

Platform Credit, Advertising, and Customer Capital

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What is a platform company?

Network

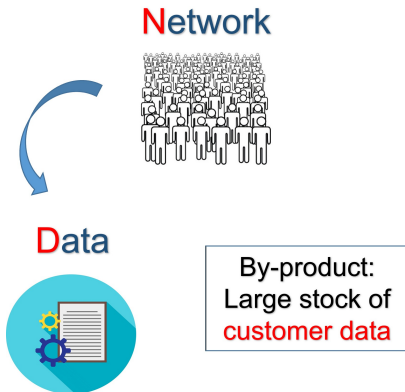


Alibaba, Amazon, Facebook, ...

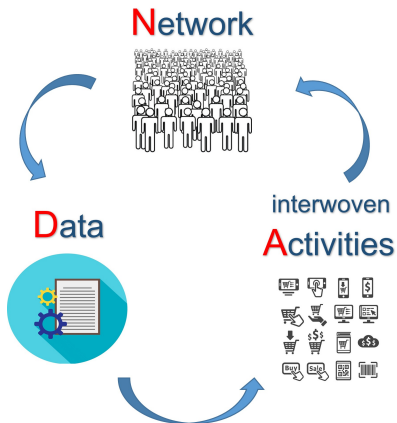
→ platforms / networks

→ exchange of goods, services, and info

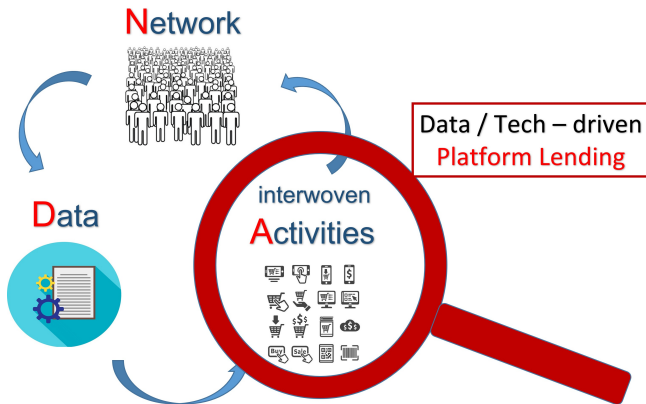
DNA of platform companies



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Platform credit



Research question

How does Platform Credit help SMEs grow?



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Existing research has shown:

Most SMEs stay small and frequently exit the market, even when their productivity equals or surpasses that of larger, established competitors (Ferraz et al., 2015).

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Can [platform credit](#) help these SMEs?

What prevents SMEs' from growing?

Even if SMEs are as productive as large firms, they will remain small if they lack brand recognition, visibility among customers and reputation.

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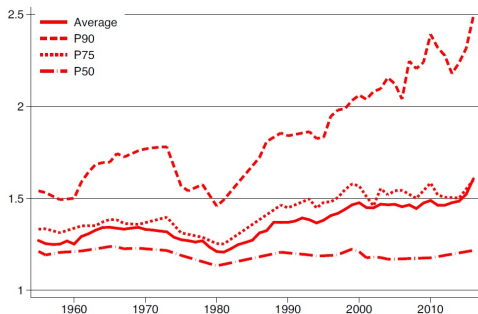
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Lack of customer capital as an obstacle to growth!

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Lack of **customer capital** as an obstacle to growth!



(B) Percentiles markup distribution (revenue weight)

FIGURE III

The Distribution of Markups μ_{it}

Variation in customer capital
→ variation in market power
(De Loecker et al. (QJE, 2020))

Impedes reallocation of
market share. (Foster et al.
(AER, 2008); Ferraz et al.
(2015))

Why don't (productive) SMEs advertise to catch up?

Hypothesis

SMEs advertise too little — they underinvest in customer capital,
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SMEs advertise too little — they underinvest in customer capital, because banks are reluctant to fund customer capital.

- ▶ Customer capital is hard to observe/value
- ▶ Customer capital is intangible...
- ▶ ... makes for poor collateral.

⇒ Banks worried about moral hazard or adverse selection might shy away from unsecured lending without collateral.

A simple model of an e-commerce marketplace

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3. Merchants optimize expected utility from consumption

- ▶ H1: Platform credit boosts advertising and sales
- ▶ H2: Effect amplified for high-quality merchants

Empirical setting



Alibaba Taobao!

- ▶ 30.000.000 merchants (retail)
- ▶ Merchants rarely produce.
- ▶ SMEs!
(avg. sales/quarter $\leq$ ¥96,302)
- ▶ Advertising expenditures



Alibaba AntFinancial!

- ▶ Data of Taobao $\rightarrow$ AntFinancial
- ▶ Big Data $\rightarrow$ credit score
- ▶ High score $\rightarrow$ platform credit
- ▶ observes and processes
merchants' cash flows

FinTech advantages of Alibaba

Big data from Taobao:

- Orders, sales.

Deduct fees/interest.

