Keeping Up Appearances: An Experimental Investigation in Social Pressure and Relative Ranks

Pascaline Dupas (Princeton)
Marcel Fafchamps (Stanford)
Laura Hernandez-Nunez (Columbia)

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Motivation

- Relative rank concerns have long been hypothesized to affect economic behavior:
  - Veblen and Howells 1899: conspicuous consumption to increase social status.
  - Duesenberry 1949: considerations of relative social status increase people's propensity to consume out of current income to 'keep up with the Jones'
  - Renewed interest for these old theories: Ghiglino and Goyal 2010; Bramoullé and Ghiglino 2022; Langtry 2023
  - Cited as reason for lavish weddings (Rao 2001; Bloch, Rao, and Desai 2004) and funerals (Jindra and Noret 2011)
- Behavioral econ: social image and self-image concerns Bursztyn, Ferman, et al. 2018; DellaVigna, List, and Malmendier 2012 and shown to affect various types of behaviors.
  - Austen-Smith and Fryer Jr 2005; Bursztyn, Egorov, and Jensen 2019; Bursztyn and Jensen 2015: social image concerns affect educational investment decision for high-school students in the USA.
  - Butera et al. 2022: public recognition motivates desirable behavior (exercise, charitable contribution) but also creates highly unequal image payoffs: pride vs. shame.

Motivation

- Abundant anecdotal evidence that the *appearance* of poverty can attract scorn, ridicule, discrimination and, often, moral condemnation.
- The poor often complain about the lack of respect they receive from others—which may, in turn, reduce their own self-respect.
- Keeping up appearances to gain the respect of others may thus be optimal from an individual point of view
  - The English language itself thinks it is the case: 'to look respectable'
- This can even be formalized by a dress code that varies with the domain of comparison – e.g., Royal Ascot Derby vs Job interview vs Supermarket

This Paper

We investigate two questions central to the welfare cost of relative rank considerations:

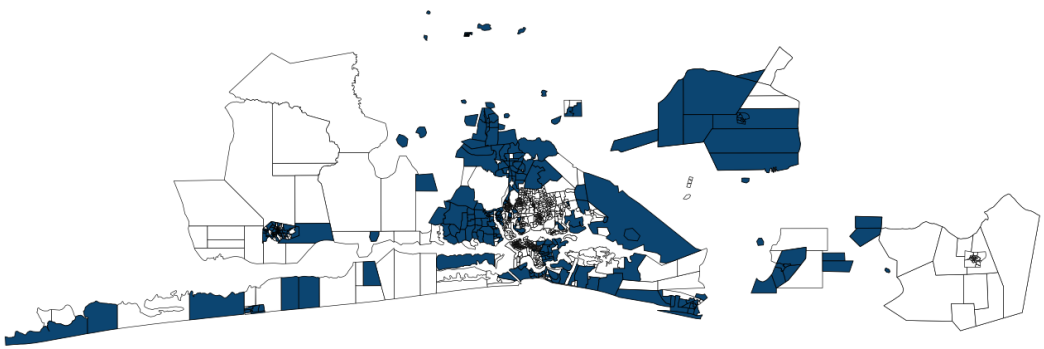
1. Are individuals who appear poor more likely to be victimized?

2. Does this generate incentives for people to distort their behavior/consumption in order to manipulate their perceived rank?

Answers to these questions *matter* for policy: design of anti-poverty programs; targeting; perceptions of inequality

Study design

- Series of choice experiments embedded in the second wave of the AUDRI survey in Côte d'Ivoire (Nov '22 to Mar '23)
- 2276 individuals from relatively poor areas in the Greater Abidjan region



Experimental design

- Survey experiments:
  - Raffle choice: treatment = public vs private
  - Several vignette experiments: treatment = info given
  - Photograph choice: treatment = documentary invitation
  - Documentary choice: randomized
- Lab experiments:
  - Mini-job applicants: treatment = meal choice
  - Enumerators screening: treatment = first or second photo
- Measurements:
  - Rating of photographs by mini-job workers
  - Job screening of photographs by enumerators

H1: Individuals who appear to be of lower rank are believed to be victimized

- We use vignette-type questions to test for H1
- The vignettes had the following structure:
  "I will present you some profiles of people and some situations; please rank from 1 to 10 each profile/person according to their likelihood of facing each situation"
- There were three types of vignettes to address different possible markers of socio-economics status:
  - Physical appearance $\rightarrow$ randomized SES markers in photographs
  - Consumption patterns $\rightarrow$ randomized applicant profile (choice)
  - (Benchmarking): Qualifications $\rightarrow$ randomized applicant profile (education)

