

Lab Experiments in Financial Literacy and Personal Finance

Antonia Grohmann¹

¹Associate Professor, Aarhus University BSS

27 June 2023

Why run experiment in personal finance and financial literacy?

- There is a lot of data based on surveys on the topic of financial literacy and personal finance
- In some cases administrative data can also be used to answer important questions in the field

Do you really need to spend time and money to collect new data?

There are a number of problems that can arise with observational data:

- Omitted variable bias
- Selection effects
- Control and simplification
- Unobservable preferences

Many of these problems can be addressed in experiments

There are different types of experiments:

Type of Experiment	Description
Laboratory Experiments	Set in a lab mostly at university, participants as (mostly) students, mostly on computers, participants know they are part of an experiment and are paid to take part
Lab-in-Field-Experiments	Take a lab set up into people's normal environment (get more relevant group for research question), participants know that they are part of an experiment are incentivised to take part
Field Experiments	Use a natural situation for experiment, relevant participants for research question, participants do not know that they are part of an experiment
Online Experiment	Computerised experiments taken by large group of participants, know that they are part of an experiment and are paid to take part, no interaction possible

Field Experiment vs. Lab Experiments

Field Experiments:

- More natural setting
- Sample (often) more relevant for research question
- Learning about specific mechanism can be difficult
- Especially if you have insignificant/unexpected results
- No way to go back or do repeats
- Expensive
- Often requires a lot of project management
- Data collection can take a long time

Lab Experiments:

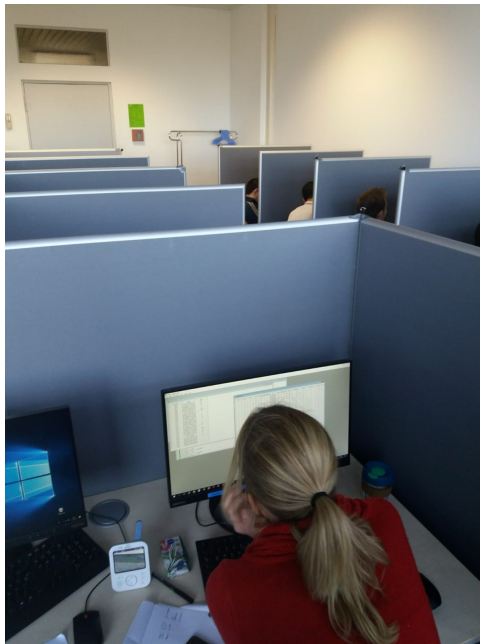
- More control: less likely to be affected by outside factors
- Usually no long lasting effects
- Can manipulate certain factors in the short run
- Easier to implement
- Cheaper
- It is not uncommon to go back for "robustness"

What it comes down to: Whether one methodology is better suited than the other depends on the question that you are asking

Rules for lab experiments

1. No deception:
Instructions have to reflect what is happening in the experiment.
Normally enforced by the lab.
2. Incentives:
Are a way to get people to participate or do certain things
3. Removing context:
Removing anything that is not necessary for the decision that we want to investigate

- Lab experiments are typically run with groups of 10 to 20 people
- Cubicles mean that participants can't see each other
- No communication between participants, except of part of experiment
- Instructions mostly on screen or paper
- Seats are randomly allocated
- Participants payments remain anonymous



Experiments about debt

Experiments about debt

Overindebtedness is a problem for a large number of households

- In Germany 6.9 million Germans were regarded as over-indebted (Schuldenatlas 2017)
- About 10% of German households can be regarded as over-indebted, holding negative assets (Bundesbank)
- In the US, every third household is under pressure from debt collectors (Urbaninstitut 2019)

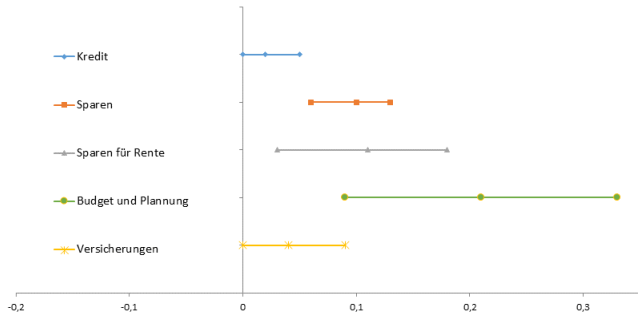
Traditionally explanations name economic shocks as reasons for over-indebtedness:

