Discriminatory Lending: Evidence from Bankers in the Lab*

J. Michelle Brock†
EBRD and CEPR

Ralph De Haas‡
EBRD, CEPR, and KU Leuven

March 7, 2022

Online Appendix

*The views expressed are the authors' and not necessarily those of the institutions they are affiliated with. IRB approval was obtained from the Heartland Institutional Review Board (project 160920-23). The study is registered with the American Economic Association registry for Randomized Controlled Trials (RCT ID AEARCTR-0009025).

†European Bank for Reconstruction and Development. One Exchange Square, EC2A 2JN, London. Email: brockm@ebrd.com. Tel.: +442073387193. Also affiliated with CEPR.

‡Corresponding author. European Bank for Reconstruction and Development. One Exchange Square, EC2A 2JN, London. Email: dehaasr@ebrd.com. Tel.: +442073387213. Also affiliated with CEPR and KU Leuven.

Online Appendix A: Additional results

Table A1: Correlation matrix

	Participant is supervisor	Participant is female	Participant age (years)	Participant risk aversion	Participant experience (years)	Participant gender bias (IAT)	Female applicant	Rejection dummy
Participant is supervisor	1.000							
Participant is female	0.092	1.000						
Participant age (years)	0.567	0.037	1.000					
Participant risk aversion	0.033	0.149	-0.011	1.000				
Participant experience (years)	0.205	0.066	0.558	-0.034	1.000			
Participant gender bias (IAT)	0.093	0.188	0.081	-0.003	0.118	1.000		
Female applicant	0.000	0.000	0.000	0.000	-0.000	0.000	1.000	
Rejection dummy	0.074	0.035	0.012	-0.012	-0.035	0.010	-0.020	1.000

Notes: The sample is restricted to the first round. Table 1 contains all variable definitions.

Table A2: Predictors of participant gender bias

Dependent variable: Participant gender bias (IAT)	
	[1]
Participant is female	0.114
	(0.036)
Participant experience (years)	0.006
	(0.004)
Participant age (years)	-0.001
	(0.004)
Participant is supervisor	0.045
	(0.044)
Participant risk aversion	-0.007
	(0.013)
Constant	0.283
	(0.151)
R-squared	0.051
N	312

Notes: The dependent variable is *Participant gender bias (IAT)* which takes values from -1 to 1. Positive (negative) values indicate that the participant associates careers and entrepreneurship with being male (female). A score of zero indicates no implicit gender bias. The sample is restricted to the first round round of the experiment. Standard errors are in parentheses. Table 1 contains all variable definitions.

Table A3: Applicant gender and approval: Participant heterogeneity

Dependent variable: Rejection dummy						
	Participant gender		Participant experience		Participant age	
	Female	Male	Below median	Above median	Below median	Above median
	[1]	[2]	[3]	[4]	[5]	[6]
Female applicant	-0.001	-0.023	0.001	-0.027	0.009	-0.025
	(0.037)	(0.035)	(0.034)	(0.037)	(0.036)	(0.034)
t-test p-values	0.333		0.292		0.243	
R-squared	0.358	0.274	0.317	0.347	0.388	0.291
N	620	708	612	692	532	752
File FE	✓	✓	✓	✓	✓	✓
	Participant position		Participant risk aversion		Participant gender bias	
	Officer	Supervisor	Below median	Above median	Below median	Above median
	[7]	[8]	[9]	[10]	[11]	[12]
Female applicant	-0.047	0.012	-0.018	-0.006	-0.001	-0.032
	(0.031)	(0.038)	(0.052)	(0.029)	(0.037)	(0.036)
t-test p-values	0.115		0.418		0.272	
R-squared	0.310	0.345	0.355	0.302	0.318	0.326
N	768	568	388	944	648	652
File FE	✓	✓	✓	✓	✓	✓

Notes: The dependent variable is a *Rejection dummy* that equals '1' if the participant rejects the credit application and '0' if the participant approves it. The sample is restricted to the first round of the experiment. When partitioning non-binary variables, the "Below median" sample corresponds to strictly below the median while the "Above median" sample corresponds to values at the median and above. For the *Participant risk aversion* variable, higher values indicate greater risk aversion so that participants with above median risk aversion are the most risk averse. *Participant gender bias* measures implicit gender bias based on an implicit association test (IAT). Higher IAT values indicate that participants associate men more with careers and women more with household tasks. The t-test *p-value* corresponds to one-sided tests. Cluster robust standard errors are shown in parentheses and clustered at the participant level. Table 1 contains all variable definitions.

Table A4: Applicant gender and credit score

Dependent variable: Credit score					
	[1]	[2]	[3]	[4]	[5]
Female applicant (original)	-12.85	51.04	59.30	66.74	79.87
	(49.44)	(67.35)	(67.64)	(67.33)	(67.10)
Micro				-136.46	-39.47
				(70.39)	(96.17)
Log of Credit demand					68.67
					(36.55)
Constant	1035.73	1065.00	964.34	1115.91	299.57
	(29.94)	(0.00)	(138.87)	(158.47)	(486.49)
R-squared	0.000	0.212	0.233	0.250	0.273
N	243	243	243	243	243
Sector FE		✓	✓	✓	✓
Region FE			✓	✓	✓

Notes: The dependent variable is *Credit score* as provided by the KKB credit registry. Higher values indicate less ex ante credit risk. The sample includes the 250 loan files from which the 100 loan files used in the experiment were drawn. Robust standard errors are in parentheses. Table 1 contains all variable definitions.

Table A5: Applicant gender and subjective repayment probability

Dependent variable: Subjective repayment probability (%)			
	[1]	[2]	[3]
Female applicant	0.553	0.536	0.553
	(1.399)	(1.403)	(1.399)
R-squared	0.268	0.276	0.268
N	1,329	1,329	1,329
File FE	✓	✓	✓
City FE		✓	
Double LASSO			✓

Notes: The dependent variable is *Subjective repayment probability* which ranges between 0 and 100. In column (3), a double-LASSO procedure is used to select controls from participant covariates and city FE (set of potential controls). The sample is restricted to the first round of the experiment. Cluster robust standard errors are shown in parentheses and clustered at the participant level. Table 1 contains all variable definitions.

Table A6: Gender of the entrepreneur and loan officers' risk perceptions

Dependent variable: Project risk the loan officer expects the entrepreneur to choose		
	Loan officer's perception of:	
	Entrepreneur's risk choice	Entrepreneur's risk choice with credit
	[1]	[2]
Female entrepreneur	-0.229	-0.157
	(0.115)	(0.115)
Pseudo R-squared	0.008	0.006
N	333	333

Notes: This table uses data from a separate experimental module in which participants were randomly matched with a (real-life) entrepreneur. Participants were informed about the gender, age, and sector of the entrepreneur they had been matched with. Prior to the experimental sessions, the entrepreneurs had been asked to pick one out of six entrepreneurial bets that were increasing in riskiness, in the spirit of Eckel and Grossman (2008). They were asked to do so once for a project they would finance with a loan and once for a project financed without debt. During the experiment, loan officers were then asked to guess which risky bet they thought their matched entrepreneur had chosen. They were paid if they guessed correctly. The ordered probit specifications in columns [1] and [2], regress the participant's perceptions of their matched entrepreneur's risk taking (on a 1-6 scale) on the gender of the entrepreneur for a project funded without and with credit, respectively. Both specifications control for the two other known traits of the matched entrepreneur (age and sector).

Table A7: Classification of 2-digit ISIC sectors as female- or male-dominated

ISIC code	Sector description	Female-dominated sector	Number of files	Number of decisions	
				First round	Second round
15	Manufacture of food products and beverages	1	2	25	27
17	Manufacture of textiles	1	5	64	63
18	Manufacture of wearing apparel; dressing and dyeing of fur	1	7	89	91
25	Manufacture of rubber and plastics products	0	1	14	12
26	Manufacture of other non-metallic mineral products	0	1	16	14
29	Manufacture of machinery and equipment not elsewhere classiffed	0	1	14	12
36	Manufacture of furniture; manufacturing not elsewhere classiffed	1	3	37	36
45	Construction	0	1	13	13
50	Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel	0	5	62	63
51	Wholesale trade and commission trade, except of motor vehicles and motorcycles	0	14	189	189
52	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	1	36	484	476
55	Hotels and restaurants	1	8	105	116
60	Land transport; transport via pipelines	1	6	78	79
74	Other business activities	0	3	37	39
93	Other service activities	1	3	41	40
	Unable to classify		4	68	64

Notes: This table shows, for the 2-digit ISIC codes of the 100 files used in the experiment, whether the sector is classified as being a *Female-dominated sector*, the number of files in each 2-digit sector, and the number of decisions made during the experiment based on the files of each 2-digit sector. Female-dominated sectors are defined by the share of firms with majority female ownership at the 2-digit ISIC industry level using data from the EBRD–World Bank Business Environment and Enterprise Performance Survey (BEEPS) V and VI.

Table A8: Balance checks for each analysis in the main text: rejection rates, guarantor requirements and participant heterogeneity

Dependent variable: Female applicant (treatment variable)								
Sample →	Rejection sample	Guarantor sample	Participant gender		Participant experience		Participant age	
			Female	Male	Below median	Above median	Below median	Above median
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Participant is supervisor	-0.000	-0.044	-0.088	-0.012	0.016	-0.047	-0.078	-0.052
	(0.038)	(0.052)	(0.088)	(0.075)	(0.101)	(0.067)	(0.130)	(0.057)
Participant is female	0.002	0.006			0.040	-0.070	0.008	-0.034
	(0.031)	(0.042)			(0.064)	(0.062)	(0.072)	(0.060)
Participant experience (years)	-0.000	0.006	0.005	0.008			0.019*	0.007
	(0.003)	(0.004)	(0.007)	(0.007)			(0.010)	(0.005)
Participant age (years)	0.000	-0.001	0.002	-0.003	0.001	-0.001		
	(0.004)	(0.005)	(0.009)	(0.008)	(0.009)	(0.007)		
Participant risk aversion	0.001	-0.003	-0.001	-0.011	-0.030	0.017	-0.027	0.022
	(0.011)	(0.016)	(0.025)	(0.024)	(0.026)	(0.024)	(0.027)	(0.023)
Participant gender bias (IAT)	0.006	0.020	0.054	0.007	-0.025	0.087	-0.041	-0.006
	(0.050)	(0.067)	(0.109)	(0.104)	(0.114)	(0.097)	(0.119)	(0.094)
p-value of F-test	1.000	0.675	0.815	0.821	0.872	0.653	0.488	0.498
R-squared	0.016	0.072	0.245	0.161	0.277	0.212	0.224	0.176
N	1,248	758	344	414	354	404	325	433
File FE	✓	✓	✓	✓	✓	✓	✓	✓
Sample →			Participant job		Participant risk aversion		Participant gender bias	
			Officer	Supervisor	Below median	Above median	Below median	Above median
			(9)	(10)	(11)	(12)	(13)	(14)
Participant is female			0.042	-0.080	0.072	-0.003	-0.006	-0.009
			(0.057)	(0.081)	(0.100)	(0.051)	(0.057)	(0.066)
Participant experience (years)			0.013	0.004	0.004	0.008	0.010	0.007
			(0.008)	(0.006)	(0.010)	(0.005)	(0.007)	(0.007)
Participant age (years)			-0.009	0.010	-0.003	0.005	-0.002	0.003
			(0.008)	(0.009)	(0.012)	(0.006)	(0.008)	(0.008)
Participant risk aversion			-0.021	0.044			-0.004	-0.008
			(0.021)	(0.034)			(0.026)	(0.025)
Participant gender bias (IAT)			0.026	0.129	0.033	-0.029		
			(0.086)	(0.130)	(0.142)	(0.086)		
Participant is supervisor					-0.094	-0.065	-0.110	-0.105
					(0.137)	(0.061)	(0.079)	(0.085)
p-value of F-test			0.351	0.451	0.843	0.377	0.448	0.640
R-squared			0.159	0.274	0.336	0.125	0.276	0.193
N			474	284	217	541	387	371
File FE			✓	✓	✓	✓	✓	✓