Victimization based on *physical appearance*

- **Hypothesis:** Visible markers of SES impact the likelihood of being victimized
- **Test:** respondents asked to estimate the likelihood that a given person (shown on a photograph) will be victimized
  - same individual photographed three times in different outfits/contexts associated with Low/Medium/High SES
  - Respondents randomly shown one picture

Individuals appearing to be better-off are believed less likely to be victimized

	(1) Suspected by the police of burglarizing	(2) Suspected by the community of stealing	(3) Evicted by landlord	(4) Invited to social gathering
High SES picture	-0.30***	-0.72***	-0.72***	1.45***
	(0.08)	(0.08)	(0.08)	(0.08)
Low SES picture	0.03	0.07	0.17**	-0.56***
	(0.08)	(0.08)	(0.08)	(0.08)
Photo actor FE	Yes	Yes	Yes	Yes
Observations	6828	6828	6828	6828

Notes: An observation is a vignette depicting an individual in either a Low, Medium or High SES outfit and background. The omitted category is "Medium SES" photos. Respondents were asked to rate the likelihood of the outcome on a scale of 1 to 10. To facilitate interpretation, we standardize these responses to have a mean 0 and a standard deviation of 1 in the omitted category. Clustered standard errors at the respondent level.

Second order beliefs about victimization risk are shared across SES

	(1)	(2)	(3)	(4)	(5)
	Dep. Var: Likelihood to be Invited to Social Gathering				
	Men	Women	Bottom wealth tercile	Middle wealth tercile	Top wealth tercile
High SES picture	1.40***	1.49***	1.44***	1.59***	1.30***
	(0.11)	(0.11)	(0.13)	(0.14)	(0.14)
Low SES picture	-0.62***	-0.49***	-0.53***	-0.54***	-0.61***
	(0.11)	(0.11)	(0.14)	(0.14)	(0.14)
Photo actor FE	Yes	Yes	Yes	Yes	Yes
Observations	3408	3420	2277	2277	2274

Notes: An observation is a vignette depicting an individual in either a Low, Medium or High SES outfit and background. The omitted category is "Medium SES" photos. Columns indicate characteristics of *respondent*. Indep. Vars are characteristics of the picture they rated.

Do *consumption choices* matter?

- **Hypothesis:** consumption choices affect how people are treated in economic interactions
- **Test:** respondents rank profiles that indicate whether the profiled applicant chose (1) a free meal or (2) a key-chain and a tote bag as compensation for coming to an interview
- Respondents are presented 3 out of 10 different profiles in each of the 3 different scenarios

Consumption choices are believed to matter

Table: Consumption choices as signals: Experimental Vignettes

	(1) Charity committee	(2) Interview at the supermarket	(3) Interview by the NGO
Selected free meal	-0.42***	-0.39***	-0.35***
	(0.03)	(0.03)	(0.03)
Occupation: Unemployed	0.04	0.28***	0.02
	(0.03)	(0.03)	(0.03)
Occupation: Casual Worker	0.03	0.18***	-0.03
	(0.03)	(0.03)	(0.04)
Father is civil servant	0.04	-0.01	0.03
	(0.03)	(0.02)	(0.03)
Observations	6828	6828	6828

Notes: An observation is the written profile of a hypothetical job applicant. The omitted categories are: selected tote bag and key-chain as compensation for interview time; occupation: bank employee; father's profession: farmer. Respondents were asked to rate the likelihood of the outcome on a scale of 1 to 10. To facilitate interpretation, we standardize these responses to have a mean 0 and a standard deviation of 1 for observations in the "tote bag and key chain" group. Clustered standard errors at the respondent level.

Second order beliefs about victimization risk are shared across SES

	(1)	(2)	(3)	(4)	(5)
	Dep. Var: Profile Invited as Member of Charity Committee				
	Men	Women	Bottom wealth tercile	Middle wealth tercile	Top wealth tercile
Selected free meal	-0.40***	-0.45***	-0.36***	-0.46***	-0.44***
	(0.04)	(0.04)	(0.05)	(0.05)	(0.04)
Occupation: Unemployed	0.03	0.04	0.06	0.02	0.04
	(0.04)	(0.04)	(0.05)	(0.05)	(0.05)
Occupation: Casual Worker	0.09*	-0.02	0.05	0.04	0.02
	(0.05)	(0.05)	(0.06)	(0.06)	(0.06)
Father is civil servant	0.10***	-0.02	0.04	0.01	0.06
	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)
Observations	3408	3420	2277	2277	2274

Notes: Columns indicate characteristics of *respondent*. Indep. Vars are characteristics of the profile they rated.