- Unemployment
- Divorce or death in the family
- Sickness

However:

"economic models underpredict borrowing" (Zinman, 2015)

Can financial education reduce debt? (Kaiser and Menkhoff, 2017)



Literature

1. Behavioral biases have been linked to overborrowing
 - Preferences maybe time inconsistent (Heidhus and Koszegi, 2010, Meier and Sprenger, 2010)
 - Price perception (Bertrand and Morse, 2011, Stango and Zinman, 2009)
 - Attention to costs (Stango and Zinman, 2014)
 - Social comparison can lead to debt (Georgarakos et al. 2013)
2. Overconfidence is related to a number of financial behaviours
 - Excessive trading (Barber and Odean, 2000, 2001, Merkle, 2017)
 - Extreme optimists save less and have shorter planning horizons (Soules, 2004, Puri and Robinson, 2007)

3. Few studies have looked at biased expectations and debt:
- Theoretical model show people receive positive utility to overoptimistic expectations and behave according to these expectations i.e. take too much debt (Brunnermeier and Parker, 2005)
 - Households that are overoptimistic about household financial situation have more debt (Hyytinen and Putkuri, 2018)

This Experiment

We decided to run an experiment to study the link between biased expectations and debt taking in the lab

Studying this link in the lab has a number of advantages:

- Clear causality
- We are able to isolate the effect we are interested in from factors such as economic shocks
- We do not have to rely on self-assessed expectations

There were two main challenges when designing this experiment:

1. How can we manipulate expectations?
2. How can we recreate debt taking in the lab?

We use the "reverse-hard-easy effect" to manipulate income expectations (Kruger, 1999).

Participants are paid according to their performance in a general knowledge quiz compared to others in the same session.

Positions	Earnings
1-2	5 Euro
3-4	4 Euro
5-6	3 Euro
7-8	2 Euro

Treatment variation is given by the difficulty of the task:

HARD: Which sensory cells in the human eye are responsible for colour vision?

- Rods
- Cones
- Plugs
- Buttons

EASY: Which organ in the human body is responsible for blood circulation?

- Lung
- Kidney
- Heart
- Liver

Participants that are given easy questions overestimate their performance, participants that are given hard question underestimate their performance compared to others.

BUT: The expected payouts in both treatments is the same. We can hence manipulate income EXPECTATIONS without changing INCOME itself.

This works because:

- People underestimate their relative position for hard questions and overestimate their relative position for easy questions (Larrick, Burson and Soll 2007)
- Egocentric nature of comparative ability judgments (Kruger 1999)

Debt taking in a lab setting comes with challenges:

- It is regarded as unethical to let participants leave with negative income - even if they come back at a later date
- Most labs are very concerned to keep participants happy and try hard to look after their subject pool - you do not want to upset them
- Participants come to the lab to make money
- Any shopping situation is subject to participants personal preferences

How did we solve these problems?

- Participant got a show-up (5 Euro) and participation fee (8 Euro) in addition to any money they earned during the quiz task.
- Earning from the quiz were separate. These had to be spent in a "market round"
- Participants had to shop before they earned money. This way we were able to frame the shopping as debt taking
- Any spending that is higher than what the participants earns is taken off the participation fee
- We offered a wide range of products that we believed would appeal to a student population
- Although real debt was not possible, we believe that we were able to create some of the emotions associated with debt taking.

Ihr Kontostand: 0.00 €

Ihr maximaler Kredit: 10.00 €

Sie können maximal ausgeben: 10.00 €

Ihr aufgemonnener Kredit: 0.00 €



Unten sehen Sie Bilder und kurze Beschreibungen der Produkte, die Sie kaufen können. Angezeigt werden der Preis in dieser Runde und in allen Folgerunden. Sie können auch mehrere Einheiten eines Produkts kaufen. Bitte beachten Sie, dass positive Kontostände am Schluss des Experiments nicht ausgezahlt werden.