Table A9: Balance table - Real life loan performance and guarantor requirements

Dependent variable: Female applicant (treatment variable)								
Sample →	Loan in real life		Participant gender		Participant experience		Participant age	
	Performing	NPL& Declined	Female	Male	Below median	Above median	Below median	Above median
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Participant is supervisor	-0.065	-0.001	-0.145	0.018	0.007	-0.096	-0.186	-0.033
	(0.064)	(0.087)	(0.102)	(0.095)	(0.125)	(0.085)	(0.148)	(0.076)
Participant is female	-0.000	0.018			0.039	-0.054	0.024	-0.021
	(0.053)	(0.068)			(0.079)	(0.079)	(0.085)	(0.077)
Participant experience (years)	0.010	0.002	0.006	0.014			0.029	0.009
	(0.006)	(0.007)	(0.008)	(0.009)			(0.012)	(0.006)
Participant age (years)	-0.001	-0.001	0.008	-0.012	0.006	0.000		
	(0.007)	(0.009)	(0.011)	(0.010)	(0.012)	(0.009)		
Participant risk aversion	0.003	-0.018	0.012	-0.009	-0.026	0.032	0.001	0.015
	(0.020)	(0.027)	(0.030)	(0.029)	(0.030)	(0.031)	(0.032)	(0.030)
Participant gender bias (IAT)	-0.003	0.069	0.083	-0.046	-0.093	0.077	-0.063	0.011
	(0.086)	(0.108)	(0.139)	(0.132)	(0.138)	(0.126)	(0.141)	(0.123)
p-value of F-test	0.526	0.984	0.501	0.689	0.878	0.574	0.279	0.746
R-squared	0.051	0.107	0.187	0.148	0.223	0.184	0.175	0.142
N	453	305	211	242	214	239	201	252
File FE	✓	✓	✓	✓	✓	✓	✓	✓

Sample →	Participant job		Participant risk aversion		Participant gender bias	
	Officer	Supervisor	Below median	Above median	Below median	Above median
	(9)	(10)	(11)	(12)	(13)	(14)
Participant is female	0.020	-0.068	-0.001	-0.018	-0.052	0.038
	(0.073)	(0.095)	(0.151)	(0.061)	(0.074)	(0.078)
Participant experience (years)	0.027	-0.001	0.011	0.012	0.007	0.011
	(0.009)	(0.008)	(0.014)	(0.007)	(0.009)	(0.008)
Participant age (years)	-0.019	0.018	-0.007	0.005	0.003	0.006
	(0.010)	(0.011)	(0.016)	(0.008)	(0.011)	(0.010)
Participant risk aversion	0.003	0.018			0.008	-0.010
	(0.025)	(0.038)			(0.031)	(0.030)
Participant gender bias (IAT)	-0.046	0.154	0.114	-0.076		
	(0.106)	(0.152)	(0.182)	(0.107)		
Participant is supervisor			-0.101	-0.103	-0.147	-0.135
			(0.185)	(0.076)	(0.099)	(0.103)
p-value of F-test	0.134	0.543	0.859	0.191	0.574	0.391
R-squared	0.129	0.268	0.323	0.105	0.245	0.165
N	282	171	124	329	221	232
File FE	✓	✓	✓	✓	✓	✓

Table A10: Balance table - sectoral gender composition and guarantor requirements

Dependent variable: Female applicant (treatment variable)						
Sample →	Male-dominated sector	Female-dominated sector	Male-dominated sector		Female-dominated sector	
			Below median IAT	Above median IAT	Below median IAT	Above median IAT
	(1)	(2)	(3)	(4)	(5)	(6)
Participant is supervisor	0.025	-0.100	0.034	-0.016	-0.251***	-0.133
	(0.096)	(0.064)	(0.141)	(0.174)	(0.095)	(0.103)
Participant is female	0.052	-0.000	0.187	-0.130	-0.065	0.023
	(0.079)	(0.051)	(0.105)	(0.127)	(0.068)	(0.079)
Participant experience (years)	0.020	0.003	0.019	0.028	0.007	0.005
	(0.009)	(0.005)	(0.016)	(0.013)	(0.008)	(0.008)
Participant age (years)	-0.009	0.003	-0.006	-0.015	0.003	0.007
	(0.009)	(0.006)	(0.016)	(0.015)	(0.010)	(0.010)
Participant risk aversion	-0.017	0.006	-0.008	-0.070	-0.004	0.026
	(0.029)	(0.019)	(0.053)	(0.043)	(0.030)	(0.031)
Participant gender bias (IAT)	-0.158	0.064				
	(0.131)	(0.083)				
p-value of F-test	0.364	0.713	0.430	0.069	0.068	0.657
R-squared	0.103	0.076	0.266	0.223	0.301	0.210
N	205	525	105	100	268	257
File FE	✓	✓	✓	✓	✓	✓

Table A11: Balance tables - Information treatments

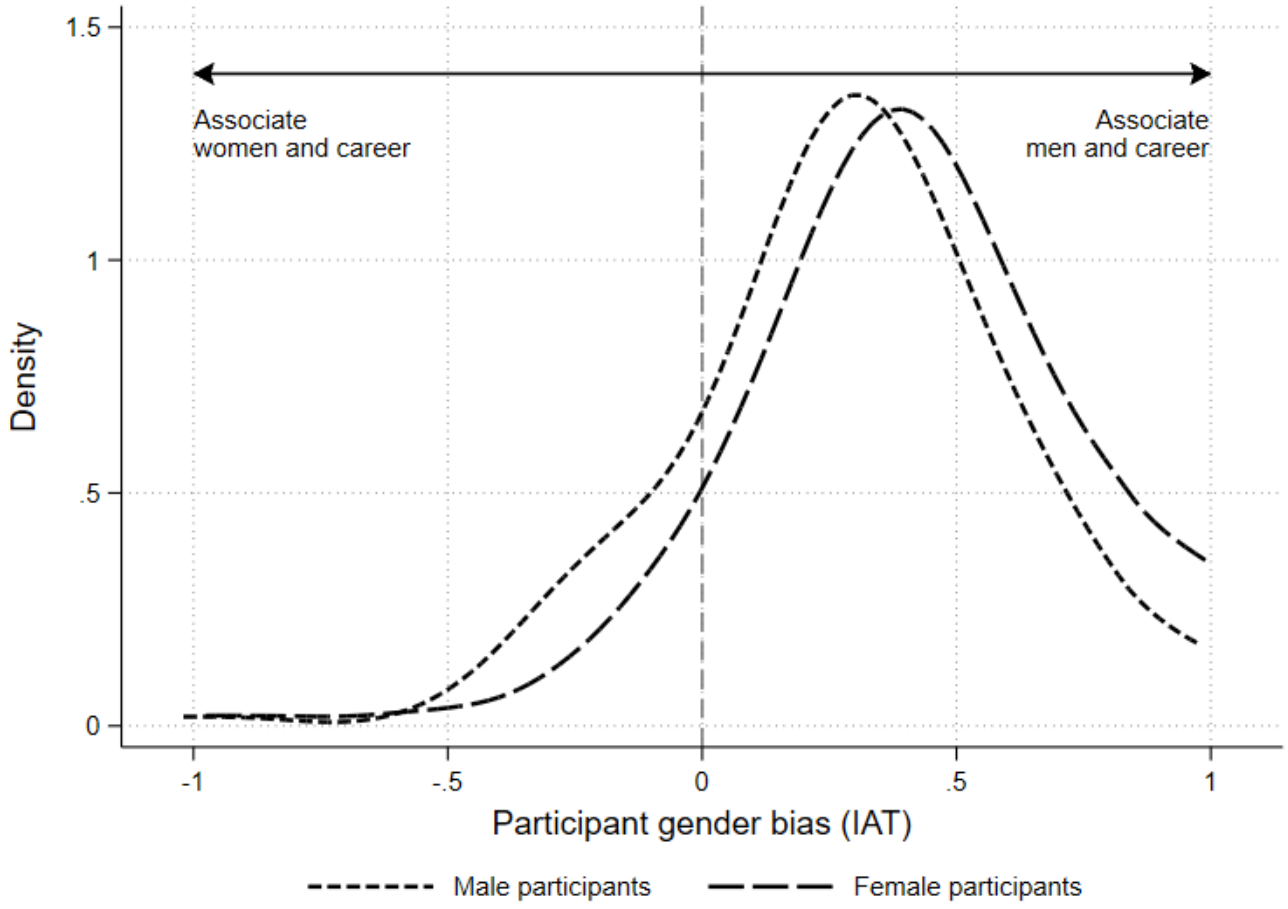
Dependent variable: Female applicant (treatment variable)		
Sample →	Rejection sample	Guarantor sample
	(1)	(2)
Participant is supervisor	0.001	0.028
	(0.038)	(0.051)
Participant is female	0.001	0.035
	(0.031)	(0.041)
Participant experience (years)	-0.001	0.002
	(0.003)	(0.004)
Participant age (years)	0.000	-0.002
	(0.004)	(0.005)
Participant risk aversion	0.002	0.012
	(0.011)	(0.015)
Participant gender bias (IAT)	0.001	-0.083
	(0.051)	(0.065)
No subj.	-0.002	0.020
	(0.037)	(0.048)
No obj.	-0.000	0.001
	(0.037)	(0.047)
p-value of F-test	1.000	0.861
R-squared	0.011	0.055
N	1,246	808
File FE	Yes	Yes

Table A12: Applicant gender and credit amount offered

	(1)	(2)
Female applicant	2,130.68	-1,270.53
	(3,856.74)	(3,659.85)
Constant	19,634.55	73,280.14
	(2,695.56)	(2,594.50)
R-squared	0.551	0.830
N	813	813
File FE	Yes	Yes

Notes: The dependent variable in column (1) is *Difference credit limit demanded and offered* which is equal to credit demanded minus credit offered and in column (2) it is *Credit limit offered*. The sample is restricted to the first round of the experiment. Cluster robust standard errors are shown in parentheses and clustered at the participant level. Table 1 contains all variable definitions.