Benchmarking

- We use the benchmarking experiment to quantify the magnitude of the victimization effect.
- For the committee position, having chosen the key-chain etc over the free meal increases the applicant's perceived likelihood of being selected by $+0.42$ standard deviation
- This is similar to the effect of having secondary education $= +0.50$ standard deviation

Are people's beliefs rooted in reality?

- Vignettes suggest people *think* that people who look poor receive a worse treatment in various human interactions. Are they right?

Are people's beliefs rooted in reality?

- To test this: Consequential experiment in which enumerators from our partner survey firms were asked to *screen* applicants for video documentaries.
  - given photos submitted by applicants
  - asked to score applicants on a scale of 0 to 10 for suitability for one of three documentaries.
    1. 'Babi la joie' (about the joy of living in Abidjan)
    2. 'Babi la dure' (about the difficulties of life in Abidjan)
    3. 'Abidjan terre d'opportunité' (about the economic opportunities offered by Abidjan)
  - Real stakes: We ultimately invited the top-scorers to submit a one-minute video recorded on a phone, and combined videos to produce three documentary videos
  - Photos separately scored for SES, beauty, corpulence (mini-job)
  - Note: Being fat is a common status symbol in sub-Saharan Africa Macchi 2023 show me

Appearances and job selection: Enumerator scores

	(1) Babi la joie	(2) Terre d'opportunite	(3) Babi la dure
SES score	0.068	0.190**	0.011
	(0.073)	(0.086)	(0.065)
Beauty score	0.229***	0.096	0.057
	(0.087)	(0.084)	(0.074)
Corpulence score	0.069	0.335***	0.009
	(0.074)	(0.099)	(0.071)
Female	0.333	0.582**	0.168
	(0.233)	(0.276)	(0.208)
Log(age)	-1.948***	-1.269***	0.253
	(0.342)	(0.481)	(0.337)
Mean score	6.16	6.37	7.02
Observations	224	150	259

Notes: An observation is a photo of a AUDRI study participant randomly assigned to the documentary experiment, and who agreed to have her photo rated. Each column shows a regression. The dependent variable is the average selection score (from 1, lowest, to 10, highest) given by enumerators to each photograph for a particular documentary. SES, beauty, and corpulence scores are average scores (between 0 and 1) given to photograph by judges.

Taking stock

- People believe that visible signals of SES such as clothes and consumption choices affect how people are treated in social and economic interactions
- Does this belief lead to a distortion in people's behavior?

Model

We present a theoretical model of 'keeping up appearances' that produces the following results:

- For a given domain of social comparison, individuals below a threshold income level of Z invest an increasing fraction of their income to preserve appearances, up to an income level y^* below which they give up on appearances and get victimized.
- For these individuals, the share of consumption spent on the signal *falls* with income: the signal behaves like a necessity
- Similar predictions if the likelihood (or severity) of victimization falls sharply as a function of appearances in the vicinity of Z
- They also generalize to the signal being a luxury good, rather than a pure signal.
- Model predictions do not require that subjects be unaware that others are manipulating their perceived rank.

Photograph Experiment: Design

- Respondents are asked their consent to be taken a picture for tracking purposes
- Respondents assigned to the **treatment** group are asked their consent for the research team to show the picture to a local panel that will select participants for documentaries about Abidjan
- We offer the possibility to come back at another moment and take another (nicer) picture
- **Hypothesis:** respondents are willing to pay (in time/effort) to produce a photograph that make them look higher-rank in order to improve their chances of being selected for the documentary