M&M's (200g)
Preis diese Runde: 1.15 €
Preis Runde 2: 2.05 €
Preis Runde 3: 2.98 €

Kaufen: 0 

Pringles Original (190g)
Preis diese Runde: 1.15 €
Preis Runde 2: 2.05 €
Preis Runde 3: 2.98 €

Kaufen: 0 

Rittersport Alpenmilch (100g)
Preis diese Runde: 0.55 €
Preis Runde 2: 0.98 €
Preis Runde 3: 1.40 €

Kaufen: 0 

Haribo Gummibären (200g)
Preis diese Runde: 0.47 €
Preis Runde 2: 0.85 €
Preis Runde 3: 1.23 €

Kaufen: 0 

Club Mate (500 ml)
Preis diese Runde: 0.60 €
Preis Runde 2: 0.96 €
Preis Runde 3: 1.20 €

Kaufen: 0 

Studentenfutter
Preis diese Runde: 1.21 €
Preis Runde 2: 2.16 €
Preis Runde 3: 3.16 €

Kaufen: 0 

Stabilo Stift
Preis diese Runde: 0.58 €
Preis Runde 2: 1.04 €
Preis Runde 3: 1.50 €

Kaufen: 0 

Stabilo Textmarker (4er)
Preis diese Runde: 1.78 €
Preis Runde 2: 3.20 €
Preis Runde 3: 4.62 €

Kaufen: 0 

Blistex Lippenbalsam
Preis diese Runde: 0.62 €
Preis Runde 2: 1.12 €
Preis Runde 3: 1.62 €

Kaufen: 0 

Coca Cola (500 ml)
Preis diese Runde: 0.75 €
Preis Runde 2: 1.15 €
Preis Runde 3: 1.50 €

Kaufen: 0

OK

We elicited income expectations in two different ways

Sie haben zuvor erfahren welche Art von Fragen Ihnen in dem Quiz gestellt werden und wie sich daraus die Bezahlung ergibt.

Zur Erinnerung: Die besten 25% erhalten 5€ und die jeweils folgenden 25% erhalten 4€, 2€, und 1€. Es werden insgesamt 2 Runden gespielt.

Welchen Verdienst erwarten Sie insgesamt aus diesen zwei Runden?

2€ 3€ 4€ 5€ 6€ 7€ 8€ 9€ 10€

Nehmen Sie an eine der beiden Runden wird zufällig ausgewählt. Mit welcher Wahrscheinlichkeit erwarten Sie eine bestimmte Auszahlung zu erhalten?

Bitte geben Sie die Wahrscheinlichkeit in Prozent an, z.B. 0.5 für 50%. Bedenken Sie dabei, dass sich die Wahrscheinlichkeiten zu 1 addieren müssen.

Auszahlung von 5 €

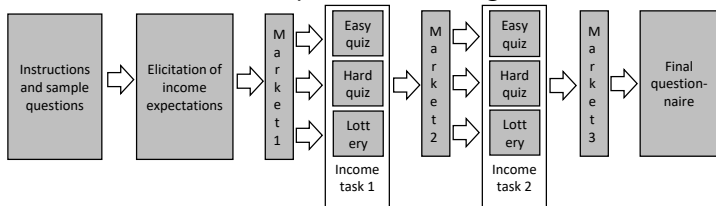
Auszahlung von 4 €

Auszahlung von 2 €

Auszahlung von 1 €

OK

Full Experimental Design



- Instructions were given out on paper. Very important to pre-test instructions
- We asked a number of comprehension questions. If a participant got a comprehension question wrong, one of the experimenters would come to them to ask them to rethink the questions. If they still got it wrong, we would explain the answer to them.
- Experiment only starts when all participants got the answer right

Questionnaire

Different than field experiments, where you normally have a baseline survey, control questions are elicited after the main experiment:

- Lab experiments are meant to be so "clean" that you should not need control variables
- Questions may affect how people behave during main part of the experiment
- Downside: It is possible that the treatment affects how people answer questions
- What you need to ask participants and when during the experiment should be carefully thought about before you design your experiment

Procedure

The experiment was programmed in Z-tree:
Z-tree is a software for running lab experiments

- Advantages:

- It is very common. Many lab-assistants know how to use it
- It is free to use, you only need to cite Fischbacher (Experimental Economics, 2007)
- You don't need to know how to program
- Some common experiments are pre-programmed

- Disadvantages:

- It is about 20 years old and looks it!
- It takes a while to get used to

Other alternative exists (O-tree), but these require programming skills.
Can be run online.