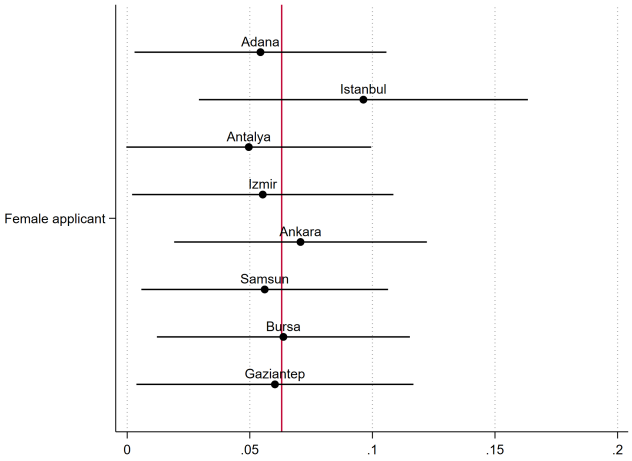
Figure A1: Participant gender bias (IAT), by participant sex



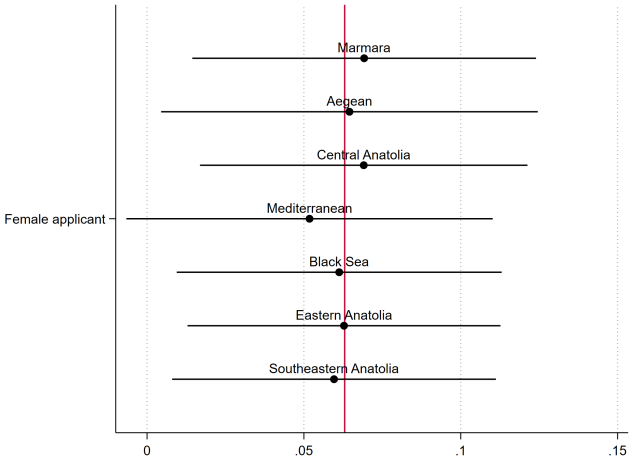
Notes: This figure shows a local polynomial smooth of the variable *Participant gender bias (IAT)* for male (short dash) and female (long dash) participants, respectively. The combined two-sample Kolmogorov-Smirnov test statistic is 0.181 and has a p-value of 0.01. Table 1 contains all variable definitions.

Figure A2: Indirect gender discrimination: Heterogeneity

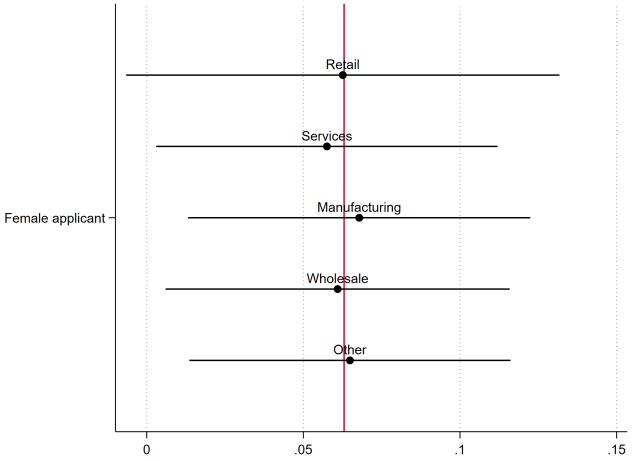
Panel A: Heterogeneity by experiment location



Panel B: Heterogeneity by province of original loan application

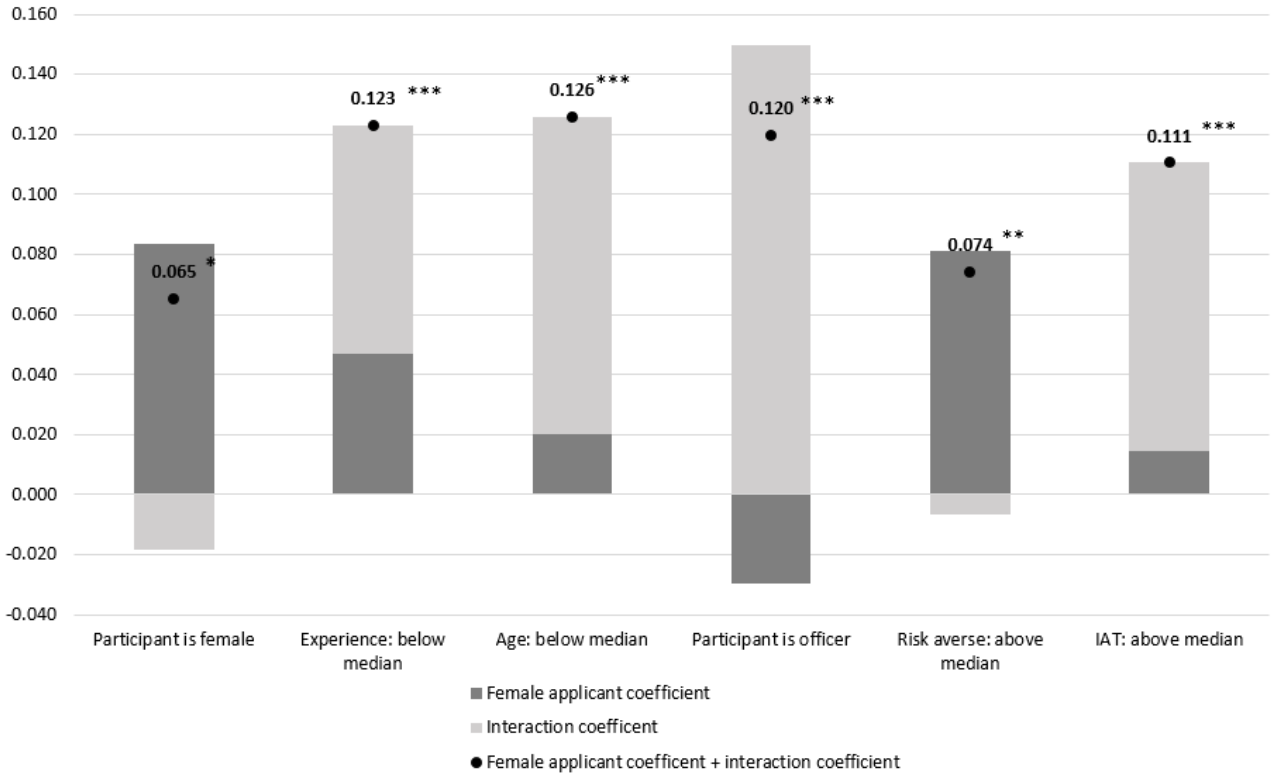


Panel C: Heterogeneity by macro-sectors



Notes: This figure shows estimated coefficients for *Female applicant* using the same specification as in column [1] of Table 3. Each dot reflects the coefficient based on the full sample minus the observations from the indicated city, province, or industry in Panel A, B and C, respectively. The dependent variable is a *Guarantor dummy* which equals '1' if the participant approved the credit application but requests a guarantor and '0' if the participant approved it without requesting a guarantor. The sample is restricted to the first round of the experiment. The horizontal lines reflect 90% level confidence intervals. In Panel A, the coefficients are ordered from highest (top) to lowest (bottom) regional household disposable income in 2016. Household disposable income is the total of disposable household income divided by household size and comes from the Turkish Statistical Institute's "Income and Living Conditions Survey Regional Results". In Panel B, the coefficients are ordered from highest (top) to lowest (bottom) regional income level per capita in 2016. Table 1 contains all variable definitions.

Figure A3: Heterogeneous guarantor requirements: Fully interacted models

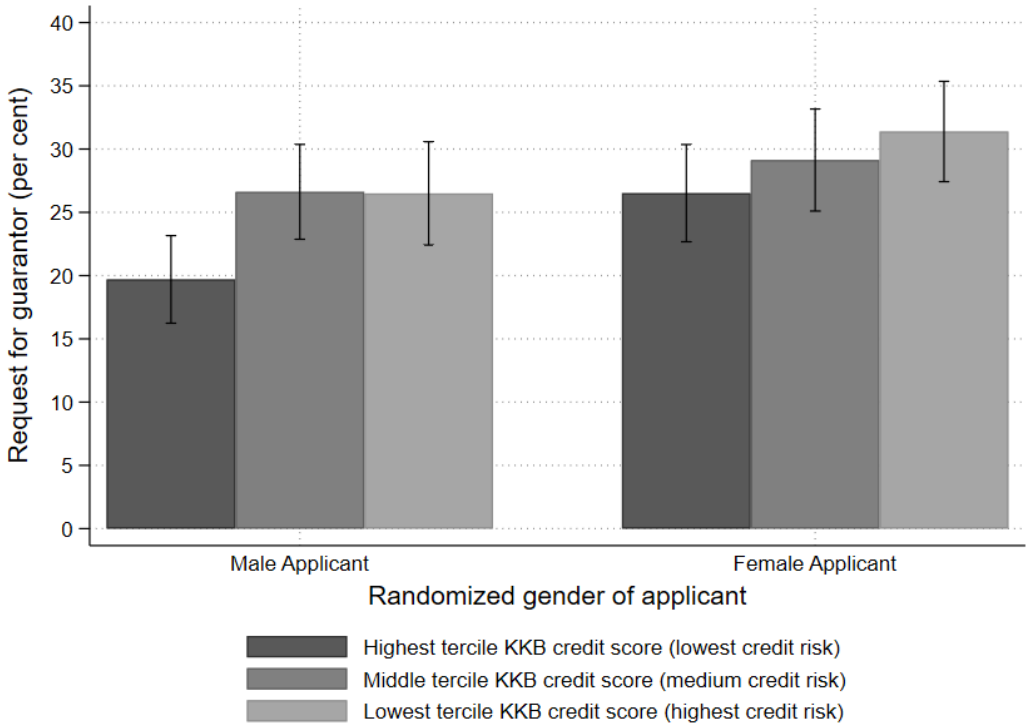


Notes: This figure shows coefficients from linear fully interacted models where the dependent variable is a *Guarantor dummy* that equals '1' if the participant approves the application but requests a guarantor and '0' if the participant approves without a guarantor. The sample is restricted to the first round of the experiment. Each bar corresponds to coefficients from a separate regression where we regress the *Guarantor dummy* on *Female applicant*, a given *Participant characteristic* interacted with *Female applicant* and the given *Participant characteristic* interacted with the file fixed effects. *, **, *** indicate significance at the 10, 5, and 1 per cent level, respectively, and refer to t-tests of the null that (*Female applicant* + *Female applicant*×*Participant characteristic*)>0. Table 1 contains all variable definitions.