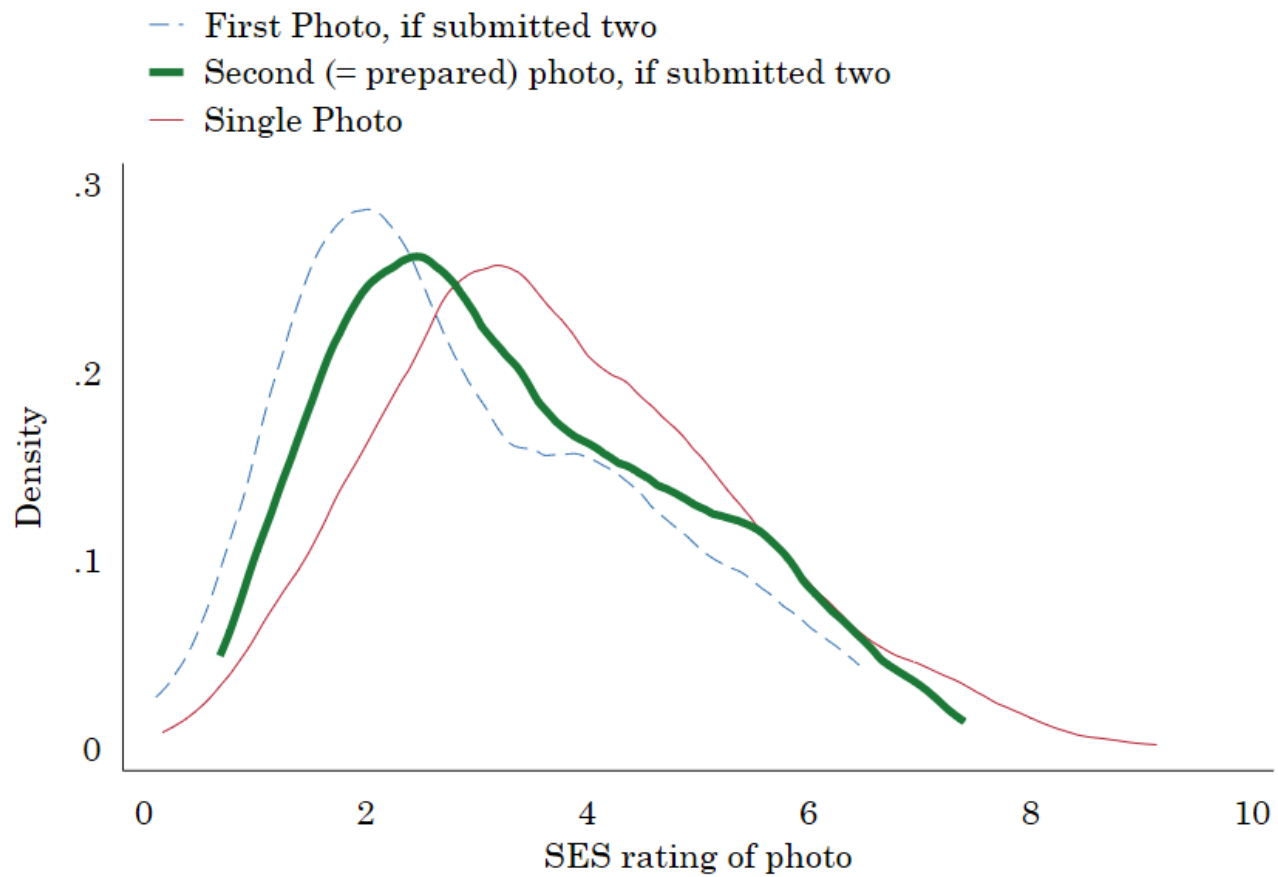
Photograph Experiment: Results

	(1)	(2)	(3)	(4)	(5)	(6)
	Scheduled second photoshoot			Participated in second photoshoot		
Screening	0.059**	0.052**	0.054**	0.090***	0.083**	0.081**
	(0.026)	(0.025)	(0.025)	(0.034)	(0.033)	(0.032)
Mean control	0.17	0.17	0.17	0.16	0.16	0.16
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Sous-prefecture FE	No	Yes	Yes	No	Yes	Yes
Enumerator FE	No	No	Yes	No	No	Yes
Observations	758	758	758	563	563	563

Heterogeneity

	(1)	(2)	(3)	(4)	(5)
	Dep. Var: Second Photoshoot				
	Men	Women	Bottom wealth tercile	Middle wealth tercile	Top wealth tercile
Screening	0.09*	0.05	0.04	0.15**	0.08
	(0.05)	(0.05)	(0.06)	(0.06)	(0.07)
Mean control arm	0.12	0.19	0.23	0.10	0.12
Observations	285	278	210	175	178

Manipulation of rankings between photo-shoots: second photos deemed to be of higher-rank



Manipulation of rankings between photo-shoots: second photos deemed to be of higher-rank

	(1) SES rank	(2) Beauty rank	(3) Corpulence rank
Prepared photo	0.397**	0.602***	0.165
	(0.179)	(0.115)	(0.146)
Constant	2.961***	4.859***	4.159***
	(0.126)	(0.081)	(0.103)
Respondent FE	Yes	Yes	Yes
Observations	230	230	230

An observation is a respondent-photograph. Only photographs of respondents who provided two photographs are included. The table shows the results of a respondent fixed effect regression of SES, beauty, and corpulence average ranks reported by independent judges on a dummy equal to 1 for the second (prepared) photograph.

