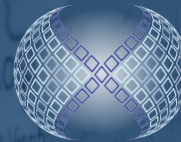




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Do Identity Concerns Affect Labor Supply?

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Motivation

- Research in psychology and sociology has long suggested that one's identity has a significant influence over behavior.
 - Here, identity refers to a social category that reflects the person's self-image and how they are perceived by others. (as in Akerlof and Kranton 2000)
 - Members of an identity group are expected to follow certain behavioral prescriptions.
- Individual concerns about violating identity prescriptions could affect labor supply for specific occupations.
 - Implications for allocation of talent
- However, the effect of identity on labor supply has been difficult to establish empirically.

This study

- Provide the first experimental test of identity effects on labor supply.
- Use real casual job offers that are predicted to differ only in the identity associations they evoke.
 - Predictions are made using survey information on the caste associations of manual tasks and the perceived hierarchy of local caste groups
 - Quantify the decrease in the job take-up rate that is attributable to identity concerns
- Distinguish the effect of self-identity (intrinsic) concerns from that of extrinsic concerns (e.g. fear of social sanctions).
 - Randomly vary whether workers expect their take-up decisions to be publicized to their neighbors or not

Related literature

- Occupational choice and labor supply
 - Status and social esteem (Fershtman, Murphy, and Weiss 1996; Corneo and Jeanne 2010; Dolton, Makepeace, and van der Klaauw 1989)
 - Gendered perceptions of occupations (Gottfredson 1981; West and Zimmerman 1987; Cejka and Eagly 1999; Akerlof and Kranton 2000)
- Misallocation of talent across occupations (Murphy, Shleifer, and Vishny 1991)
 - Exposure to innovation during childhood (Bell et al. 2018)
 - Consequences for economic efficiency (Hsieh, Hurst, Jones, and Klenow 2016)
- Effects of cultural norms and identity (Hoff & Stiglitz 2016)
 - Gender norms (Alesina, Giuliano, and Nunn 2013; Bursztyn, Gonzalez and Yanagizawa-Drott 2018)
 - Racial and political identity (Austen-Smith and Fryer 2005; Bursztyn et al. 2017)
 - Caste, cultural differences and cognitive effects (Hoff, Kshetramade, and Fehr 2011; Hoff and Pandey 2014)

Conceptual basis

- The idea of *violation* appears important to understanding the effects of identity (e.g. Benabou and Tirole 2011)
 - Jobs could be different not only in the effort costs of working on them, but also in the identity concerns they evoke.
- The caste system in India has two notable features that allows one to build a set of jobs offers that sharply vary in identity concerns.
 - Many castes have historical links to specific occupations. (Risley 1892)
 - The castes form a social and ritualistic ranking. (Mariotte 1958, Mahar 1960)

Historical rank and occupation

Task Survey

- N = 151, with 15 caste groups
- Go over a list of manual tasks
 - Whether there is a particular caste that performs the task
 - If so, which caste performs the task
 - To what extent they have performed the task
 - Whether the task is associated with a particular gender
- In addition, helped identify caste groups well-known in the local area

Task Survey results

	Associated with any SC	Never performed	Performed in own hh	Performed outside
Washing farming tools	0	0.11	0.83	0.06
Washing clothes	0.72	0.02	0.96	0
Repairing floor mats	0.15	0.86	0.09	0.02
Repairing leather shoes	0.98	0.81	0.17	0.07
Sweeping animal sheds	0	0.19	0.79	0.02
Sweeping latrines	0.84	0.48	0.50	0.02
Deshelling peanuts	0.01	0.25	0.70	0.03
Making ropes	0.03	0.66	0.30	0
Making paper bags	0.01	0.87	0.10	0.07

Ranking Survey

- N = 209, with 15 caste groups
- In the main exercise, participants rank 7 selected castes.
 - Given cards with caste names
 - Are asked to arrange the cards according to caste hierarchy
 - ▶ Allow for ties by placing cards horizontally
 - ▶ Three types of instructions (general hierarchy, according to food- or water sharing practices)
 - Simple average yields rank scores