Figure A4: Guarantor requirements, by loan quality and applicant gender

Panel A

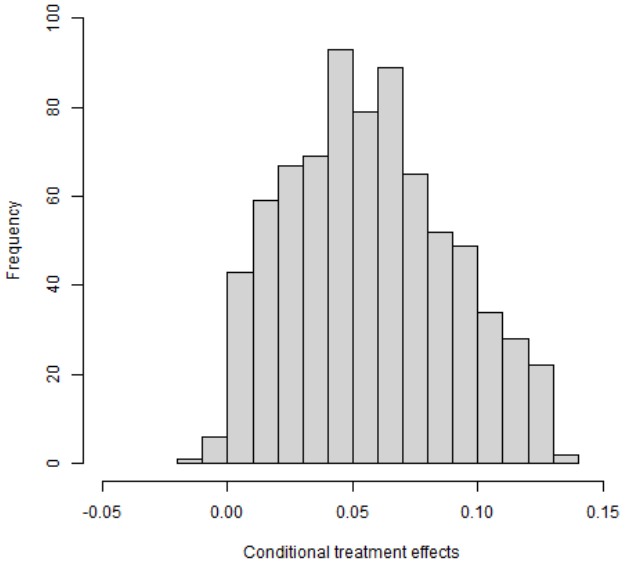
Panel B



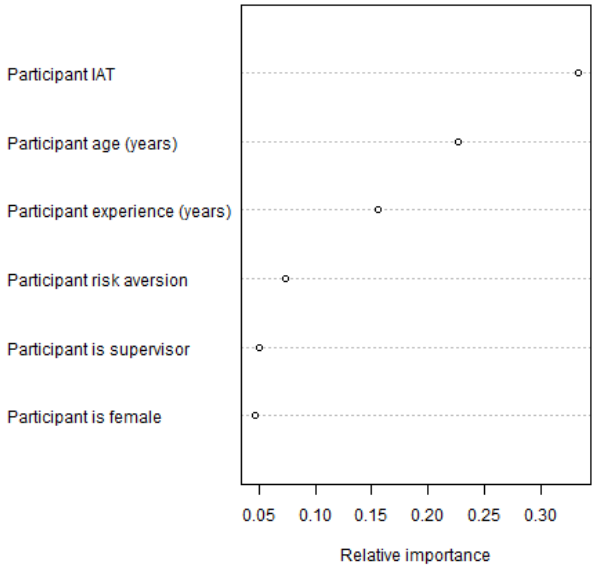
Notes: This figure shows the percentage of loan applications that were approved during the experiment and for which participants requested a guarantor. Panel A: bars indicate applications to which participants assigned a repayment probability at/above the median (dark gray) or below the median (light gray). Panel B: bars indicate loan applications with a KKB credit score in the highest tercile (lowest credit risk, dark gray); middle tercile (medium credit risk, medium gray); or lowest tercile (highest credit risk, light gray). Whiskers indicate one binomial standard error. The sample is restricted to the first round of the experiment. Table 1 contains all variable definitions.

Figure A5: Applicant gender and guarantor requirements – Heterogeneous treatment effects

Panel A: Distribution of conditional treatment effects

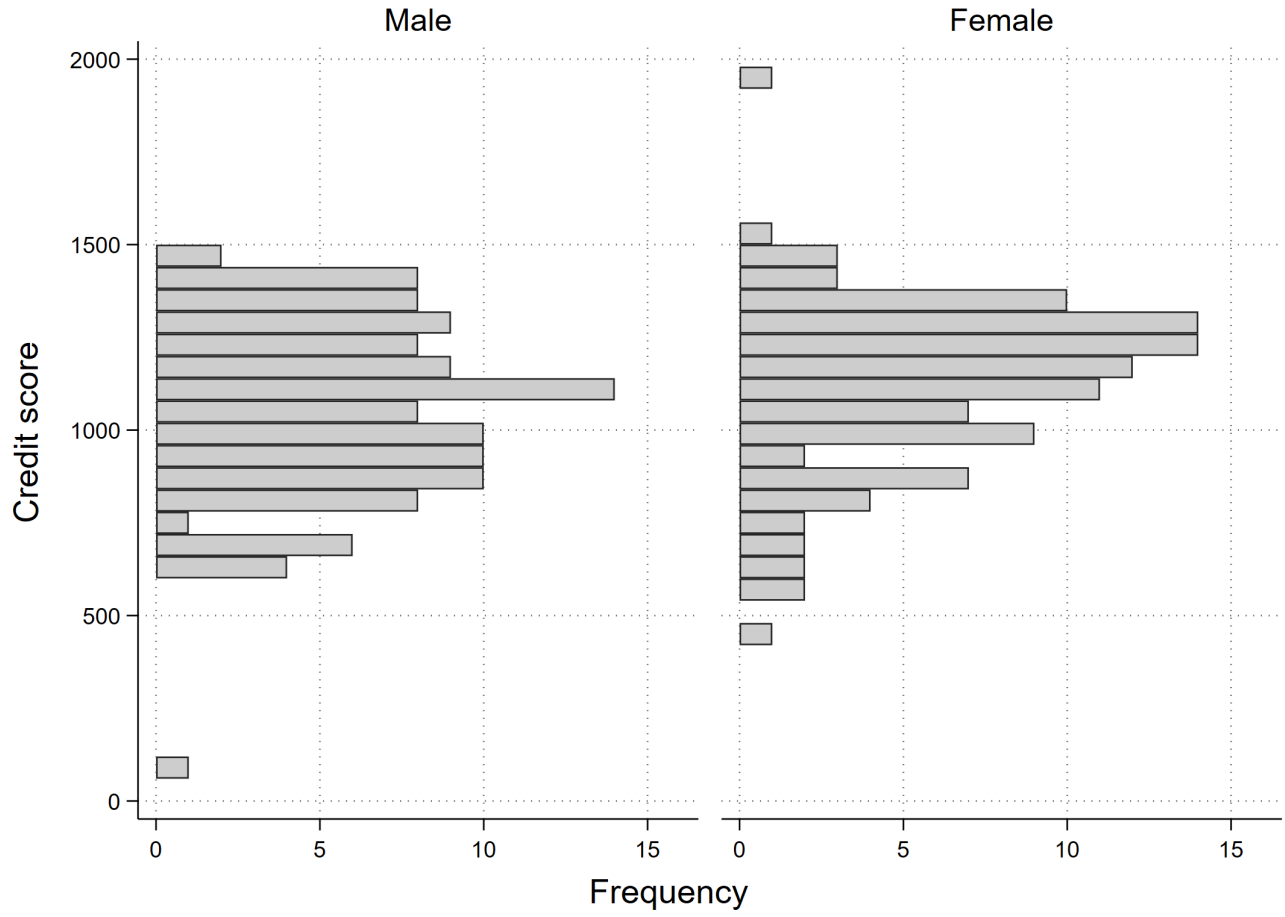


Panel B: Relative importance of covariates



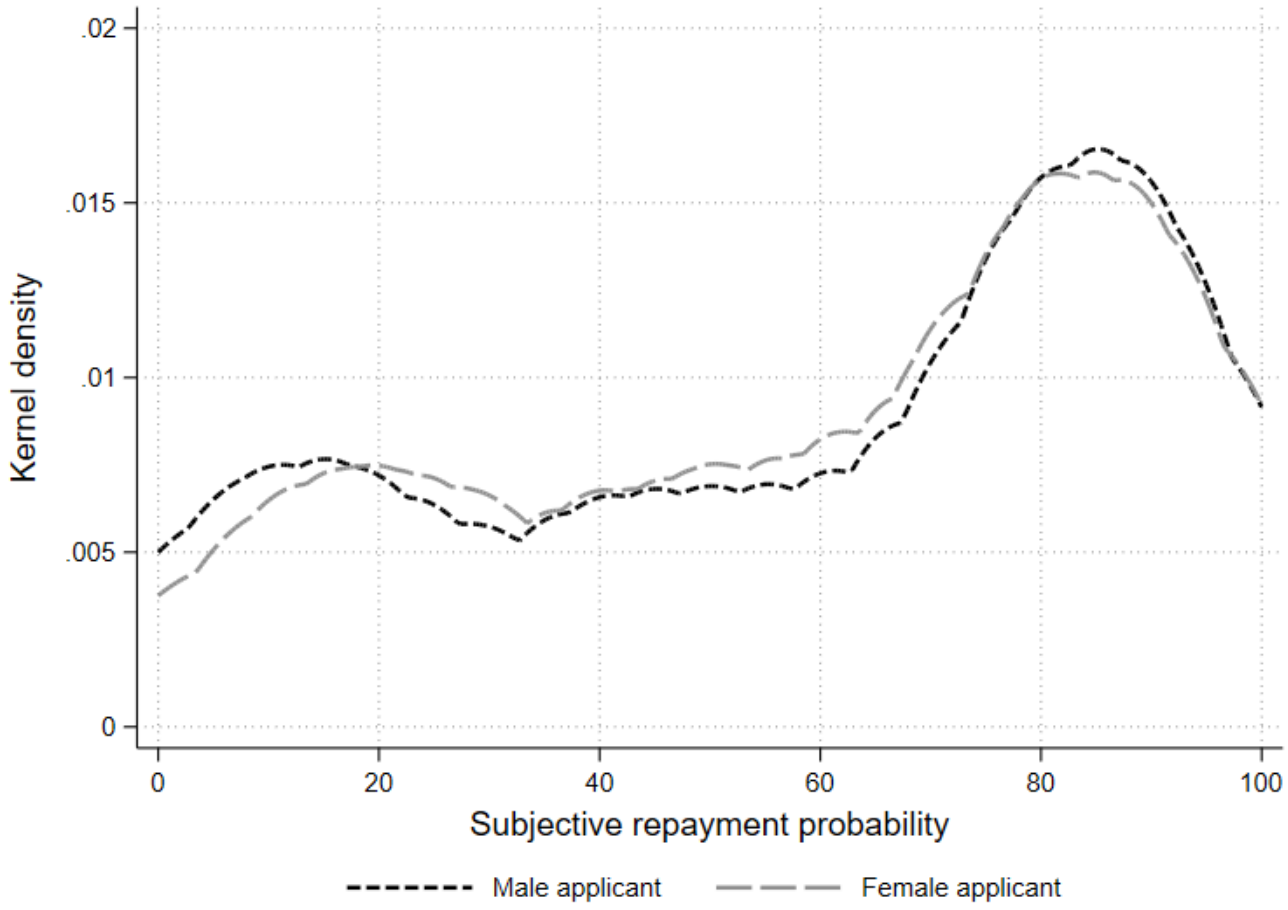
Notes: This figure shows results from a generalized causal forest model with 20,000 trees and honest splitting (Athey, Tibshirani and Wager, 2019). The outcome is the *Guarantor dummy* and the covariates are the participant characteristics in Panel A of Table 2. *Female applicant* is the treatment variable. Panel A shows the distribution of the conditional treatment effects. Panel B shows the variable *Relative importance*. This is a weighted sum of how many times a loan officer trait was used to split at each depth in the forest when estimating treatment heterogeneity.