- The main experiment was conducted in December 2017 in the experimental economics lab at the TU Berlin.
- 285 participants took part in 24 session containing about 24 people each
- We ran two pilot session prior to the main sessions that we included in the main analysis
- Participants were recruited via ORSEE (Greiner, 2015)
 - ORSEE is a participants recruitment tool that most labs use
 - Labs have a pool of registered participants
 - ORSEE also contains information on experiments that participants have previously participated in
 - It also contains information on basic socio-demographics
 - You can recruit participants based on gender

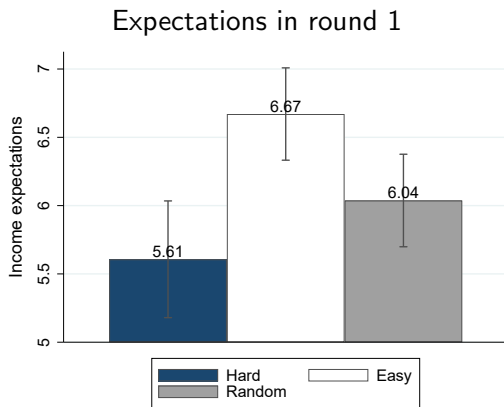
For any experiment it is important to check if the sample is balanced:

	<i>n</i>	Mean	Mean by treatment			F-test
			Hard	Easy	Control	<i>p</i> -value
Gender (female=1)	252	0.49	0.49	0.45	0.50	0.66
Age	252	22.64	22.17	23.20	23.05	0.02
Bachelor degree	252	0.18	0.18	0.23	0.14	0.32
Masters degree	252	0.06	0.02	0.06	0.10	0.12
Works	252	0.31	0.29	0.32	0.34	0.77
Income	248	701	635	834	627	0.01
Financial literacy	252	5.26	5.10	5.42	5.29	0.37
Risk tolerance (choices)	248	10.1	9.64	11.11	9.35	0.05
Risk tolerance (self-assessed)	252	4.75	4.55	5.22	4.45	0.04
Self-control	252	-0.03	-0.18	0.04	0.04	0.30

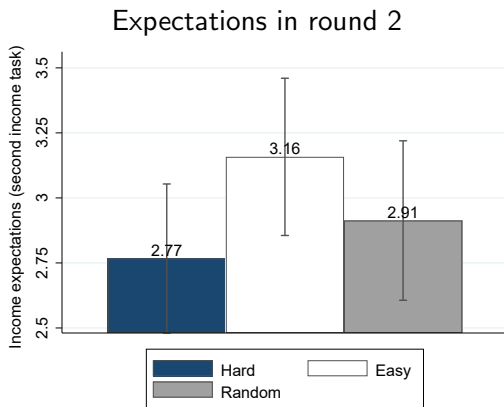
We are assuming that if observables are balanced between treatments that all unobservables are also balanced.

We can therefore say that randomisation was successful.

Were we successfully able to manipulate expectations?



After feedback participants adjust their expectations!



Does our treatment affect debt taking in the lab?

	Debt after market 1 (1)	Debt after market 2 (2)	Final debt (3)	Has debt (4)
Easy treatment	0.728** (0.366)	0.600** (0.297)	0.361* (0.192)	0.111 (0.073)
Random group	0.592* (0.345)	0.313 (0.305)	0.169 (0.194)	0.028 (0.074)
Constant	3.501*** (0.259)	2.128*** (0.208)	0.489*** (0.119)	0.310*** (0.051)
R ²	0.019	0.016	0.013	0.010
Observations	252	252	252	252

Mechanism: Are the results caused by a change in expectations and overconfidence:

	Debt after market 1		Debt after market 2		Final debt		Has debt	
Expectations	0.246*** (0.094)		0.279*** (0.082)		0.114** (0.052)		0.029 (0.019)	
Overconfidence		0.078 (0.048)		0.177*** (0.040)		0.187*** (0.029)		0.076*** (0.009)
Female	-0.848*** (0.317)	-0.949*** (0.316)	-0.408 (0.250)	-0.523** (0.246)	-0.301* (0.179)	-0.348** (0.160)	-0.090 (0.069)	-0.102* (0.059)
Age	-0.012 (0.049)	-0.005 (0.048)	0.014 (0.043)	0.018 (0.041)	0.008 (0.026)	0.004 (0.024)	-0.005 (0.010)	-0.008 (0.009)
Bachelor	0.012 (0.388)	0.058 (0.388)	-0.300 (0.311)	-0.233 (0.306)	-0.179 (0.203)	-0.133 (0.185)	-0.049 (0.088)	-0.033 (0.078)
Masters	0.727 (0.993)	0.674 (1.000)	0.648 (0.764)	0.621 (0.738)	0.504 (0.479)	0.537 (0.436)	0.214 (0.176)	0.233 (0.159)
Works	0.058 (0.332)	0.149 (0.345)	-0.088 (0.272)	-0.019 (0.272)	0.074 (0.185)	0.057 (0.163)	-0.024 (0.072)	-0.040 (0.063)
Log of income	-0.076 (0.229)	-0.061 (0.239)	-0.215 (0.187)	-0.204 (0.196)	-0.152 (0.132)	-0.155 (0.120)	0.000 (0.045)	-0.002 (0.041)
Financial literacy	0.156 (0.115)	0.149 (0.117)	0.225** (0.087)	0.249*** (0.089)	0.045 (0.064)	0.096 (0.064)	-0.001 (0.023)	0.022 (0.021)
Risk tolerance (choices)	0.011 (0.031)	0.023 (0.031)	0.013 (0.029)	0.022 (0.027)	0.033 (0.025)	0.032 (0.021)	0.001 (0.007)	-0.000 (0.006)
Risk tolerance (self-assessed)	0.079 (0.079)	0.108 (0.078)	0.100 (0.061)	0.129** (0.061)	-0.034 (0.039)	-0.028 (0.035)	-0.000 (0.016)	-0.000 (0.014)
Self-control	0.116 (0.144)	0.103 (0.144)	-0.005 (0.114)	-0.010 (0.113)	-0.077 (0.068)	-0.067 (0.061)	-0.016 (0.029)	-0.010 (0.027)
Constant	2.239 (1.638)	3.294** (1.667)	0.199 (1.304)	1.426 (1.333)	0.442 (0.769)	0.983 (0.768)	0.337 (0.332)	0.485 (0.302)
R ²	0.13	0.11	0.16	0.18	0.09	0.26	0.04	0.24
Observations	241	241	241	241	241	241	241	241

The elephant in the room: EXTERNAL VALIDITY

- External validity is a major criticism of lab experiment - In some cases with good reason!
- What can we really learn about "real" life from such stylised situations?
- Lab experiments have an important role in research
 - Effective at isolating a single effect
 - The aim is to strip a situation down to the very basics
 - A situation is simplified
 - Few confounding effects
 - Try to keep the emotions and cognitive processes attached to the decision that is being researched
- It is likely that you will have to argue for the external validity of your experiment

We try to show that our experiment has external validity by looking at the same effect in a representative sample of households in Germany:

	Overdraft use		Belief to repay		Debt problems	
	(1)	(2)	(3)	(4)	(5)	(6)
Overconfidence (numbers)	0.089** (0.045)		0.089** (0.039)		-0.002 (0.056)	
Overconfidence (animals)		0.058 (0.037)		-0.021 (0.032)		-0.058 (0.046)
Gender	0.022 (0.026)	0.024 (0.025)	0.004 (0.021)	-0.002 (0.021)	-0.027 (0.036)	-0.033 (0.035)
Age	-0.001 (0.001)	-0.001* (0.001)	0.001** (0.001)	0.001** (0.001)	-0.003** (0.002)	-0.003** (0.002)
Education	0.001 (0.008)	0.001 (0.008)	-0.013 (0.008)	-0.010 (0.007)	0.008 (0.012)	0.010 (0.012)
Works	0.020 (0.031)	0.025 (0.031)	-0.045** (0.023)	-0.045** (0.022)	-0.110** (0.048)	-0.118** (0.048)
Log of income	0.006 (0.025)	0.002 (0.025)	0.042* (0.024)	0.036 (0.024)	-0.016 (0.046)	-0.014 (0.046)
Financial literacy	-0.012 (0.010)	-0.013 (0.010)	0.000 (0.008)	0.000 (0.008)	-0.051*** (0.017)	-0.051*** (0.017)
Risk tolerance (self assessed)	0.010 (0.006)	0.010 (0.006)	-0.000 (0.005)	-0.001 (0.005)	0.001 (0.007)	0.002 (0.008)
Risk tolerance (choices)	0.000 (0.002)	-0.000 (0.002)	-0.000 (0.002)	-0.000 (0.002)	0.003 (0.002)	0.003 (0.002)
Self-control	-0.012 (0.017)	-0.012 (0.017)	0.014 (0.014)	0.014 (0.014)	0.030 (0.024)	0.030 (0.024)
Constant	0.131 (0.218)	0.166 (0.221)	0.544*** (0.193)	0.613*** (0.189)	0.668* (0.398)	0.668* (0.394)
Unconditional mean	0.12	0.12	0.92	0.92	0.10	0.10
R ²	0.022	0.019	0.035	0.026	0.099	0.104
Observations	698	698	639	639	280	280