Ranking Survey results

Caste	Rank score	Associated identity tasks	Associated paired-control tasks	Level (assigned)
Kaibarta	1.48			1
Sundhi	2.07			1
Dhoba	3.71	Washing clothes	Washing farming tools	2
Kela	4.14			2
Mochi	4.59	Mending leather shoes	Mending floor mats	3
Pana	5.19			3
Hadi	6.60	Sweeping latrines	Sweeping animal sheds	4

Predictions

Design overview

- The goal is to examine how worker willingness to take up different job offers align with predicted presence of identity concerns.
- Workers are presented with a large set of potential job offers.
 - Indicate their choices regarding whether to take or decline each offer.
 - One offer is randomly selected and implemented.
- Some job offers are expected to evoke stronger identity concerns.
 - Involve spending some time on the identity tasks rather than the paired control tasks that require similar skills.
 - For some workers, the identity tasks are associated with castes that rank lower than their own.
- There are variations in privacy conditions across workers

Sample construction

- The experiment takes place in Odisha, India.
- Male household heads of ages 18-55, who primarily derive income from daily wage labor
 - Low income households are typically engaged in daily wage labor.
 - Agriculture in the peak season, and small-scale manufacturing and construction in the lean season
- Only those interested in a one-day job of producing paper bags—a control task—are recruited.




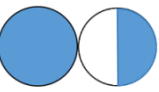





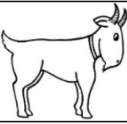


BDM procedures

- Workers' willingness to take up jobs is elicited in an incentive compatible manner based on the Becker-DeGroot-Marschak method (BDM).
 - It is in their best interest to accept or decline each offer as if it were a single take-it-or-leave-it offer.
- The job offers are the same in most aspects
 - Wage at the prevailing rate
 - Total working time of five hours
 - One-time offers for the same employer
 - Spend some time on the default task of producing paper bags, which is not associated with any caste, at the same worksite
 - Spend some time on one *extra* task in a private space

Privacy conditions and implementation

- Workers receive different scripts based on their privacy condition.
 - Before workers made take-up decisions, they are told about focus group discussions which will take place in their villages later that day.
 - Private: their job take-up choices will remain private information, except for their interest in washing agricultural tools.
 - Public: their choices will be discussed with the focus group.
- After workers indicate choices, one offer is randomly selected.
 - Accept: perform the job within the next three days and complete a follow-up survey.
 - Decline: complete a follow-up survey for a small compensation (Rs. 50).

Exercise sheet

		10 min	30 min	1 hour	1.5 hours
					
	Task				
1					
2					
3					
4					

Variations in job offers

- The job offers vary in both the extra task's *type* and the *time* required to work on it.
 - Time requirement of 10 minutes, 30 minutes, 1 hour or 1.5 hours
 - The total working time is fixed at 5 hours
- Since the extra task's *type* changes while holding the other aspects of the job offers the same, any differences in the (willingness to) take-up are attributable to the marginal differences in the utility costs of engaging in the extra tasks.
- Furthermore, the *time* variations allow one to estimate the effect of *engaging at all* in the extra tasks, as the time requirement on the extra tasks approaches zero.

Key Predictions

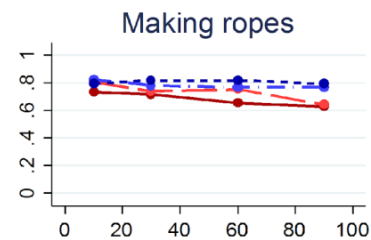
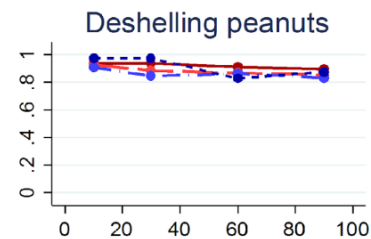
- I predict that strong identity concerns will be present for engaging in the identity tasks, especially when the tasks are associated with castes that are perceived to be lower than the workers' own in the hierarchy.
- Hence, the fall in take-up for the identity task (compared to the control tasks) will be greater when the task has a lower (rather than higher) rank score than the worker's caste.
 - Examine whether the results appear to be driven by self- or social-identity concerns.