Figure A6: Credit score by real-life gender of applicant



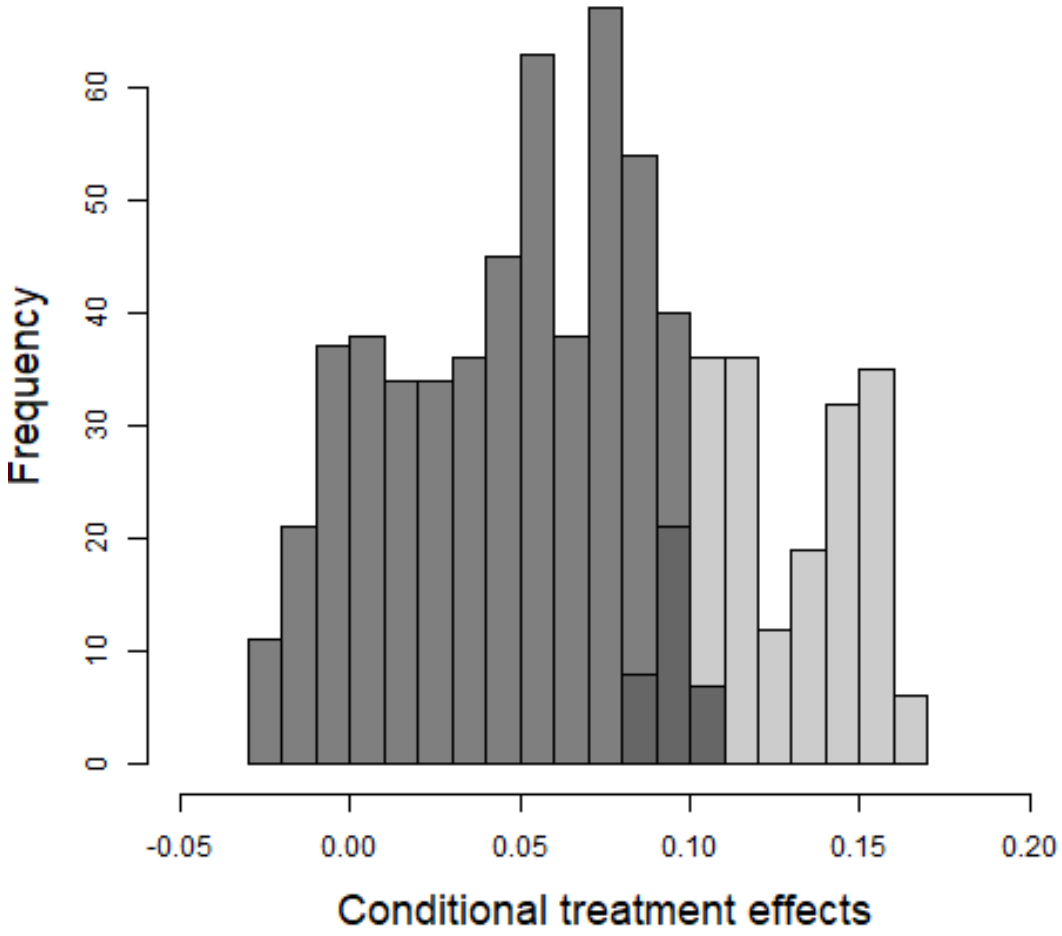
Notes: This figure shows the distribution of the variable *Credit score* for loan application files that were male (left) and female (right) in real life. Credit scores are from the KKB credit registry and higher scores indicate lower credit risk. The figure is based on the 250 loan application files from which the 100 files used in the experiment were drawn. The combined two-sample Kolmogorov-Smirnov test statistic is 0.168 and has a p-value of 0.087. Table 1 contains all variable definitions.

Figure A7: Subjective repayment probability by randomized gender of loan application



Notes: This figure shows the kernel density curves of the variable *Subjective repayment probability* for loan applications that were presented as male (black short dash) and female (gray long dash), respectively. The figure is based on the 1,329 decisions made in the first round of the experiment. The combined two-sample Kolmogorov-Smirnov test statistic is 0.404 and has a p-value of 0.649. Table 1 contains all variable definitions.

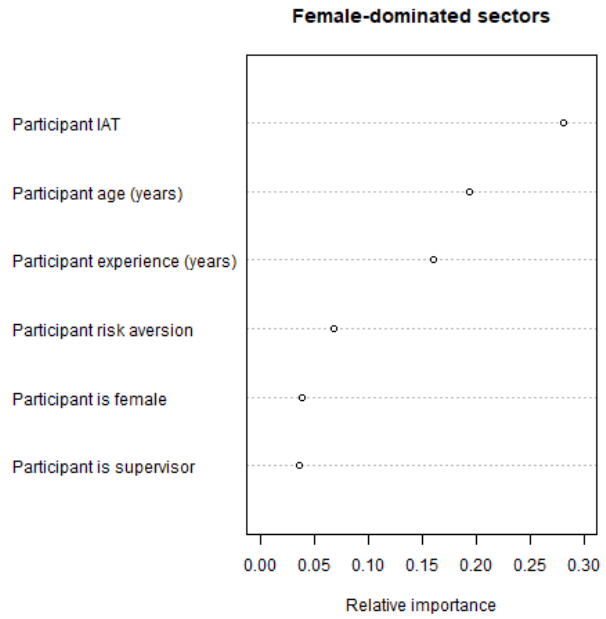
Figure A8: Conditional treatment effects in male- versus female-dominated sectors



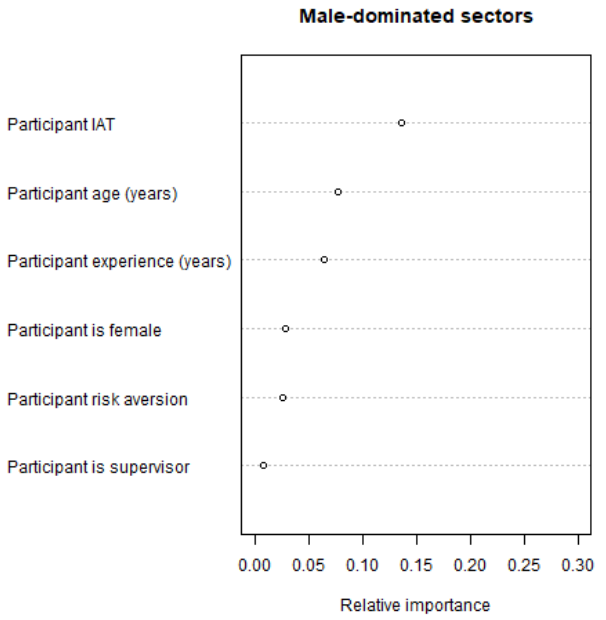
Notes: This figure shows results from two separate generalized causal forest models each with 20,000 trees and honest splitting (Athey, Tibshirani and Wager, 2019). The outcome is the *Guarantor dummy* and the covariates are the participant characteristics in column [5] of Table 4. *Female applicant* is the treatment variable. The dark (light) grey bars show the distribution of the conditional treatment effects for female (male) dominated sectors. The dashed (solid) line indicates the average treatment effect from the baseline model for female (male) dominated sectors as in Table 7, column [2] (Table 7, column [1]). Table 1 contains all variable definitions.

Figure A9: Heterogeneous treatment effects - Relative importance of covariates

Panel A



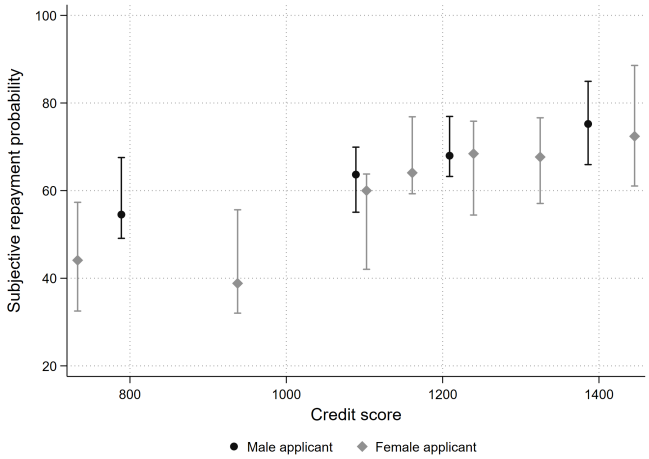
Panel B



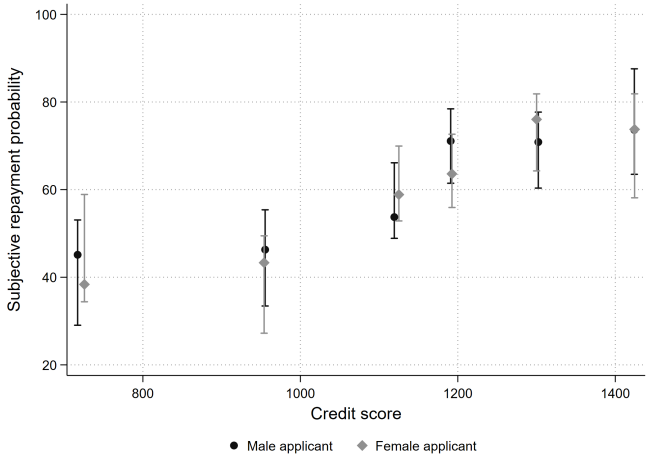
Notes: This figure shows results from two separate generalized causal forest models each with 20,000 trees and honest splitting (Athey, Tibshirani and Wager, 2019). The outcome is the *Guarantor dummy* and the covariates are the participant characteristics. Female- and male-dominated sectors are defined by the share of firms with majority female ownership at the 2-digit ISIC industry level using data from the EBRD–World Bank Banking Environment and Performance Survey (BEEPS) V and VI. Female- (male-) dominated firms are those in industries with an above (below) median share of majority female-owned firms. The horizontal axes of Panels A and B show the variable *Relative importance*. This is a weighted sum of how many times a loan officer trait was used to split at each depth in the forest when estimating treatment heterogeneity in female-dominated sectors (Panel A) or male-dominated sectors (Panel B).