Manipulation of rankings between photo-shoots: second photos improve **expected** outcomes

	(1) Receptionist Sofitel	(2) Charity committee	(3) Voice of the poor	(4) Voice of the mighty	(5) Invited to social gathering
Prepared Photo	0.59***	0.54***	0.27	0.63***	1.16***
	(0.21)	(0.19)	(0.16)	(0.16)	(0.23)
Mean first picture	4.37	4.19	4.58	3.87	4.26
Respondent FE	Yes	Yes	Yes	Yes	Yes
Observations	230	230	230	230	230

An observation is a respondent-photograph. The table shows the results of the second picture on the perceived likelihood of facing the events indicated on each column. Respondent FE (photographed individuals) are included as indicated at the bottom.

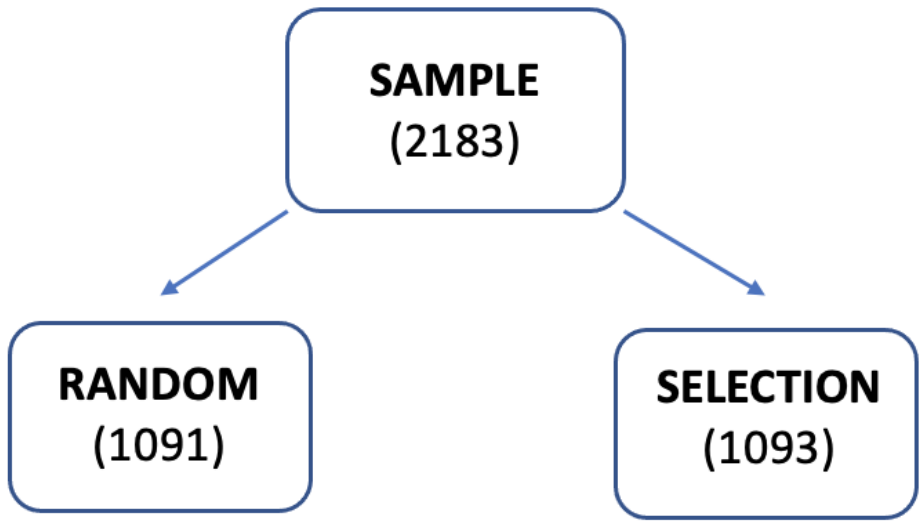
Manipulation of rankings between photo-shoots: second photos improve **realized** outcomes

	(1) Babi la joie	(2) Terre d'opportunite	(3) Babi la dure
Prepared photo	-0.313	1.759**	-1.890**
	(0.271)	(0.762)	(0.790)
Female	0.291	0.311	0.187
	(0.231)	(0.282)	(0.195)
Log(age)	-2.042***	-0.578	0.227
	(0.344)	(0.488)	(0.317)
Mean first picture	6.251	6.313	7.046
Observations	225	150	259

An observation is a respondent-photo. All respondents who provided at least one photo are included. The table shows the results of a regression of the enumerator scores on a dummy equal to 1 if the photo was part of the second, anticipated ("prepared") photoshoot.

Mini-job Experiment: Design

- We proposed a job of 3-4 hours under two different settings:
  - **Random:** We tell individuals that we will select the workers randomly
  - **Selection:** We suggest that the selection of workers will be based on some selection questions



- We ask applicants to choose either (a) a meal or (b) a pen of the same value, that will be delivered in addition to a monetary compensation for the job

More people are less likely to select the free meal when they know their choice will be seen by a selection committee

	(1)	(2)	(3)	(4)
	Dep. variable: Respondent selected free meal			
Screening	-0.08***	-0.07***	-0.07**	-0.06**
	(0.03)	(0.03)	(0.03)	(0.03)
Mean random arm	0.57	0.57	0.57	0.57
Controls	No	Yes	Yes	Yes
Sous-prefecture FE	No	No	Yes	Yes
Enumerator FE	No	No	No	Yes
Observations	1343	1343	1343	1343

An observation is a respondent selected for the "mini-job" choice experiment. The table displays the coefficients of regressing "Chose pen" on a dummy equal to 1 if the respondent was assigned to the screening treatment (i.e., they were told hires would not be made at random but based on their answers). Control variables include dummies for: female; older than 50 years old; speaks french at home; Ivorian; followed higher studies; casual worker; and tercile of wealth distribution within the sous-prefecture.