Rank scores

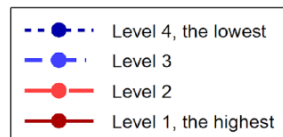
Plotting data (N=491)

- Time variations have relatively small effects and appear similar across different tasks

Pure control tasks



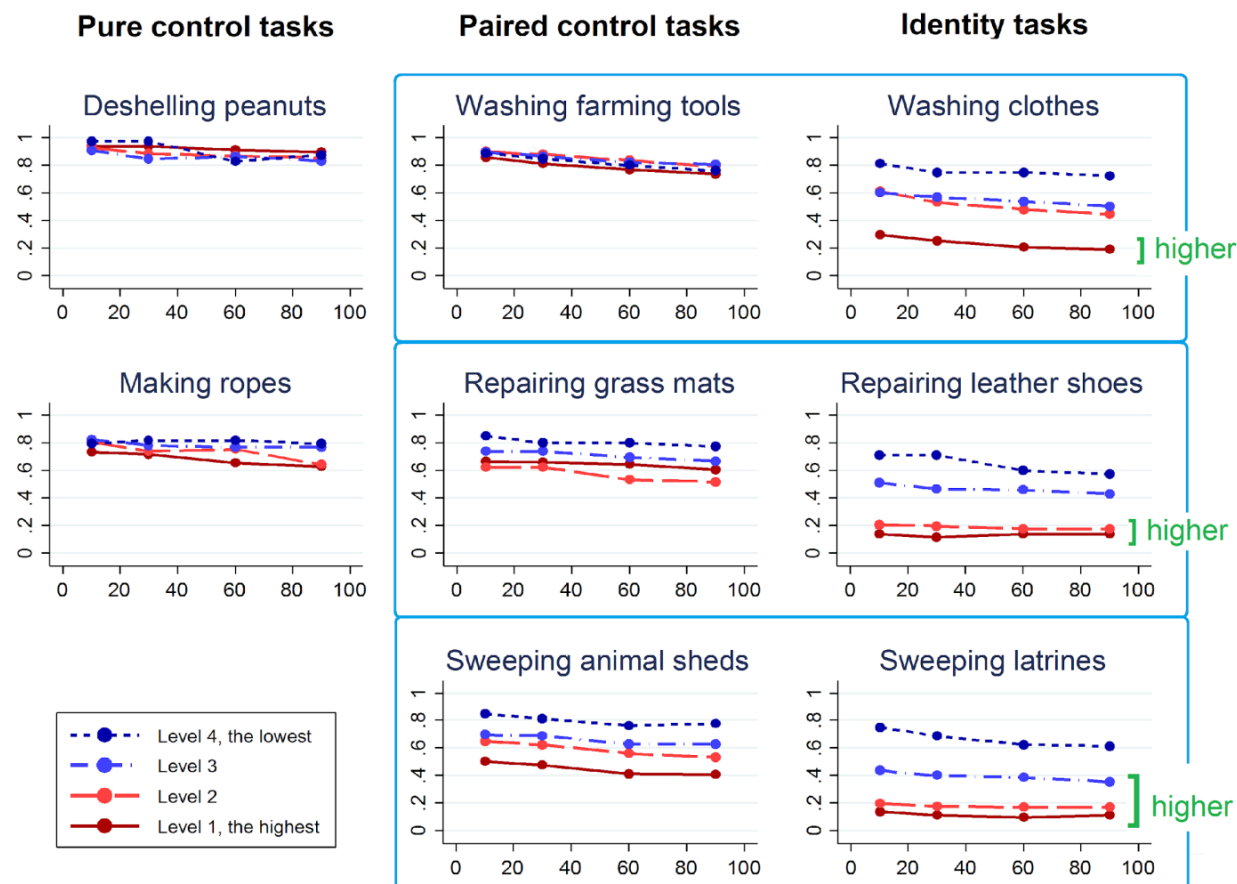
Rank scores



Plotting data (N=491)

- Time variations have relatively small effects and appear similar across different tasks
- For the identity tasks, the take-up rates show large drops when worker caste levels are higher than that associated with the tasks