Figure A10: Information treatments, credit score and subjective repayment probability, by randomized applicant gender

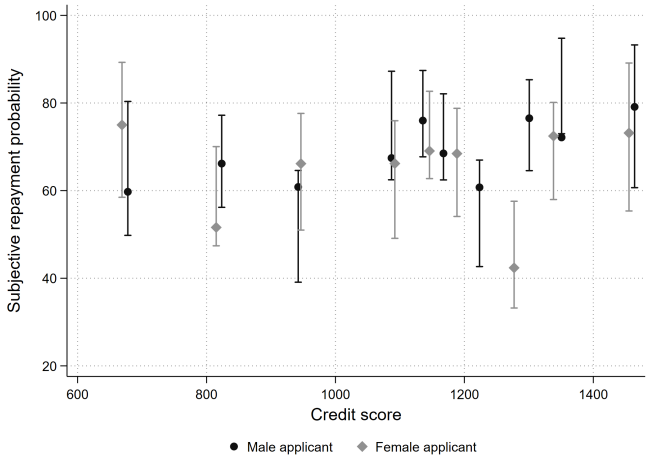
Panel A: Control



Panel B: No subjective information

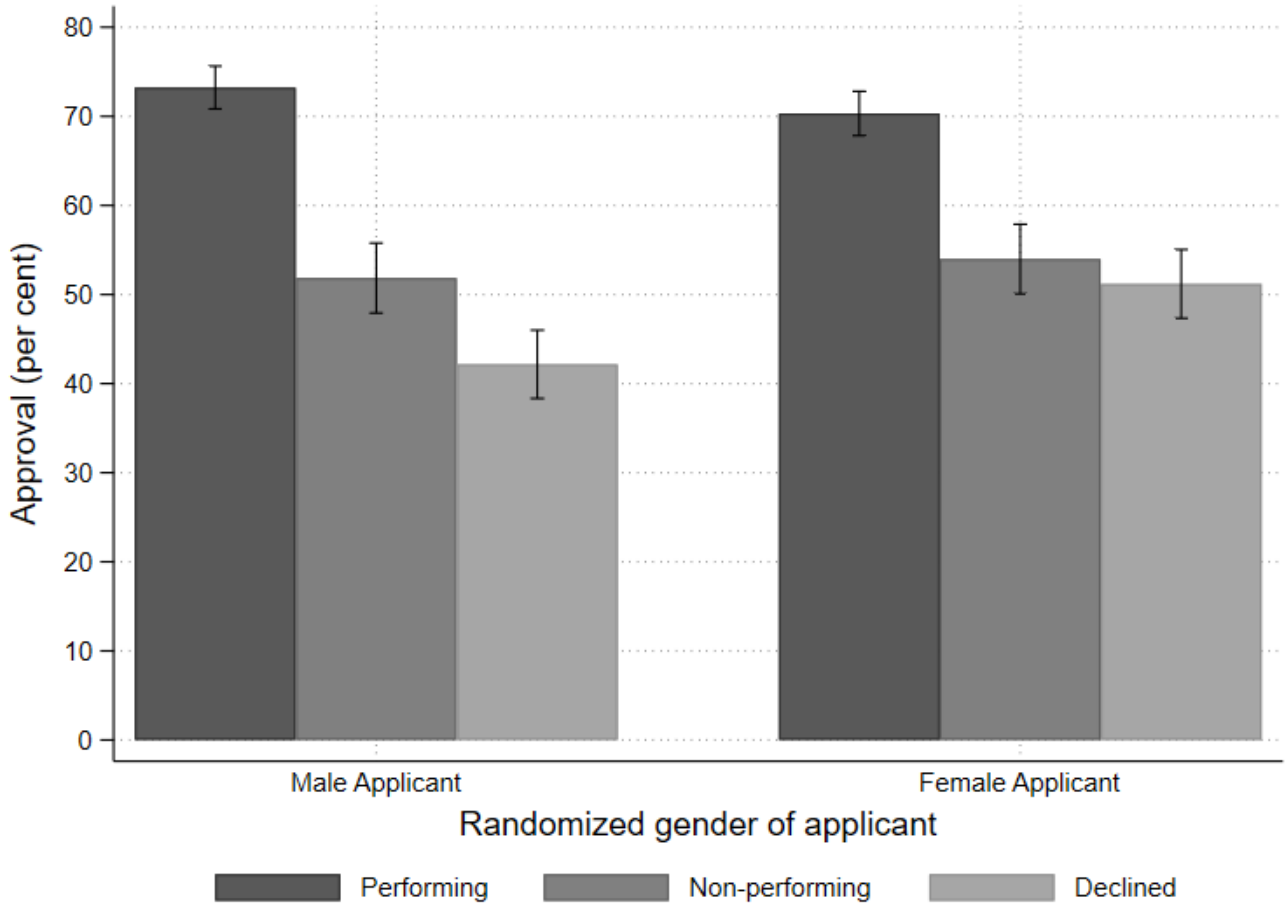


Panel C: No objective information



Notes: This figure shows binned scatter plots for male applicants (dark grey dots) and female applicants (light grey diamonds) using robust pointwise confidence intervals. Panel A, B and C reflect decisions in the second round of the experiment for the *Control*, *No subjective information* and *No objective information* treatments, respectively. The number of bins is not pre-determined but data driven and the integrated mean squared errors are minimized. The confidence intervals are at the 95% level and based on a cubic B-spline regression estimate of subjective repayment probability on the credit score. Credit scores are provided by the KKB credit registry and higher scores indicate lower credit risk. Appendix Table A1 contains all variable definitions.

Figure A11: Loan approval, by loan quality and applicant gender



Notes: This figure shows the percentage of loan applications approved during the experiment. Bars are shown for approved loans repaid in real life (dark gray), approved loans that were defaulted on in real life (medium gray), and loan applications rejected in real life (light gray). Bars indicate applications that were shown to participants as coming from a female (right) or male (left) entrepreneur. Whiskers indicate one binomial standard error. The sample is restricted to the first round of the experiment. Appendix Table A1 contains all variable definitions.

Online Appendix B: Gender variation in applicant information

This Appendix reports on a second round of application reviews, in which participants received another four files. We again randomized the gender of each. Inspired by Bernstein, Korteweg and Laws (2017) who measure the impact of different types of information on investors' decision to fund start-ups, we now also experimentally varied the information available to loan officers. Even when officers do not perceive female entrepreneurs to be more risky on average, they may still find it more difficult to judge applications from individual women. They may, for example, encounter relatively few such applications and hence be less sure of the complete risk distribution among entrepreneurial women. This makes it more difficult to interpret signals about the quality of individuals. Rational loan officers may then put less weight on traits of individual female applicants (which to them are weaker signals of creditworthiness) and more weight on group means (Aigner and Cain, 1977). Reducing the richness of applicant characteristics can therefore make statistical discrimination more pronounced (Kaas and Manger, 2012; Neumark, 2018).

Officers were randomized into one of three groups.[1] A control group evaluated applications with all information available (as in the first round). A first treatment group evaluated files from which we had deleted the credit score from Turkey's credit registry. This score, which aggregates hard financial data that may help to predict default, is virtually costless to acquire by loan officers in real life. A second treatment group evaluated files where we had removed a section with more subjective information.[2] This section contains voluntary comments by loan officers about the applicant (such as about how industrious they are or whether they have a good business network). Bank staff provide this information to strengthen the rationale for lending. Subjective information is generally costly to acquire and is produced at the agent's discretion. It may be most important when evaluating lower-quality borrowers (Iyer et al., 2016).

If either the objective credit score or the subjective comments section contribute to officers' ability to make fair and objective lending decisions, omitting it may increase statistical discrimination as loan officers need to rely more on possibly mistaken priors about female entrepreneurs. We should then see that bias is higher in the treatment groups than in the control group. Yet, we find no evidence for this: restricting the information available to loan officers does not have a disproportionate impact on female loan applications. This can be seen in Appendix Table B1, which presents linear probability regressions where the dependent variable is our *Rejection dummy* or *Guarantor dummy* in columns 1-2 and 3-4, respectively. Columns 1 and 3 include dummy variables that indicate whether in a particular decision we randomly withheld subjective (*No subj.*) or objective (*No. obj.*) loan application information. In columns 2 and 4, we also interact

[1] For this round, we opted for a within-file (in terms of gender randomization) and between-participant (in terms of the information treatment) experimental design for two reasons. First, we wanted to avoid non-linear or heterogeneous order effects. Non-linear order effects are difficult to control for, while controlling for heterogeneous order effects would require a larger participant pool than we had. Second, subjecting all participants to all treatments would have required each participant to complete 12 reviews, and there was not enough time for that.

[2] All the files selected for the experiment had their subjective information sections filled out. The amount of information differs across the final 100 files, ranging from 21 to 377 words. In unreported regressions, we explored whether the quantity of subjective information (proxied by the number of words) had an impact on decision-making but this was not the case.

these dummy variables with the *Female loan applicant* indicator. Columns 1 and 2 provide some evidence that the subjective information that loan officers can voluntarily add to an application file increases the willingness to lend among those who review the file. Yet, this effect does not differ between male and female loan applicants as can be seen from the interaction terms in columsn 2 and 4.

In all, we therefore do not find evidence for statistical gender discrimination in the vein of Aigner and Cain (1977). Relatedly, Figure OA1 in the Online Appendix shows that in both the control group and the *No subjective information* treatment arm, we find a positively sloped relationship between an applicant's credit score (an objective ex ante proxy for borrower quality) and the subjective repayment probability. This holds for both female and male applications. In both groups, there is little evidence for different slopes among men versus women—as in Aigner and Cain (1977). In the third panel of this figure, we show this relationship for the treatment arm in which we masked the credit score. Not surprisingly, this treatment breaks down the relationship between (now unobserved) credit score and the subjective repayment probability. Importantly, this result is again no different among male versus female files.