Conclusion Part I

- What have we learned to far?
 - We run an experiment to study the causal relationship between bias income expectations and debt taking in the lab
 - We are able to successfully manipulate expectations using the reverse-hard-easy-effect
 - We can see that higher income expectations lead to more debt taking
 - The effect can be seen in early round and fades as participants adjust their expectations
 - We can show that the effect works through higher expectations in the early rounds and overconfidence in later rounds
- In this experiment, results were in line with hypothesis and we found significant results
- I am now going to show another example of what can also happen.

The effect of social comparison on debt taking: Experimental evidence

Social comparison and borrowing behavior

“The wealth or power must be put in evidence, for esteem is awarded only on evidence.” (Thorstein Veblen 1899, The Theory of the Leisure Class)

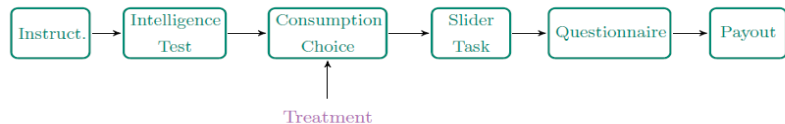
- Higher perceived peer income related to higher debt and financial distress (Georgarakos 2014)
- Having lottery winners in the neighborhood leads to more borrowing and bankruptcy (Agarwal 2019)

Underlying mechanisms of social comparison

Aim of this paper:

- Identify potential mechanisms underlying peer effects on debt taking
 - **Social image concerns**
Concerns about the kind of private information that is revealed to others when making a public decision
 - **Peer information**
Receiving information about the decision of others and adjust the own decision because of:
 - Intrinsic conformity
 - Self-image concerns
 - New information
- We run a lab experiment to disentangle these two effects
- Using experiments also circumvents the problem of correlated and contextual effects (Manski 1993)

Experimental flow



Consumption choice

- Quiz earnings depend on performance in comparison to others:
Best 25% earn 3 Euro, second best earn 2 Euro, third best earn 1 Euro and last 25% earn 50 Cent
- All quiz earnings that are not spend on pens are lost
- Pen prices correspond to earnings levels (one additional pen):
5-Star pen costs 4 Euro, 4-Star 3 Euro, 3-Star 2 Euro, 2-Star 1 Euro and 1-Star 50 Cent
- Participants can “take out a loan” to buy a better pen
- Repay the loan with money earned in the slider task
(payoff decreases with the amount of sliders set correctly)
- If this is not enough, money is taken from participation fee

Quiz

Teil 1 - Vervollständigen Sie die folgenden Zahlenreihen:

2 7 13 20 28 ?? <input type="text"/>	2 9 ?? 35 54 77 <input type="text"/>	?? 6 -1 8 -3 10 <input type="text"/>	3 ?? 7 -15 13 -27 21 <input type="text"/>
--------------------------------------	--------------------------------------	--------------------------------------	---

Bitte speichern Sie diese 4 Antworten explizit, indem Sie auf "Speichern" klicken:

Teil 2 - Wählen Sie jeweils das Bild von der rechten Hälfte (1, 2, 3 oder 4), welches die Bilderreihe auf der linken Hälfte sinnvoll ergänzt (Diese Antworten werden automatisch gespeichert).

Bild: <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4	
Bild: <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4	

Why pens?

- Quality difference visible
⇒ Used as signal for good performance
- No strong preferences
⇒ Cheapest pen is preferred
- Cheapest pen also used in the lab

Stifte Auswahl

5-Sterne Stift: 

4-Sterne Stift: 

3-Sterne Stift: 

2-Sterne Stift: 

1-Stern Stift: 



Back

Treatments

Control (private) treatment

- Simultaneous consumption decision
- Decision is kept private

Public treatment: social image concerns

- Simultaneous consumption decision
- Decision has to be made public afterwards

Info treatment: peer information

- Sequential consumption decision
- Aggregate decisions are shown in table for subsequent participants

Inducing social image concerns in public treatment

- Performing well on an “IQ-test” is a desirable trait
- Earnings that are not spend on a pen are lost

⇒ Buying a low quality pen is revealing for a low performance

Inducing peer information in info treatment

- Participants are sitting in cubicles and decide in random order
- They only see how many pens of each kind haven been bought previously

