-4.819)	(-3.644)	(-2.830)
NonCollege	-0.003	-0.008***	-0.006**	-0.008***	-0.010***	-0.005*	-0.005**	-0.005*	-0.004	-0.002	-0.010***
	(-1.142)	(-3.179)	(-2.598)	(-3.099)	(-3.815)	(-1.855)	(-2.076)	(-1.915)	(-1.597)	(-0.719)	(-3.895)
Female	0.024***	0.016***	0.013***	0.018***	0.023***	0.014***	0.017***	0.012***	0.012***	0.013***	0.021***
	(9.090)	(6.262)	(5.105)	(7.582)	(8.743)	(5.052)	(6.662)	(4.503)	(4.440)	(4.517)	(8.270)
log(Age)	0.018***	0.003	-0.011**	0.009*	0.047***	0.009*	-0.001	-0.008*	-0.007	-0.003	0.029***
	(3.395)	(0.624)	(-2.132)	(1.875)	(9.662)	(1.789)	(-0.175)	(-1.714)	(-1.444)	(-0.678)	(5.977)
log(Income)	0.103***	0.088***	0.086***	0.091***	0.095***	0.043***	0.090***	0.066***	0.061***	0.048***	0.097***
	(16.979)	(19.584)	(18.008)	(16.441)	(14.710)	(8.312)	(20.338)	(14.184)	(13.546)	(10.079)	(15.540)
log(LoanToIncome)	0.067***	0.057***	0.056***	0.061***	0.075***	0.027***	0.056***	0.042***	0.038***	0.020***	0.071***
	(13.259)	(14.241)	(13.369)	(12.445)	(13.471)	(6.201)	(14.095)	(10.539)	(9.704)	(4.871)	(13.448)
ShortTerm	-0.231***	-0.198***	-0.173***	-0.212***	-0.223***	-0.213***	-0.198***	-0.171***	-0.171***	-0.036***	-0.235***
	(-13.106)	(-12.721)	(-13.109)	(-13.298)	(-13.083)	(-14.949)	(-12.861)	(-13.826)	(-13.884)	(-4.629)	(-12.792)
log(InterestRate)	-8.799***	-7.645***	-6.788***	-8.165***	-8.684***	-8.185***	-7.602***	-6.730***	-6.712***	-0.616**	-9.012***
	(-19.628)	(-19.613)	(-20.398)	(-19.757)	(-19.418)	(-22.634)	(-19.749)	(-21.010)	(-21.039)	(-2.085)	(-19.218)
Application Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Week FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Branch FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Loan type FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Observation	145,982	145,982	145,982	145,982	145,982	145,982	145,982	145,982	145,982	145,982	145,982
Adjusted R-squared	0.140	0.265	0.354	0.222	0.170	0.217	0.268	0.369	0.372	0.342	0.123

Table IB4. **The Effects of Officer Attention Constraints by Individual Socioeconomic Labels**

In this table, we report results pertaining to the effects of interaction between each individual socioeconomic status label and loan officer busyness. The outcome variable is review time (measuring attention allocation) for Panel A and approval for Panel B. The regression specification is the same as in Tables IV and V, except that the indicator variables for *High-SES(Social)* and *High-SES(Economic)* are replaced by indicators of the individual socioeconomic status labels, *PublicEmployee*, *LocalResident*, *EmploymentCert*, *RegularPay*, *IncomeCert* and *HomeOwner*. *BusynessDecile* is LOO-predicted officer busyness sorted into deciles. Application controls are similar to before. Bootstrapped standard errors are double-clustered at the week and officer levels. T-statistics are reported in parentheses. $^{***}p < 1\%$, $^{**}p < 5\%$, $^{*}p < 10\%$

Panel A: Officer attention by LOO-predicted busyness

Dependent variable:	StandardizedReviewTime					
	1	2	3	4	5	6
BusynessDecile	-0.016***	-0.020***	-0.022***	-0.019***	-0.017***	-0.018***
	(-4.940)	(-7.212)	(-5.945)	(-6.911)	(-4.745)	(-5.300)
PublicEmployee	0.141***					
	(3.916)					
PublicEmployee× BusynessDecile	0.016***					
	(4.309)					
LocalResident		0.512***				
		(39.224)				
LocalResident× BusynessDecile		0.012***				
		(209.026)				
EmploymentCert			0.514***			
			(207.519)			
EmploymentCert× BusynessDecile			0.013***			
			(20.005)			
IncomeCert				0.438***		
				(63.367)		
IncomeCert× BusynessDecile				0.013***		
				(52.386)		
RegularPay					0.194***	
					(33.758)	
RegularPay× BusynessDecile					0.015***	
					(20.066)	
HomeOwner						0.270***
						(80.159)
HomeOwner× BusynessDecile						0.016***
						(10.917)
Application Controls	Y	Y	Y	Y	Y	Y
Local Busyness Controls	Y	Y	Y	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y
Observation	145,982	145,982	145,982	145,982	145,982	145,982
Adjusted R-squared	0.036	0.075	0.087	0.064	0.037	0.044

Panel B: Approval rate by LOO-predicted busyness

Dependent variable:	Approval					
	1	2	3	4	5	6
BusynessDecile	-0.001	-0.004***	-0.006***	-0.004***	-0.002**	-0.003***
	(-1.476)	(-5.361)	(-8.133)	(-5.009)	(-2.120)	(-4.756)
PublicEmployee	0.209***					
	(12.698)					
PublicEmployee× BusynessDecile	0.005**					
	(2.253)					
LocalResident		0.423***				
		(56.485)				
LocalResident× BusynessDecile		0.008***				
		(6.909)				
EmploymentCert			0.472***			
			(64.066)			
EmploymentCert× BusynessDecile			0.010***			
			(8.324)			
IncomeCert				0.345***		
				(40.196)		
IncomeCert× BusynessDecile				0.010***		
				(7.022)		
RegularPay					0.376***	
					(27.183)	
RegularPay× BusynessDecile					0.007***	
					(4.164)	
HomeOwner						0.390***
						(40.462)
HomeOwner× BusynessDecile						0.013***
						(9.031)
Application Controls	Y	Y	Y	Y	Y	Y
Local Busyness Controls	Y	Y	Y	Y	Y	Y
Officer-Month-Yr FE	Y	Y	Y	Y	Y	Y
Week FE	Y	Y	Y	Y	Y	Y
Branch FE	Y	Y	Y	Y	Y	Y
Loan type FE	Y	Y	Y	Y	Y	Y
Observation	145,982	145,982	145,982	145,982	145,982	145,982
Adjusted R-squared	0.143	0.270	0.359	0.229	0.174	0.221