Lastly, we note the smaller coefficient for *Female applicant* in round 2 as compared with round 1. We consider this coefficient to be less reliable as a measure of the baseline impact of applicant gender on guarantor requirements because in two-thirds of the round 2 decisions important information was (by construction) missing. This limits power when estimating the baseline effect. Second, the pattern of selection into the guarantor regression is different compared to round 1. This can be due to the change in information available in the two treatments, but can also be due to fatigue. Indeed, the selection pattern is even different for the control group compared to round 1. In the control arm in round 2, participants are more likely to reject all the female files they review (and accept at least one male file) than in round 1, and less likely to reject all the male files they review (and accept at least one female file). This leads to fewer participants contributing to the variation in the gender coefficient of the guarantor regression in a non-random way. Unfortunately, we cannot analyze these patterns further due to the small sample size here.

Table B1: Availability of borrower information and gender bias

Dependent variable:	Rejection dummy		Guarantor dummy	
	[1]	[2]	[3]	[4]
Female applicant	-0.005	0.032	0.042	0.017
	(0.024)	(0.041)	(0.029)	(0.052)
No subj.	0.058	0.095	-0.062	-0.097
	(0.034)	(0.041)	(0.047)	(0.059)
No obj.	-0.057	-0.039	-0.046	-0.052
	(0.035)	(0.044)	(0.046)	(0.055)
Female applicant × No subj.		-0.074		0.068
		(0.056)		(0.074)
Female applicant × No obj.		-0.036		0.013
		(0.060)		(0.070)
R-squared	0.198	0.199	0.187	0.188
N	1,334	1,334	860	860
File FE	✓	✓	✓	✓

Notes: The dependent variable in columns [1] and [2] is a *Rejection dummy* that equals '1' if the participant declines the credit application and '0' if the participant approves it. The dependent variable in columns [3] and [4] is a *Guarantor dummy* that equals '1' if the participant approves the credit application but requests a guarantor and '0' if the participant approves it without requesting a guarantor. The sample is restricted to the second round of the experiment. Cluster robust standard errors are shown in parentheses and clustered at the participant level. Table A1 contains all variable definitions.

Online Appendix C: A Survey of Turkish Business Women

This Online Appendix reports on a survey among Turkish business women. We conducted the survey in order to gain more insights into how female entrepreneurs themselves perceive guarantor requirements. The survey sample included subscribers of EBRD's *Business Lens* website. *Business Lens* is a free online platform designed to give women entrepreneurs in Turkey a tailored assessment that highlights the strengths and weaknesses of their business.

We fielded the survey in September using SurveyMonkey and received 208 fully or partially filled-out responses in total. Participants completed the survey in Turkish. We do not know the full population of active *Business Lens* users, as women who signed up may never have actively used it. We therefore stress that the sample of female entrepreneurs is by no means a representative cross-section of all women Turkish entrepreneurs. On the one hand, women who sign up to *Business Lens* may be relatively experienced, professional, and educated. Guarantor requirements may then be less of a concern than for the average female Turkish entrepreneur. On the other hand, the women who took the time to respond may themselves have experienced guarantor-related issues, so that they were motivated to give their opinion.

Skip patterns and programming instructions are shown in blue text. Below each item, we report the response summary statistics.

Introduction: Thank you for taking the time to complete this short survey. Most questions are about your experience with getting access to credit for your business. Some questions are about guarantors. A guarantor or co-signer is someone who promises to repay your loan in case you would not be able to. Banks sometimes ask for a guarantor as a precondition for granting a loan.

The survey should take about 10 minutes. Your participation is voluntary and you can stop the survey at any time. We will protect your personal information closely so no one will be able to connect your responses to you. If you are interrupted while taking the survey, you can stop and re-start the survey by following the link provided in the survey invitation. Please note, to pick up where you left off you should continue on the *same device and browser* which you started the survey on.

Qa) Do you agree to the above terms? By clicking Yes, you consent that you are willing to answer the questions in this survey.

1. Yes GO TO Q1
2. No GO TO Qb

Qb) Are you sure you want to end the survey?

1. Yes GO TO END
2. No GO TO Qa

Q1 Have you ever applied for a business loan or credit line from a bank or from a similar financial institution (such as a microfinance institution)?

	Responses	Mean	Median	Min	Max
Yes, applied for a business loan or credit line	205	0.780	1	0	1

Q2 What is the main reason you have never applied for a loan or credit line for your business?

	Responses	Mean	Median	Min	Max
No need for a loan – my business has sufficient funding	42	0.119	0	0	1
Interest rates were not favourable	42	0.238	0	0	1
I did not have a guarantor or co-signer whom I could ask	42	0.119	0	0	1
I did not want to ask someone to act as a guarantor or co-signer	42	0.119	0	0	1
Collateral requirements were too high	42	0.048	0	0	1
I did not think my application would be approved for reasons unrelated to collateral or guarantor requirements	42	0.214	0	0	1
Other	42	0.143	0	0	1

Q3 Thinking of the most recent business loan or credit line you applied for, was it approved?

	Responses	Mean	Median	Min	Max
Yes, it was approved	160	0.731	1	0	1
No, it is still pending	160	0.031	0	0	1
No, it was rejected	160	0.237	0	0	1

Q4 Thinking of this most recent business loan or credit line you applied for, why do you think it was rejected? Pick three reasons at most.

	Responses	Mean	Median	Min	Max
I was required to provide a guarantor or co-signer, but I did not have a guarantor or co-signer whom I could ask	36	0.250	0	0	1
I was required to provide a guarantor or co-signer, but I did not want to ask someone to act as guarantor or co-signer	36	0.167	0	0	1
I could not meet the collateral requirements	36	0.250	0	0	1
The financial health and prospects of my company were not good enough	36	0.278	0	0	1
My credit rating was not good enough	36	0.639	1	0	1
Other	36	0.139	0	0	1

Q5 Referring to your most recent business loan or credit line, did the financing require collateral and/or a guarantor/co-signer?

	Responses	Mean	Median	Min	Max
Required collateral and/or guarantor/co-signer	115	0.426	0	0	1

Q6 Referring to your most recent business loan or credit line, what type of collateral was required (if any). More than one answer can apply.

	Responses	Mean	Median	Min	Max
Guarantor or co-signer	48	0.458	0	0	1
Land or buildings owned by the firm	48	0.479	0	0	1
Machinery and equipment including movables	48	0.083	0	0	1
Accounts receivable and inventories	48	0.042	0	0	1
Personal assets (gold, cash, house, etc.)	48	0.375	0	0	1
Other forms of collateral not included in the categories above	48	0.021	0	0	1
None of the above / does not apply	48	0.021	0	0	1

Q7 [Show only if Q6a=='Guarantor or co-signer'] Referring to your most recent business loan or credit line, which sentence best describes the guarantor requirement?

	Responses	Mean	Median	Min	Max
It was impossible for me to meet the guarantor/co-signer requirement, so I negotiated other terms	22	0.182	0	0	1
It was burdensome and difficult for me to find a guarantor or co-signer, but I managed to find one	22	0.364	0	0	1
The guarantor/co-signer requirement was not a barrier	22	0.455	0	0	1

Q8 Was this the first time you have had a business loan or credit line approved from this financial institution?

	Responses	Mean	Median	Min	Max
Yes, first time a business loan or credit line was approved	111	0.387	0	0	1

Q9 Have you ever been asked by a bank to provide a guarantor or co-signer when you applied for a loan or a credit line (either for personal use or for your business)?

	Responses	Mean	Median	Min	Max
Yes, have been asked to provide a guarantor or co-signer	147	0.612	1	0	1

Q10 Has a bank ever rejected your loan application because you could not provide a guarantor/co-signer or did not want to provide a guarantor/co-signer?

	Responses	Mean	Median	Min	Max
Yes, rejected because could not/did not want to provide a guarantor/co-signer	146	0.473	0	0	1

Suppose you want to take out a loan from a bank to finance an investment in your business that will cost 500,000 Turkish lira (for example, to pay for new machinery). The interest rate on this loan is 16% per year. The bank requires you to have a guarantor who co-signs the loan.

Q11 Would you be willing to pay a higher annual interest rate in order not to have a guarantor or co-signer?

	Responses	Mean	Median	Min	Max
Yes, willing to pay a higher annual interest rate in order not to have a guarantor or co-signer	183	0.404	0	0	1

Q12 In order to get the loan without a guarantor or co-signer, what is the highest annual interest rate that you would be willing to pay? Please indicate your answer by sliding the dot to an appropriate location on the slider scale.

	Responses	Mean	Median	Min	Max
Highest annual interest rate that you would be willing to pay	74	20.635	20	17	30

Q13 Who typically acts as your guarantor or co-signer, if you need one? Check all that apply.

	Responses	Mean	Median	Min	Max
Mother	178	0.225	0	0	1
Father	178	0.197	0	0	1
Brother	178	0.163	0	0	1
Sister	178	0.163	0	0	1
Husband	178	0.348	0	0	1
Son	178	0.062	0	0	1
Daughter	178	0.045	0	0	1
Female friend	178	0.084	0	0	1
Male friend	178	0.067	0	0	1
Female collegue	178	0.067	0	0	1
Male collegue	178	0.073	0	0	1
Business associate who is not immediate family	178	0.118	0	0	1
None of the above/does not apply	178	0.315	0	0	1

Q14 Have you yourself ever acted as a guarantor or co-signer for others?

	Responses	Mean	Median	Min	Max
Yes, acted as a guarantor or co-signer for others	177	0.362	0	0	1

Q15 When someone agrees to act as your co-signer or guarantor, is there an expectation that you help them in some way in the future?

	Responses	Mean	Median	Min	Max
Yes, always	176	0.375	0	0	1
Often, but not always	176	0.102	0	0	1
Only sometimes	176	0.199	0	0	1
Rarely	176	0.102	0	0	1
No, never	176	0.222	0	0	1

Q16 On a scale of 1 to 10, how difficult is it for an entrepreneur like you to find a guarantor or co-signer when the bank requires one? Please indicate your answer by sliding the dot to an appropriate location on the slider scale.

	Responses	Mean	Median	Min	Max
Difficulty for an entrepreneur to find a guarantor or co-signer when required	167	7.467	9	1	10

Q17 Do you think that banks are more or less likely to ask women entrepreneurs for a guarantor as compared to male entrepreneurs?