Rank scores



Main results on willingness to take-up

	(1) Take-up	(2) Take-up	(3) Take-up	(4) Take-up
Lower task	-0.125*** (0.032)	0.041 (0.028)	-0.105* (0.060)	-0.105* (0.062)
Identity × Lower	-0.220*** (0.035)	-0.220*** (0.035)	-0.220*** (0.035)	-0.220*** (0.036)
Associated task	0.011 (0.031)	0.080*** (0.029)	0.135*** (0.038)	0.135*** (0.039)
Identity × Associated	0.087* (0.045)	0.087* (0.045)	0.087* (0.045)	0.087* (0.046)
Identity task				
Dep. var. mean	0.732	0.732	0.732	0.732
Time control	Yes	Yes	Yes	Yes
Task FE	Yes	Yes	Yes	Yes
Caste FE	No	Yes	Yes	No
Task pair × Caste FE	No	No	Yes	Yes
PID FE	No	No	No	Yes
R-squared	0.225	0.236	0.244	0.522
Observations	13748	13748	13748	13748

Pre-registered

Robustness

Completion rates

Examining the results

Are the results driven by the differences in:

1. Outside options?

- The follow-up survey asked if workers who did not accept their offer found other income-earning opportunities the next day.
- 35% of workers found other jobs, and the chance of finding jobs did not vary across castes.
- 83% of those without jobs said they would have worked if they had found jobs.

2. Worker characteristics?

- The effects appear robust to controlling for the interactions between task type indicators and worker age, years of education, and wealth score.

3. Prior experiences?

- Using the Task and Caste surveys, I test whether prior experiences differ across caste levels, and do not find significant differences.

Worker controls

Prior experiences

Alternate explanations

1. Expectations about employers

- Advertised as one-time offers from the same employer
- Fears of discrimination has difficulty explaining why higher caste workers avoid “lower” caste jobs

2. Surveyor demand effect

- The surveyors do not ask about worker castes or discuss the caste associations of tasks during the experiment.
- Workers could not identify the surveyors’ castes during follow-up surveys.

3. Other differences in worker characteristics or expectations

- This concern supposes that these differences interact with the costs of engaging at all in the different types of the tasks involved in the experiment.
- Furthermore, these interactions would need to somehow align well with the caste rankings and occupational associations that were separately measured.

Support for the identity channel

- If caste identity concerns were driving the results:
 1. Such concerns may be stronger among those who have strong views about observing caste norms
 2. Such concerns may increase in caste distance
 - i.e. they may intensify if the caste associated with the identity task was further removed from one's own in terms of rankings.

Sensitivity to caste norms

- The follow-up survey contained seven scenario questions, which described characters violating various caste norms
- Those who express disapprovals for more than four scenarios are designated as being **caste sensitive**.

	(1)	(2)
	Take-up	Take-up
Lower task	0.040 (0.034)	-0.091 (0.066)
Identity × Lower	-0.163*** (0.044)	-0.169*** (0.045)
Caste sensitive × Lower	-0.034 (0.043)	0.022 (0.038)
Caste sensitive × Identity × Lower	-0.150** (0.061)	-0.134** (0.060)
Caste sensitive × Associated	0.068 (0.050)	0.038 (0.049)
Caste sensitive × Identity × Associated	-0.051 (0.090)	-0.035 (0.088)
Task and Caste FE	Yes	No
Task, Task pair × Caste, and PID FE	No	Yes
R-squared	0.250	0.524
Observations	12124	12124

Caste distance

	(1)	(2)
	Take-up	Take-up
Lower task	0.015 (0.027)	-0.039 (0.036)
Identity × Lower	-0.193*** (0.034)	-0.193*** (0.035)
2 or 3 levels lower	0.000 (0.028)	-0.039 (0.059)
Identity × 2 or 3 levels lower	-0.081** (0.035)	-0.081** (0.036)
Associated task	0.068** (0.030)	0.139*** (0.039)
Identity × Associated	0.079* (0.045)	0.079* (0.046)
Task and Caste FE	Yes	No
Task, Task pair × Caste, and PID FE	No	Yes
R-squared	0.238	0.522
Observations	13748	13748

Role of self-identity

If extrinsic concerns were driving the take-up decisions, this coefficient would be negative and significant.