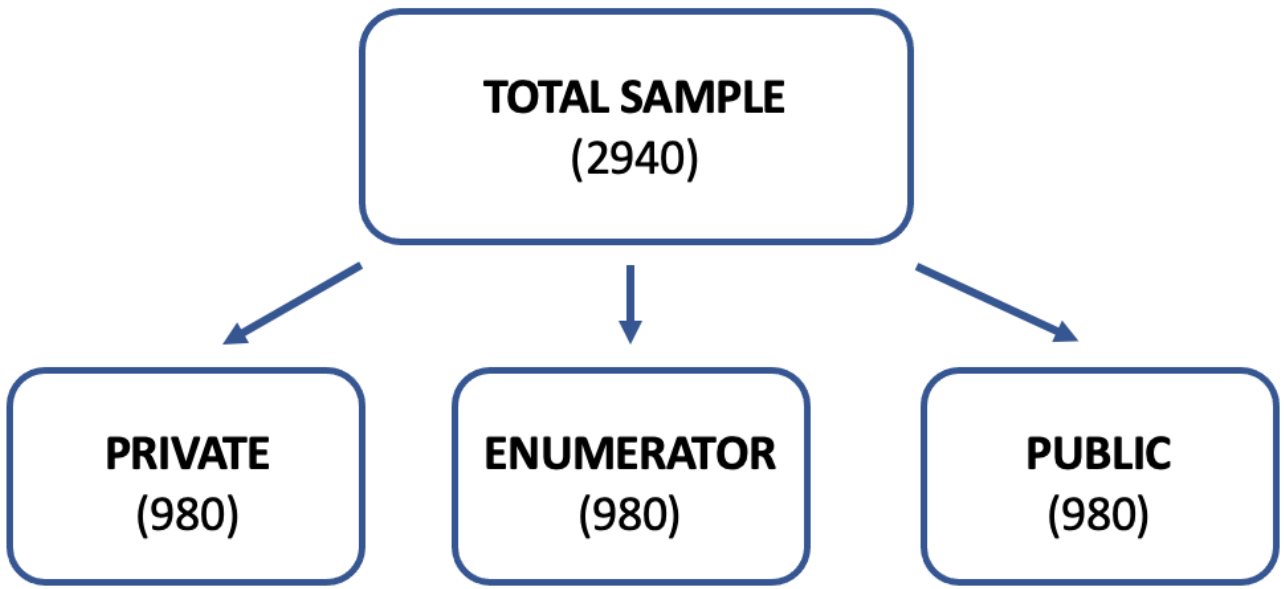
This distortion is only there for the poor or near-poor

	(1)	(2)	(3)	(4)	(5)
	Dep. Var: Respondent selected free meal				
	Men	Women	Bottom wealth tercile	Middle wealth tercile	Top wealth tercile
Screening	-0.06*	-0.09**	-0.11**	-0.12**	-0.01
	(0.04)	(0.04)	(0.05)	(0.05)	(0.05)
Mean random arm	0.48	0.66	0.63	0.62	0.46
Observations	713	630	435	449	459