⇒ Identities are not revealed but aggregate preference of peers

Caveat: there is path dependency in each session, we will control for the order in which people decide

Table

Main hypotheses

- 1 Participants in the public treatment are more likely to take a loan to buy a higher quality pen in order to signal higher intelligence.
- 2 Participants in the information treatment follow the decision of those who have already made their decision. Thus, we expect to find evidence for conformity in this setting.¹

Procedures

- 24 sessions at TU Berlin in November 2018 (+3 pilot sessions)
- Experiment is programmed in z-Tree (Fischbacher 2007)
- Participants are recruited via ORSEE (Greiner 2015)
- 270 (mostly) students from various disciplines
- Sessions last between 42-58 minutes
- Average earnings are 14.33 Euro
(including 5 Euro show-up fee and 3.50 Euro participation fee)

The study is registered in the AEA RCT Registry (AEARCTR-0003597)

There is not more borrowing in the public treatment

	Loan Amount (1)	Loan Dummy (2)	Loan Amount (3)	Loan Dummy (4)
Public Treatment	0.010 (0.118)	0.041 (0.088)	-0.017 (0.137)	0.006 (0.095)
Info Treatment	0.086 (0.126)	0.033 (0.078)	0.073 (0.114)	0.003 (0.073)
Mean Control Group	0.220	0.172	0.220	0.172
Adj. R-Squared	-0.004	-0.005	0.030	0.034
Controls	No	No	Yes	Yes
Observations	270	270	248	248

There is no effect when we control for path dependence

	Loan Amount (1)	Loan Dummy (2)	Loan Amount (3)	Loan Dummy (4)
Info Treatment	0.014 (0.166)	-0.092 (0.095)	-0.016 (0.452)	0.070 (0.369)
Order	0.011 (0.021)	0.018 (0.012)		
Mean Prev. Pens			0.023 (0.113)	0.051 (0.116)
Mean X Info			0.034 (0.164)	-0.015 (0.139)
Mean Control Group	0.220	0.172	0.220	0.172
Adj. R-Squared	0.027	0.037	0.018	0.031
Correction	Order	Order	Mean Pen	Mean Pen
Observations	248	248	226	226

Pre-experimental online survey

- Online survey send out with lab invitation approx. one week before session
- Choose preferred product out of five homogeneous goods: chocolate, cola, folders, lip balms and pens
- Same five pens as later offered in the lab
- Questions on importance of price, brands/image and the opinion of others for consuming everyday products

⇒ Allows to test for within-variation and control for pre-experimental preferences

We check deviations from pre-experiment choice

	Pen Before (1)	Pen After (2)	Difference (3)
Public Treatment	0.098 (0.226)	-0.061 (0.231)	-0.237 (0.246)
Info Treatment	-0.227 (0.254)	0.022 (0.179)	0.262 (0.289)
Mean Control Group	2.00	2.69	0.71
Adj. R-Squared	0.036	-0.014	0.004
Observations	201	248	201

Results on info treatment unchanged when controlling for path dependence

	Lost Amount (1)	Lost Dummy (2)	Lost Amount (3)	Lost Dummy (4)
Public Treatment	0.115** (0.043)	0.076** (0.030)	-0.066 (0.070)	-0.033 (0.044)
Info Treatment	0.068 (0.057)	0.067 (0.055)	-0.018 (0.043)	0.005 (0.050)
Performance			0.002 (0.003)	0.002 (0.003)
Performance X Public			0.026** (0.014)	0.016** (0.008)
Performance X Info			0.013 (0.009)	0.009 (0.008)
Mean Control Group	0.038	0.043	0.038	0.043
Adj. R-Squared	-0.003	-0.006	0.018	0.001
Observations	248	248	248	248

Results on info treatment unchanged when controlling for path dependence

Why does publicity lead to under-spending?

- Blame aversion:
being the cause of others misery is socially undesirable
- Debt stigma:
It is more stigmatized to be seen as having debt than to be seen as unintelligent

⇒ Participants still show social image concerns, just not the ones we anticipated: the context might have changed concerns

Conclusion

- We run a lab experiment to disentangle the effects between social image concerns and peer information
- Lab experiments in peer effect mean we can avoid manski-problems
- Results are not as hypothesised: The public treatment seems to lead to "leaving money on the table" not debt taking
- We discuss two possible reasons: Blame aversion and debt stigma
- Social image concerns still matter but not in the way we anticipated