	(1) Take-up	(2) Take-up	(3) Take-up	(4) Take-up
Lower task	0.070** (0.034)	-0.084 (0.064)	0.056 (0.037)	-0.090 (0.072)
Identity × Lower	-0.245*** (0.041)	-0.245*** (0.042)	-0.256*** (0.045)	-0.256*** (0.045)
Associated task	0.059 (0.038)	0.117*** (0.044)	0.054 (0.039)	0.117** (0.047)
Identity × Associated	0.134** (0.056)	0.134** (0.057)	0.134** (0.059)	0.134** (0.060)
Public × Lower task	-0.054 (0.038)	-0.037 (0.033)	-0.050 (0.040)	-0.027 (0.036)
Public × Identity × Lower	0.047 (0.039)	0.047 (0.040)	0.044 (0.042)	0.044 (0.042)
Public × Associated task	0.049 (0.051)	0.044 (0.045)	0.028 (0.051)	0.039 (0.046)
Public × Identity × Associated	-0.101 (0.068)	-0.101 (0.069)	-0.102 (0.071)	-0.102 (0.073)
Task FE interaction	No	No	All	All
Task and Caste FE	Yes	No	Yes	No
Task, Task pair × Caste, PID FE	No	Yes	No	Yes
R-squared	0.238	0.522	0.258	0.524
Observations	13748	13748	11928	11928

Supplementary experiment

- The goal is to quantify the pecuniary cost of engaging in jobs that present identity conflicts.
 - Results show that a substantial share of workers turn down income-earning opportunities in order to avoid those jobs
 - How much additional wages do workers demand for engaging in those jobs?
 - How are such costs distributed across individual workers?
- Plan: after workers get started on a manufacturing job, offer additional wages for switching to working on other tasks for some time.
 - Use a BDM method with multiple price offers
 - Use similar task and time variations as the main experiment
- In light of the experimental findings, I plan to examine the patterns in the Indian labor market data.



Caste, ranking and occupation

- Caste list from REDS 2006
- Historical rankings in Odisha (Risley 1908)
- Historical occupations in Bengal (Risley 1892)

Caste system

Social Category	Caste	Ranking	Occupation
G	BRAHMAN	1	Priest
G	KARAN	2	Writer
OBC	KHANDAYAT	2	Swordsman
OBC	BHANDARI	3	Barber
OBC	KAMAR/LOHAR	3	Blacksmith
OBC	TANTI	4	Weaver
OBC	TELI	5	Oil-presser
SC	DHOBA	6	Washer
SC	BAURI	6	Cultivating
SC	CHAMAR	6	Tanner
SC	MOCHI	(7)	Leatherwork/cobbler
SC	DUMA	(7)	Menial
SC	PANA	7	Weaver/basket-making
SC	HADI	7(8)	Scavenging
SC	KELA	(8)	(Snake charming)
ST	GANDA/GOND		Boating/fishing
ST	KHADIA		Cultivating

Results using pre-registered ranking

	(1)	(2)	(3)	(4)	(5)
	Take-up	Take-up	Take-up	Take-up	Take-up
Lower task	-0.194*** (0.021)	-0.102*** (0.032)	0.006 (0.026)	0.014 (0.034)	0.014 (0.035)
Identity × Lower	-0.059** (0.028)	-0.136*** (0.034)	-0.136*** (0.034)	-0.136*** (0.034)	-0.136*** (0.035)
Associated task	0.004 (0.026)	0.041 (0.031)	0.050* (0.027)	0.134*** (0.040)	0.134*** (0.041)
Identity × Associated	0.201*** (0.040)	0.161*** (0.042)	0.161*** (0.042)	0.161*** (0.042)	0.161*** (0.043)
Identity task	-0.338*** (0.021)				
Dep. var. mean	0.732	0.732	0.732	0.732	0.732
Time control	Yes	Yes	Yes	Yes	Yes
Task FE	No	Yes	Yes	Yes	Yes
Caste FE	No	No	Yes	Yes	No
Task pair × Caste FE	No	No	No	Yes	Yes
PID FE	No	No	No	No	Yes
R-squared	0.200	0.207	0.233	0.237	0.516
Observations	13748	13748	13748	13748	13748