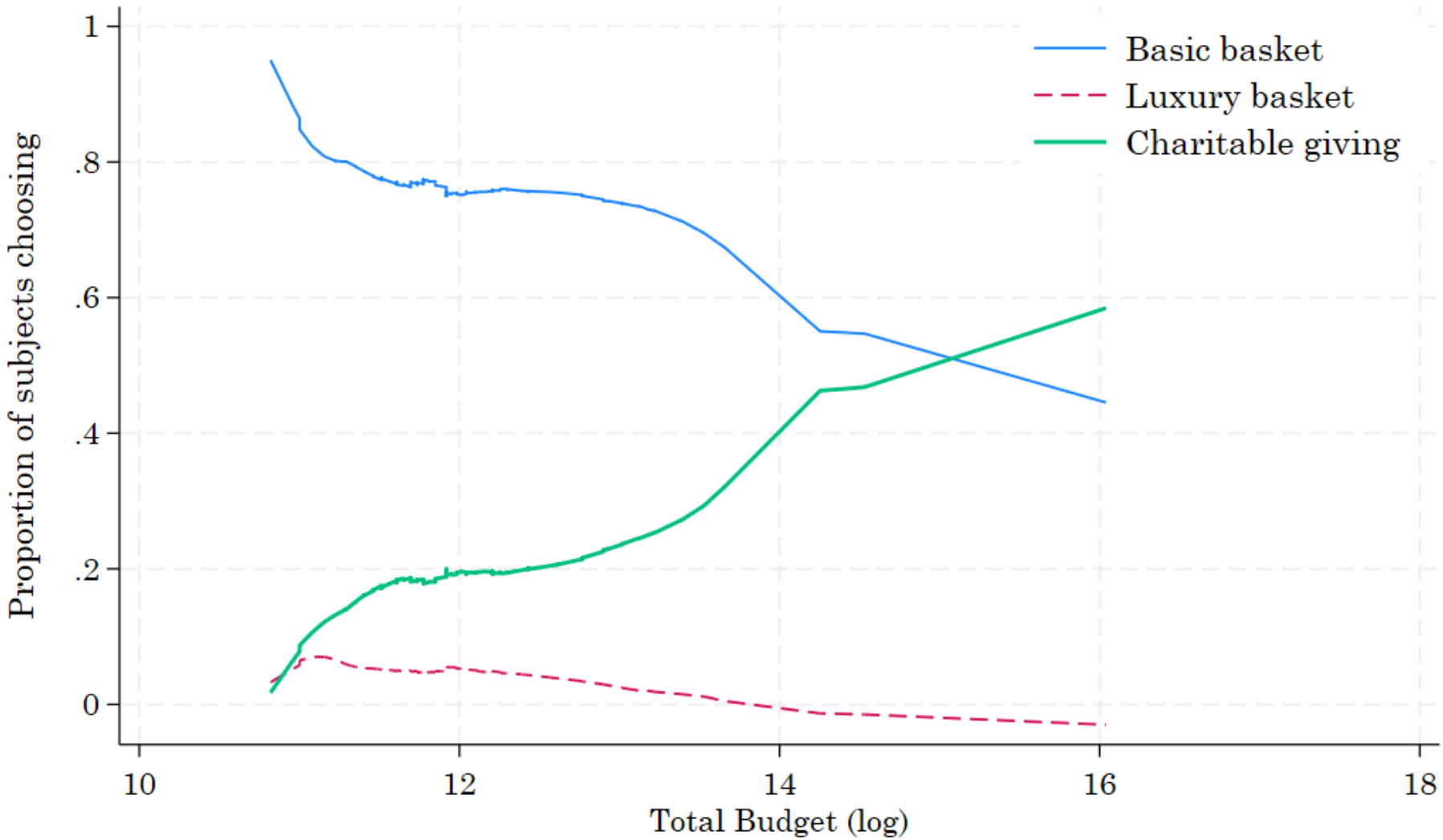
An observation is a respondent selected for the "mini-job" choice experiment. The table displays the coefficients of regressing "Chose pen" on a dummy equal to 1 if the respondent was assigned to the "Screening" condition for the sample indicated in each column.

Raffle: Design

- Raffle: 1 in 40 chance to win 50,000 FCFA (80 USD)
  - *large given median monthly income of 65,000 FCFA (mean 128,000).*
- **Choice:** basket of basic goods, basket of luxury goods, contribution to charity organisations Baskets



