

# Impact of Culture in Peer-to-Peer Lending

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## Abstract

1. We document that culture and cultural perception both influence financial decisions. We examine the impact of clan culture, an important dimension of Chinese culture, on individual lending behavior.
2. Using data from RenRenDai, a leading peer-to-peer lending platform in China, we find that borrowers from regions with higher clan culture are more likely to get loans funded, attract larger bids from lenders, get loans funded faster, are less likely to default, and repay a larger fraction of their loans.
3. These effects are more pronounced when borrowers are riskier, there is greater information asymmetry, and the legal environment is weaker.
4. Clan culture acts as a substitute for formal institutional mechanisms. Cultural considerations improve the efficiency of financial decisions

## Motivation

### Importance of Culture in Finance

- ▶ A cultural revolution is taking place in finance (Zingales, JFE, 2015). e.g., Corporate culture of trust is positively associated with profits (Guiso, et al., JFE, 2015); Corruption culture overseas influences American residents to cheat on taxes (Debacker et al., JFE, 2015).

### Why Clan Culture?

- ▶ The social structures of imperial China, exemplified by clans, impacted development of Chinese society (Greif and Tabellini, AER, 2010; Benjamin, QJE, 2019).
- ▶ Clan culture has broad social functions and economic functions even in the modern China (Zhang, Journal of Comparative Economics, 2017, 2020; Chen et al., Economic Journal, 2022).
- ▶ Most previous studies look at aggregate outcomes or institutional actions. However, culture is more likely to impact individual actions. Peer-to-peer lending allows us to examine this.

## Research Questions

1. Does clan culture influence borrower and lender behavior in peer-to-peer lending?
2. What is the impact of clan culture on borrower and lender outcomes in peer-to-peer lending?
3. Why does clan culture influence borrower and lender outcomes in peer-to-peer lending?

## Background

### Clan Culture

- ▶ Clans are kin-based groups with common ancestors that gathered to form social organizations.
- ▶ Genealogy compilation is a crucial aspect of the Chinese clan system.
- ▶ Clan Culture effectively facilitated resource pooling for business ventures and risk sharing for daily life, and sustained the Chinese economy for numerous generations.