Main results

Robustness checks

	(1)	(2)	(3)	(4)	(5)
	Take-up	Take-up	Take-up	Take-up	Take-up
Lower task	0.041 (0.029)	0.035 (0.031)	0.040 (0.027)	0.041 (0.028)	0.041 (0.028)
Identity × Lower	-0.227*** (0.036)	-0.241*** (0.040)	-0.220*** (0.035)	-0.220*** (0.035)	-0.220*** (0.035)
Associated task	0.084*** (0.030)	0.080** (0.031)	0.080*** (0.028)	0.080*** (0.029)	0.080*** (0.029)
Identity × Associated	0.090* (0.046)	0.086* (0.049)	0.088* (0.045)	0.087* (0.045)	0.087* (0.045)
Sample construction	Tasks w/o choice reversal	Workers w/o choice reversal	All	All	All
Additional FE	No	No	Task and time orders	Caste × Surveyor	Task × Time cont.
Task and Caste FE	Yes	Yes	Yes	Yes	Yes
R-squared	0.257	0.253	0.238	0.284	0.522
Observations	13140	11284	13748	13748	13748

Main results

Job and survey completion

Main results

	(1) Completed work	(2) Completed work	(3) Completed survey
Washing farming tools	0.001 (0.097)	-0.038 (0.102)	-0.019 (0.071)
Washing clothes	-0.110 (0.092)	-0.012 (0.103)	-0.008 (0.066)
Repairing floor mats	-0.070 (0.089)	-0.021 (0.097)	0.089 (0.054)
Repairing leather shoes	-0.347*** (0.082)	-0.116 (0.129)	0.067 (0.058)
Sweeping animal sheds	-0.198** (0.087)	-0.127 (0.104)	0.013 (0.062)
Sweeping latrines	-0.317*** (0.085)	-0.003 (0.128)	0.079 (0.057)
Constant	0.541*** (0.064)	0.688*** (0.068)	0.852*** (0.046)
Sample constuction	All	Accepted offer	All
F stat for joint significance	5.93	0.39	1.30
Prob > F	0.000	0.882	0.257
R-squared	0.071	.010	.017
Observations	422	254	422

Worker characteristics

Examining results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Take-up	Take-up	Take-up	Take-up	Take-up	Take-up	Take-up	Take-up
Lower task	0.015 (0.030)	-0.090 (0.066)	0.031 (0.029)	-0.085 (0.065)	0.024 (0.031)	-0.107 (0.070)	0.016 (0.032)	-0.105 (0.072)
Identity × Lower	-0.201*** (0.038)	-0.201*** (0.039)	-0.229*** (0.038)	-0.229*** (0.039)	-0.229*** (0.039)	-0.229*** (0.040)	-0.210*** (0.041)	-0.210*** (0.042)
Associated task	0.062** (0.031)	0.131*** (0.043)	0.067** (0.030)	0.136*** (0.042)	0.064** (0.030)	0.132*** (0.042)	0.063** (0.032)	0.138*** (0.044)
Identity × Associated	0.089* (0.048)	0.089* (0.049)	0.089* (0.048)	0.089* (0.049)	0.087* (0.048)	0.087* (0.049)	0.084* (0.049)	0.084* (0.050)
Task FE interaction	Age	Age	Years of edu.	Years of edu.	Wealth Score	Wealth Score	All	All
Time control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Caste FE	Yes	No	Yes	No	Yes	No	Yes	No
Task pair × Caste FE	No	Yes	No	Yes	No	Yes	No	Yes
PID FE	No	Yes	No	Yes	No	Yes	No	Yes
R-squared	0.259	0.528	0.256	0.525	0.246	0.522	0.267	0.527
Observations	12124	12124	12124	12124	11928	11928	11928	11928

Prior experiences

	(1) Never performed	(2) Never performed
Lower task	-0.002 (0.051)	0.085 (-0.165)
Identity × Lower	-0.026 (0.051)	-0.026 (-0.054)
Associated task	-0.04 (0.096)	0.047 (-0.134)
Identity × Associated	-0.222* (0.115)	-0.222* (-0.122)
Dependent variable mean	0.489	0.489
Task and Caste FE	Yes	No
Task, Task pair × Caste, and PID FE	No	Yes
R-squared	0.436	0.556
Sample size	141	141
Observations	1269	1269

Examining results