	Responses	Mean	Median	Min	Max
Much more likely to ask women	169	0.367	0	0	1
A bit more likely to ask women	169	0.172	0	0	1
Equally likely	169	0.408	0	0	1
A bit more likely to ask men	169	0.036	0	0	1
Much more likely to ask men	169	0.018	0	0	1

Q18 Recent research in Turkey found that female loan applicants are more likely to be asked to provide a guarantor than male applicants, even when their businesses are very similar. Do you think this is a reasonable precaution banks take or an unfair practice?

	Responses	Mean	Median	Min	Max
Reasonable precaution	167	0.042	0	0	1
Unfair practice	167	0.904	1	0	1
Neither	167	0.054	0	0	1

Lastly, we would like to know a bit more about yourself.

Q19 In what year were you born?

	Responses	Mean	Median	Min	Max
Year	164	1976	1976	1955	1995

Q20 In which province do you normally live?

	Responses	Mean	Median	Min	Max
Adana	164	0.012	0	0	1
Adıyaman	164	0.012	0	0	1
Afyonkarahisar	164	0.012	0	0	1
Ankara	164	0.067	0	0	1
Antalya	164	0.030	0	0	1
Bursa	164	0.037	0	0	1
Denizli	164	0.012	0	0	1
Gaziantep	164	0.030	0	0	1
Istanbul	164	0.262	0	0	1
Kahramanmaraş	164	0.012	0	0	1
Kayseri	164	0.024	0	0	1
Kocaeli	164	0.012	0	0	1
Konya	164	0.012	0	0	1
Manisa	164	0.024	0	0	1
Mersin	164	0.024	0	0	1
Muğla	164	0.061	0	0	1
Samsun	164	0.024	0	0	1
Tekirdağ	164	0.012	0	0	1
Trabzon	164	0.024	0	0	1
Yalova	164	0.012	0	0	1
Çanakkale	164	0.030	0	0	1
Çorum	164	0.012	0	0	1
İzmir	164	0.110	0	0	1
Other	164	0.128	0	0	1

Q21 What sector best describes the type of business you run?

	Responses	Mean	Median	Min	Max
Agriculture, hunting and related service activities	163	0.043	0	0	1
Construction	163	0.049	0	0	1
Education	163	0.092	0	0	1
Electricity, gas, steam and hot water supply	163	0.006	0	0	1
Fishing, aquaculture and service activities incidental to fishing	163	0.006	0	0	1
Health and social work	163	0.055	0	0	1
Hotels and restaurants	163	0.037	0	0	1
Insurance and pension funding, except compulsory social security	163	0.006	0	0	1
Manufacture of basic metals	163	0.006	0	0	1
Manufacture of chemicals and chemical products	163	0.006	0	0	1
Manufacture of fabricated metal products, except machinery and equipment	163	0.055	0	0	1
Manufacture of food products and beverages	163	0.117	0	0	1
Manufacture of furniture; manufacturing n.e.c.	163	0.012	0	0	1
Manufacture of medical, precision and optical instruments, watches and clocks	163	0.012	0	0	1
Manufacture of office, accounting and computing machinery	163	0.006	0	0	1
Manufacture of other transport equipment	163	0.006	0	0	1
Manufacture of paper and paper products	163	0.018	0	0	1
Manufacture of rubber and plastics products	163	0.012	0	0	1
Manufacture of textiles	163	0.092	0	0	1
Manufacture of wearing apparel; dressing and dyeing of fur	163	0.006	0	0	1
Mining of metal ores	163	0.006	0	0	1
Other business activities	163	0.123	0	0	1
Other service activities	163	0.104	0	0	1
Post and telecommunications	163	0.006	0	0	1
Publishing, printing and reproduction of recorded media	163	0.006	0	0	1
Real estate activities	163	0.006	0	0	1
Recreational, cultural and sporting activities	163	0.037	0	0	1
Research and development	163	0.012	0	0	1
Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	163	0.018	0	0	1
Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear	163	0.006	0	0	1
Undifferentiated goods-producing activities of private households for own use	163	0.006	0	0	1
Water transport	163	0.006	0	0	1
Wholesale trade and commission trade, except of motor vehicles and motorcycles	163	0.018	0	0	1

Q22 For how many years have you been a manager in the [insert sector from Q21] sector?

	Responses	Mean	Median	Min	Max
Years	162	12	10	0	40

Q23 How many full-time staff are employed by your business?

	Responses	Mean	Median	Min	Max
Less than 10 persons employed	162	0.753	1	0	1
10 – 49 persons employed	162	0.191	0	0	1
50 or more persons employed	162	0.056	0	0	1

Q24 What is your marital status?

	Responses	Mean	Median	Min	Max
Single/never married	162	0.160	0	0	1
Married	162	0.568	1	0	1
Co-habiting	162	0.012	0	0	1
Separated/divorced	162	0.210	0	0	1
Widowed	162	0.019	0	0	1
Perfer not to say	162	0.031	0	0	1

Thank you very much for your time today, we greatly appreciate it. For further questions, please feel free to email [insert EBRD contact and e-mail]. Alternatively, please provide your comments here: |_____|

Online Appendix D: Stylized loan application

Details about requested credit

Type of limit		Client	Operating (or Working Capital)	Reserve	Project / single use only
Current	Limit				
	Risk				
	Eva. Risk				
	Maturity				
Demanded	Limit				
	Maturity				
Recommended	Limit				
	Maturity				

Type of credit		Working Capital Limit	Discount Loans - TL	Trade Overdraft Account	Cash Credits - Short-term -TL	Reserve Limit	Chequebook	Company Credit Card	Single Use / Project Limit	Instalment Loans - Cash - TL
Available	Limit									
	Risk									
	Eva. Risk									
	Maturity									
	Repayment Schedule									
Demanded	Limit									
	Maturity									
	Repayment Schedule									

Other information about the client

Additional information about the shareholders			Reasons for application	
Company no.				Type (e.g. Cash/Instalment Loan/Overdraft Account/Company Credit Card)
Client Name Surname / Title			Use of Credit	
Birth Date			Credit Amount	
Birth Place			Vehicle Make	
Shareholder Percentage (%)			Model	
Establishment Date			Year	
Operation Start Date			Number	
Term Start Date			Automobile Insurance	
Home Ownership			Use of Vehicle	
Education level			Merchandise Payer	
Last Update			Merchandise Type	
Changes			Last Update	
Personal background			Changes	

Introductory information about the company

	Answer	Last Update	Changes
Detailed Information about the shareholders and the Company			
Location and sector of the company			
Production and Trade Capacity			
Date of the move to the last work place			
Are there any changes in the area of activity of the company since the establishment?			
Has the firm changed its controlling stake (51%) since inception? If yes, indicate the date of the last control share change			
The real estate status of the work place			
Monthly rent of the work place			
Is there anybody who can maintain continuance of the company?			
The area of activity of the company			
CBT Sector No.			
Domestic Market Sales Condition			
Domestic Market Purchasing Condition			
Company History			
Information about Financial Statement			

Information about financial statement

	Answer	Last Update	Changes
Commercial Bookkeeping Principles and Procedures			
Other information related with financial statements			

Information about financial statement

Type	Description	Two period before	Previous Period	Period
Balance Sheet / Income Statement				
Liquid Value				
Commercial Receivables				
Stocks				
Medium-Term Receivables				
Doubtful Receivables				
Fixed Assets				
Bank Debts				
Commercial Payables				
Medium-term Liabilities				
Deferred Public Debts				
Long-term Liabilities				
Paid Capital				
Reserves				
Profit/Loss for the Period				
Net Sales				
Operating Profit				
Net Profit/Loss				
Total Asset				
Total Liabilities				

Company total banks credit risks

Period	Cash Limits (TL)	Cash Risks(TL)	Non-cash Limits(TL)	Non-cash Risks(TL)	No. of banks	Last Update	Changes

Relationships with financial institutions

Information about properties

Question	Answer	Last Update	Changes

Is there any property?

Property list

Owner	Type of the Property	Proprietor	Number	Value	Registration Address	Description	Last Update	Changes

Real estate list

Type of Real Estate	Ownership	Name of the Owner	Country	City	Province	Number	Current Market Value	Location of the Real Estate	Is there deed of real estate?	Incumbrancer	Description	Last update	Changes

Applicant profile

COMPANY INFO

Title	
Business Address	
Area of Activity	
Sector	
Commercial Property	
Majority Partner's Industry Experience	
Age of majority partner	
Credit Starting Date	
Year of foundation	
Company Assets	

Existing partners

Existing Partners	Company no.	Shareholding	Partnership Amount	Starting date	Partner / Director	Activity Level

Firm owner credit history

Application No.		Name and Surname		Date of Birth	

Credit Reference Agency (CRA) Score	
Reasons of CRA Score	
Worst Payment Record (Historical)	
Are currently any Legal Proceedings?	

Summary for credit records	
Total Number of Loans	
Current Worst Payment Record (in the last 6 months)	
Worst Payment Record (Historical)	
Total Debt	
Current Total Amount of Credit Card Instalments (in the past 6 months)	
Total Amount of Credit Card Instalments (historical)	
Special conditions	

Application summary	
Type of Loan	
Application Date	
Limit	
Currency	
Decision	
Credit relation	

Warning summary	
No. of Warnings	
Last Warning Date	
Warning Category	

Summary of open loans

Loan Type	Currency Code	Credit Limit	Total Debt Balance	Number of Credits
Consumer Credit	TL	xxxxxx	xxxxxx	xxxx

Application Summary	
Open Loan Payment Performance	
Closed Loan Payment Performance	
Legal/Administrative Follow-up Loans	
Summary of Guaranteed Loans	

Firm financial statement

SPREAD (TL)

Company Name	Financial Statement Type	Tax Procedure Law (TPL)
	Currency	TL
Branch:	Audited (Y/N)	
Date:	Auditor	

Business account statement 2015- year-end

Expenses			Revenues				
Stock at the beginning of the period	Stock purchased during the period	Expenses	Revenue during the Period	Other Income	End of Period Stock	Loss	Profit

Business account statement -2014 year-end

Expenses			Revenues				
Stock at the beginning of the period	Stock purchased during the period	Expenses	Revenue during the Period	Other Income	End of Period Stock	Loss	Profit

Business account statement 2013 year-end

Expenses			Revenues				
Stock at the beginning of the period	Stock purchased during the period	Expenses	Revenue during the Period	Other Income	End of Period Stock	Loss	Profit

Additional comments and opinions about the client

Loan officer opinion, first review	Loan officer name	Date and time