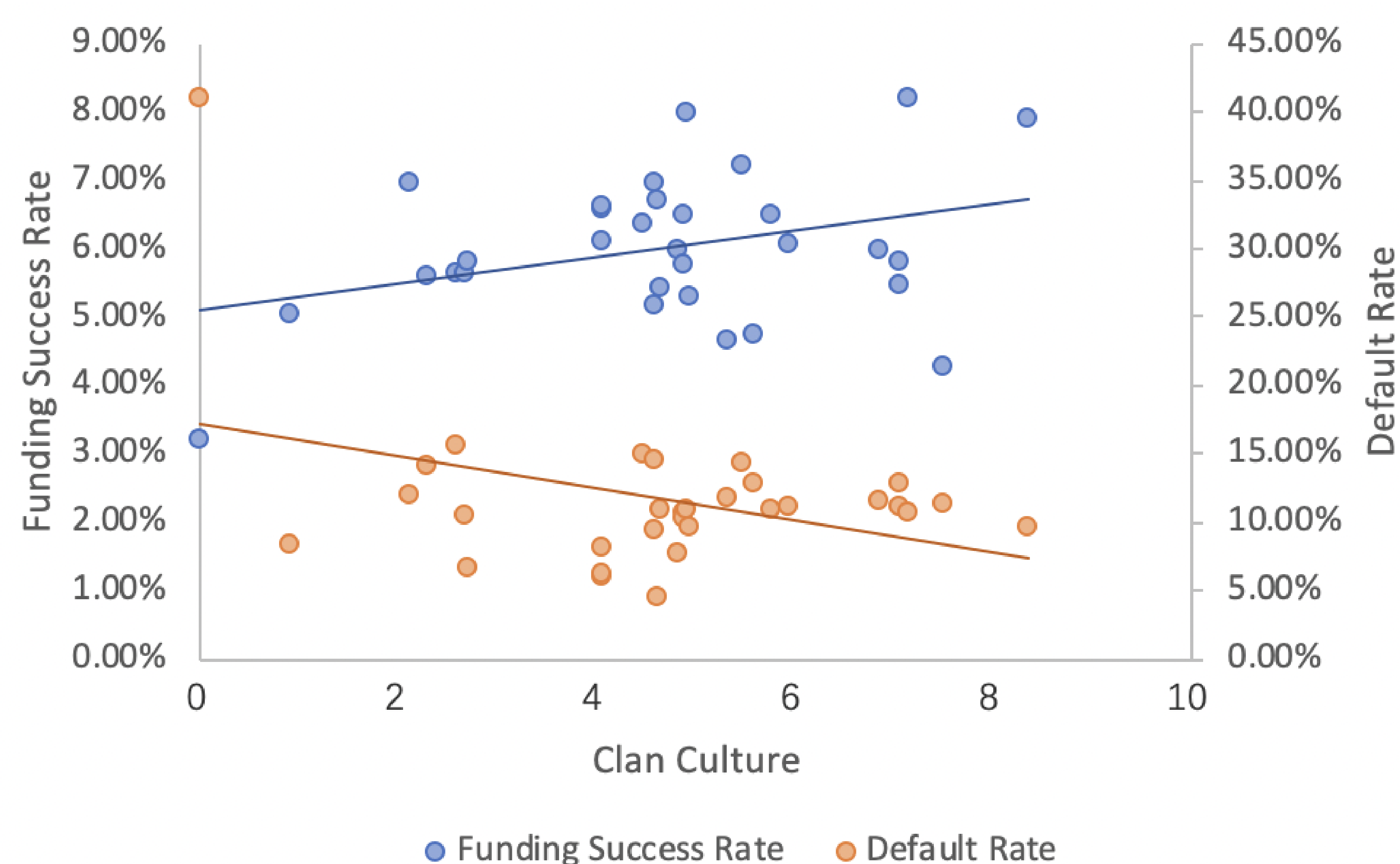
### RenRenDai

- ▶ One of the largest P2P platform in China.
- ▶ Borrowers apply for loans by disclosing personal information and choosing the interest rate they are willing to pay.
- ▶ RRD issues its own credit ratings.
- ▶ Investors bid. A loan receives no funding unless funded 100%.

## Data

- ▶ All 341,348 loan listings posted on RRD between 2012 and 2015, 21,371 successfully funded, rest were not; 2,413 loans defaulted, rest were repaid.
- ▶ Genealogy data from The General Catalog of Chinese Genealogy.
- ▶ GDP from China Statistical Yearbooks.
- ▶ Lawyers data from the Ministry of Justice, provincial departments of justice, the official website of the Lawyers Association, the Lawyers' Yearbook and the provincial and municipal statistical yearbooks.
- ▶ Bank data from China Banking and Insurance Regulatory Commission

## Clan Culture, Funding Success, and Default Rate



## Borrowers with Higher Clan Culture Are More Successful

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Success	Success	Success Hazard Rate	Funding Time	Funding Time	Log Average Bid Amount	Log Average Bid Amount
Clan Culture	0.043*** (7.55)	0.031*** (5.40)	0.019*** (3.85)	-0.010*** (-3.21)	-0.008** (-2.37)	0.031*** (10.60)	0.024*** (7.20)
Loan APR	-0.178*** (-38.70)	-0.178*** (-38.64)	-0.131*** (-33.70)	-0.038*** (-12.61)	-0.038*** (-12.60)	0.048*** (18.85)	0.048*** (18.83)
Female	0.050** (2.12)	0.049** (2.04)	0.040** (2.04)	0.005 (0.40)	0.005 (0.38)	0.072*** (5.63)	0.073*** (5.69)
Age	0.018*** (13.35)	0.017*** (13.04)	0.016*** (14.34)	0.001 (0.82)	0.001 (0.81)	0.011*** (14.16)	0.011*** (14.19)
Credit Rating	1.133*** (87.50)	1.134*** (87.41)	0.583*** (102.80)	-0.019*** (-5.22)	-0.019*** (-5.19)	0.114*** (33.66)	0.114*** (33.71)
Loan Term	-0.030*** (-27.28)	-0.030*** (-27.47)	-0.024*** (-25.97)	0.004*** (6.74)	0.004*** (6.73)	0.013*** (21.68)	0.013*** (21.56)
Education	0.259*** (25.12)	0.259*** (24.89)	0.186*** (21.21)	-0.015** (-2.46)	-0.015** (-2.51)	0.005 (0.91)	0.005 (0.96)
Log Previous Loans	0.719*** (16.41)	0.719*** (16.41)	-0.116*** (-8.23)	-0.059*** (-6.11)	-0.058*** (-6.07)	-0.139*** (-16.25)	-0.141*** (-16.42)
Income Level	0.131*** (18.08)	0.129*** (17.54)	0.127*** (22.03)	0.001 (0.28)	0.001 (0.25)	0.129*** (34.67)	0.128*** (34.13)
Married	0.098*** (4.87)	0.108*** (5.31)	0.089*** (5.01)	0.023* (1.94)	0.024** (2.01)	0.023** (2.05)	0.021* (1.86)
Work Experience	0.245*** (27.51)	0.245*** (27.35)	0.215*** (29.21)	-0.004 (-0.75)	-0.004 (-0.81)	-0.051*** (-10.56)	-0.049*** (-10.18)
House Ownership	-0.072*** (-3.85)	-0.069*** (-3.66)	-0.042*** (-2.66)	-0.039*** (-3.73)	-0.039*** (-3.72)	0.025** (2.54)	0.027*** (2.75)
Car Ownership	0.039* (1.70)	0.035 (1.55)	0.068*** (3.83)	0.001 (0.11)	0.001 (0.12)	0.044*** (3.93)	0.043*** (3.88)
GDP Per Capita		0.004 (0.59)	0.006 (1.20)		-0.006* (-1.65)		0.025*** (7.06)
Lawyers Per Capita		-0.020*** (-3.38)	-0.017*** (-3.58)		0.004 (1.16)		-0.013*** (-4.03)
Banks Per Capita		0.431*** (12.42)	0.328*** (11.36)		0.028 (1.42)		-0.077*** (-4.13)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Purpose Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	334,992	334,992	334,976	21,068	21,068	22,895	22,895
Adjusted R <sup>2</sup>				5.7e-02	5.7e-02	.36	.36
Pseudo R <sup>2</sup>	0.26	0.26					
F Statistic				20.22	16.69	484.4	397.9