→ Verifiability

→ Seniority

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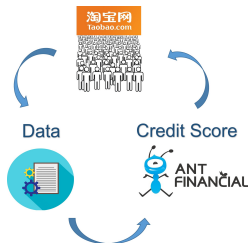
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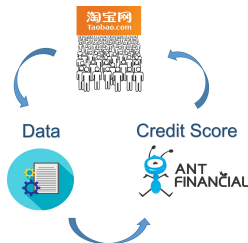
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- ▶ Linear scoring model
- ▶ Continuous score
- ▶ Eligibility: $CS \geq 480$

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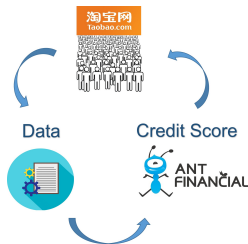
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- ▶ One contract form (3min)
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Automated monitoring:

- ▶ If CS drops below 480, credit line withdrawn the next month.
→ Repayment over 12mth.

Regression discontinuity design

Prediction:

Platform Credit $\Rightarrow$ Invest in customer capital (advertise).

The ideal experiment:

Random access to platform credit?

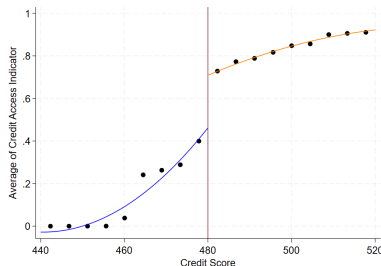
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Panel A: First-stage regressions

	<i>Credit ineligible → eligible</i>
<i>CS below 480 → above 480</i>	0.255*** (0.006)
Controls	Yes
CS bandwidth	[460;500]
Obs.	658,304

Random access to credit → More advertising

Panel B: Second-stage regressions

Δ *Advertising expense*

Credit ineligible → eligible
(instrumented)

???
(???)

Controls

Yes

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Note: Δ Advertising expense is normalized by lagged sales

→ Advertising margin increases by 0.024 (sample mean = 0.02)

Pass-through of platform credit to advertising

	(1)	(2)	(3)
Panel A: First-stage regressions			
	Δ Credit eligible	Δ Credit eligible	Δ Credit amount
CS below 480 $\rightarrow$ above 480	0.255*** (0.006)	0.255*** (0.006)	0.037*** (0.006)
Panel B: Second-stage regressions			
	Δ Credit amount	Δ Advertising expense	Δ Advertising expense
Credit ineligible $\rightarrow$ eligible	0.145*** (0.026)	0.024*** (0.010)	
Δ Credit amount			0.168*** (0.026)
Controls	Yes	Yes	Yes
Obs.	648,184	658,304	648,184
F-stat of excluded instrument	1,844.2	1,859.8	36.29
Bandwidth (CS)	[460;500]	[460;500]	[460;500]

- On average, merchants use **16.8%** (0.024/0.145) of their platform credit to finance new advertising expenses.

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High-quality merchants spend more on advertising

	(1)	(2)	(3)
	First stages		Second stage
	Δ Credit eligible	Δ Credit eligible $\times$ High quality	Δ Advertising expense
<i>CS below 480 $\rightarrow$ above 480 $\times$ High quality</i>	-0.005 (0.007)	0.324*** (0.005)	
<i>CS below 480 $\rightarrow$ above 480</i>	0.257*** (0.009)	-0.042*** (0.005)	
<i>Credit ineligible $\rightarrow$ eligible $\times$ High quality</i>			0.049*** (0.005)
<i>Credit ineligible $\rightarrow$ eligible</i>			-0.002 (0.003)
<i>High quality</i>	0.035*** (0.002)	0.132*** (0.003)	0.003 (0.003)
Controls	Yes	Yes	Yes
Obs.	658,304	658,304	658,304
F-stat of excluded instruments	1,615.4	2,885.8	—
Bandwidth (CS)	[460;500]	[460;500]	[460;500]

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- Only high-quality merchants increase advertising!
- For them, the pass-through of credit to advertising is 92%.
 → High-quality merchants spend almost all credit on advertising!

Random access to credit → Better performance

Second-stage regressions	(1)	(2)	(3)	(4)
Dependent variable:	Δ <i>Shop page visits</i>		Δ <i>Sales</i>	
<i>Credit ineligible</i> → <i>eligible</i>	0.085*** (0.027)	0.015 (0.015)	1.266*** (0.134)	0.081 (0.081)
<i>Credit ineligible</i> → <i>eligible</i> × <i>High quality</i>		0.128*** (0.033)		2.202*** (0.087)
<i>High quality</i>		0.038*** (0.004)		0.150*** (0.031)
Controls	Yes	Yes	Yes	Yes
Obs.	648,182	648,182	646,342	646,342
Bandwidth (CS)	[460;500]	[460;500]	[460;500]	[460;500]

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- ▶ Remember: they spend 92% of platform credit on advertising.
 - Supports “advertising” as economic mechanism

Conclusion

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Evidence from Alibaba Taobao and AntFinancial:

1. Financially constrained SMEs underinvest into customer capital.
2. Causal effect of platform credit on advertisement.
3. Platform credit helps SMEs increase visibility / revenues.
4. In particular, high-quality SMEs benefit.

Financial constraints and customer capital?

Banks reluctant to lend if

- ▶ Moral hazard
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Bank Financing



Asym. info
No collateral

Platform Credit



Big Data
Verifiable Cash Flows

Who finances investments in customer capital?

Platform lenders can lend without collateral...

Unlike banks, they see

- ▶ Firm visibility among customers
- ▶ Customer loyalty
- ▶ Customer satisfaction
- ▶ Customer transactions
- ▶ ...



Unlike banks, they process payments between SMEs and customers!



Hypothesis

Unlike traditional banks, platform lenders finance investments in customer capital, allowing productive SMEs to grow.