Contributing to charity is a signal of higher SES



Signaling through Charity Contribution

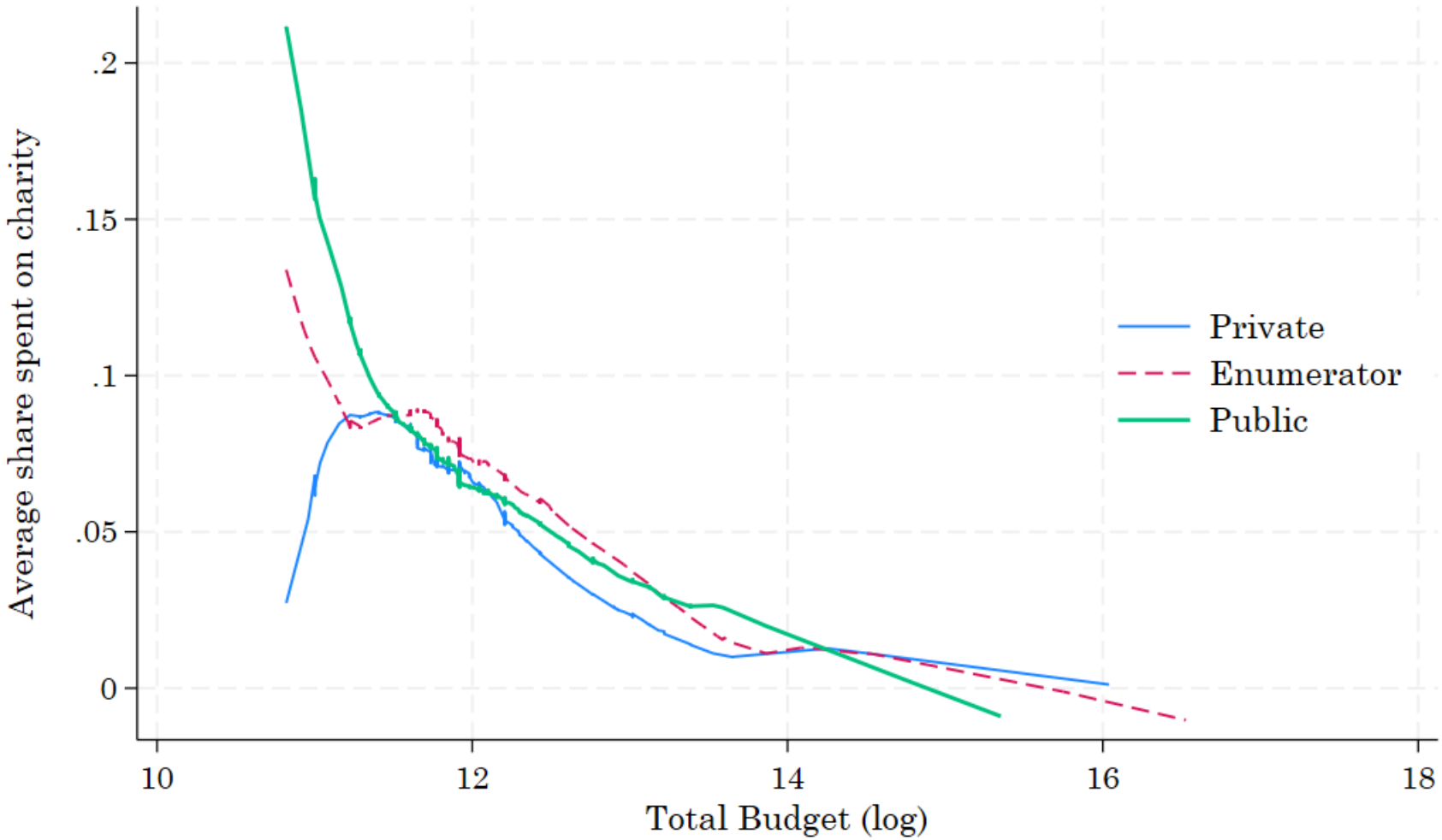
	(1)	(2)
	Dep Var: Chose charity contribution over basket of goods	
Public (Enumerator)	0.037*	0.036*
	(0.020)	(0.020)
Public (Neighbors)	0.022	0.023
	(0.020)	(0.020)
Mean private	0.177	0.177
Controls	No	Yes
Sous-prefecture FE	Yes	Yes
Observations	2276	2276

An observation is a respondent in the "tombola" choice experiment. In the private treatment respondents select directly the item they want. In the enumerator treatment, respondents must tell the enumerator their choice. In the public treatment, respondents write down their choice in a list that contains the names of some of their neighbors. Controls include dummy variables indicating the following characteristics of the respondents: female; older than 50 years old; speaks french at home; Ivorian; more than secondary education; and terciles of wealth distribution. Sous-prefecture fixed effects and enumerator fixed effects included as indicated at the bottom.

Testing prediction: Income elasticity of keeping-up appearances

- Prediction: for low SES individuals, the share of consumption expenditures devoted to the signal good falls with total expenditures

Effect concentrated at bottom of income distribution



Conclusion

- People believe that signals of SES such as physical appearance and consumption choices affect the likelihood of individuals to be victimized
- As a result, people distort their consumption behavior to manipulate their perceived ranking, so as to increase their chances of avoiding negative outcomes
- This suggests true inequality may be much greater than perceived inequality
- This has important implications for the targeting and design of anti-poverty programs (large welfare costs of being tagged as poor)
  - Our model and results suggest that identifying the *very poor* may be "easy" since they cannot afford to hide their status, but identifying those who are poor but not destitute may be much more difficult.