## Borrowers with Higher Clan Culture Default Less

	(1)	(2)	(3)	(4)
	Default	Default	Repayment Ratio	Repayment Ratio
Clan Culture	-0.064*** (-4.01)	-0.038*** (-4.16)	0.003** (2.21)	0.033*** (3.34)
Loan APR	0.149*** (10.93)	0.083*** (10.72)	-0.007*** (-6.47)	-0.086*** (-10.23)
Female	-0.180** (-2.43)	-0.106*** (-2.63)	0.015*** (3.16)	0.135*** (3.11)
Age	0.036*** (8.69)	0.020*** (8.76)	-0.002*** (-7.67)	-0.021*** (-8.57)
Credit Rating	-1.654*** (-18.27)	-0.746*** (-19.15)	0.050*** (38.14)	0.875*** (26.67)
Loan Term	0.033*** (11.45)	0.018*** (11.21)	-0.003*** (-14.83)	-0.019*** (-10.56)
Education	-0.410*** (-12.67)	-0.220*** (-12.31)	0.026*** (12.21)	0.240*** (12.74)
Log Previous Loans	0.722*** (11.01)	0.415*** (11.21)	-0.064*** (-18.77)	-0.414*** (-12.96)
Income Level	0.255*** (12.14)	0.144*** (12.36)	-0.014*** (-9.60)	-0.138*** (-11.14)
Married	0.074 (1.23)	0.035 (1.08)	-0.011** (-2.54)	-0.029 (-0.83)
Work Experience	-0.063** (-2.34)	-0.032** (-2.17)	0.006*** (3.45)	0.037** (2.34)
House Ownership	-0.018 (-0.34)	-0.002 (-0.07)	0.001 (0.20)	0.005 (0.17)
Car Ownership	-0.153** (-2.49)	-0.101*** (-2.94)	0.018*** (4.14)	0.106*** (2.92)
GDP Per Capita	-0.026 (-1.34)	-0.015 (-1.43)	0.003** (2.41)	0.021* (1.82)
Lawyers Per Capita	-0.039** (-2.46)	-0.025*** (-2.74)	0.002 (1.54)	0.023** (2.14)
Banks Per Capita	1.388*** (15.42)	0.795*** (15.39)	-0.109*** (-15.31)	-0.799*** (-13.80)
Year Fixed Effects	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes
Purpose Fixed Effects	Yes	Yes	Yes	Yes
Estimation	Logit	Probit	Ols	Tobit
Observations	21,084	21,084	21,054	21,054
Adjusted R <sup>2</sup>			.13	
Pseudo R <sup>2</sup>	0.25	0.25		0.21
F Statistic			163.7	

## Conclusions

- ▶ Borrowers from regions with higher clan culture are more likely to get their loans funded, get loans funded faster and, receive larger bids from lenders, less likely to default, and have higher repayment ratios
- ▶ This effect is more pronounced where the borrowers are of low quality, there exists greater information asymmetry, and the legal environment is weaker.
- ▶ Clan culture influences borrowers' and lenders' performance through market trust, social network, and moral norms

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