The Weight of Expectation:
Behavioral Evidence on Gender Norm Enforcement

Alejandra Villegas

Departament of Economics
Universidad Iberoamericana, Mexico City

maria.villegas@ibero.mx

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Question → Identification

- **Question:** Who sanctions deviations in unpaid domestic work?
  (evaluator gender × target gender)
- **Why it's hard:** the reference group is latent ⇒ observational "peer effects" confound reflection/sorting/shocks.
- **Idea:** norms enter utility via an **asymmetric sanction function** (directional + target-gender specific).

Design → Estimand → Results

- **Design:** incentivized norm elicitation + **two-round dictator game**.
- **Randomize:** recipient gender (fixed) + deviation from $\bar{y}_i G$
  $t \in \{\text{Conform}, +20\text{pp}, -20\text{pp}\}$.
- **Estimand:** $\theta_i = a_{i2} - a_{i1}$ ($\theta < 0$ punish, $\theta > 0$ reward).
- **Takeaway:** norm enforcement is **relational** (who judges whom) and **asymmetric** (direction matters).

Motivation

- Gender inequality persists where policy leverage is limited (e.g. unpaid domestic work, time use) shaping labor supply, earnings trajectories, and intrahousehold bargaining power.
- A key driver is gender social norms: shared expectations about women's and men's roles beyond private optima or material constraints.
- Norms bind because they are enforced: deviations can trigger informal costs—disapproval, withdrawal of cooperation, or punitive responses—making noncompliance costly.
- There is an attitude–behavior gap: even equality supporters may sanction norm-challenging behavior, helping reproduce the status quo.

Related literature: norms, interactions, and identification

From private to social utility

- Standard micro: utility depends on own actions.
- With norms: actions have social payoffs—identity prescriptions and (dis)approval costs enter utility [Akerlof and Kranton, 2000, Bicchieri, 2006].
- Enforcement is strategic and costly: third parties punish deviations even without material gain [Fehr and Fischbacher, 2004, Abbink et al., 2017].

Empirical approaches

- Surveys/time-use document gendered allocations consistent with coordinating role expectations [Campaña et al., 2018].
- Behavioral tools measure (i) perceived norms via incentivized coordination and (ii) enforcement via allocation/punishment choices [Krupka and Weber, 2013, Fallucchi and Nosenzo, 2021].
- Recent gender-norm work emphasizes (a) framing/double standards and (b) networked influence [Barigozzi et al., 2025, Hager et al., 2025].

Identification problem

- Norms are group-specific, but the reference group is latent: whose expectations matter (peers, leaders, cohort, strata) is typically unknown and endogenous.
- Observed "peer effects" confound: (i) reflection (simultaneity), (ii) sorting into groups, and (iii) shared shocks [Manski, 1993].
- Structural estimation requires strong assumptions about group composition/exogenous variation in group means.

Contributions

- **Makes norm enforcement observable and causal in a high-noise domain.** Moves beyond correlational peer effects by isolating evaluative sanctions as a measurable behavioral object.
- **Identifies gendered double standards in enforcement.** Shows that sanctions depend on *who deviates* (target gender) and *how they deviate* (direction), highlighting asymmetric accountability for women vs. men.
- **Links enforcement to normative heterogeneity among enforcers.** Demonstrates that sanction intensity systematically varies with evaluators' own prescriptions, connecting personal norms to the strength of informal regulation.
- **Explains persistence despite attitude change.** Provides behavioral evidence that egalitarian stated attitudes can coexist with punitive responses, implying that shifting attitudes alone may not relax the constraint created by informal sanctions.

A simple model of evaluative sanctions (Round 1)

Evaluator i chooses a transfer $a_{i1} \in \{0, 1, \dots, T\}$ to a recipient of gender $g \in \{F, M\}$.

$$U_{i1}(a \mid g) = \alpha_i(g)\, a - \frac{c}{2}a^2 \qquad \Rightarrow \qquad a^*_{i1}(g) = \frac{\alpha_i(g)}{c}.$$

- **Objects & timing:** in Round 1, the evaluator allocates T lottery tickets to a *simulated* recipient; recipient gender g is observed (and held fixed across rounds). Norm-relevant information is revealed only in Round 2.
- **Interpretation:** with no strategic response from the recipient, Round-1 giving captures baseline, preference-based evaluation in social-preference and norm-based utility models [Fehr and Schmidt, 1999, Bolton and Ockenfels, 2000, Charness and Rabin, 2002, Bicchieri, 2006].

Round 2: norm information as a deservingness wedge

In Round 2, evaluator observes recipient domestic-work share s and holds a personal norm y_i. Define deviation $d_i \equiv s - y_i$.

$$U_{i2}(a \mid g, s, y_i) = \alpha_i(g)\, a - \frac{c}{2} a^2 - \kappa_i\, \psi(d_i, g)\, a,$$

$$\psi(d, g) = \lambda_{g,+} \max\{d, 0\} + \lambda_{g,-} \max\{-d, 0\}.$$

- κ_i: enforcement intensity; $\psi(\cdot)$ allows directional asymmetry and target dependence.

Identified outcome and testable implications

Main outcome:

$$\theta_i \equiv a_{i2} - a_{i1}.$$

Ignoring corners:

$$\theta_i^* = -\frac{\kappa_i}{c}\psi(d_i, g) \leq 0 \quad \text{for } d_i \neq 0.$$

- Directional asymmetry: $\lambda_{g,+} \neq \lambda_{g,-}$.
- Target dependence: $\lambda_{F,\cdot} \neq \lambda_{M,\cdot}$.
- Heterogeneity: κ_i correlated with y_i or attitudes.

Experimental Design: Overview and Identification

- **Setting and mode:** Online experiment.
- **Three sequential components:** (1) demographics; (2) elicitation of *individual normative beliefs* y_{iG} and *perceived social norm* $\bar{y}_G$ (incentivized); (3) two-round dictator game.
- **Key randomizations (between-subject):** recipient gender is randomly assigned and held constant across rounds; in round 2, recipient norm compliance is randomly assigned (T1/T2/T3).
- **Main causal object:** *sanctioning* measured **within-subject** as the change in allocations across rounds:

$$\theta_{iG} \equiv \text{Tickets}_i^{(2)} - \text{Tickets}_i^{(1)}.$$

This differencing nets out baseline altruism and isolates the effect of the recipient's normative statement.

Phase 1: Eliciting y_{iG} and $\bar{y}_G$ (Incentivized)

- **Common vignette:** Hypothetical household (heterosexual couple + two young children). Domestic work trades off with paid work time.
- **Individual normative belief (y_{iG}):** participants state *how domestic work should be divided* between the woman and the man.
- **Perceived social norm ($\bar{y}_G$):** participants predict *how the majority in their social group* believes tasks should be divided in the same scenario.
- **Incentives (Krupka–Weber style coordination):** participants earn lottery tickets if their prediction matches the *modal* response.

Phase 2: Measuring Norm Enforcement (Two-Round Dictator Game)

- **Outcome:** dictator allocates 10 lottery tickets between self and a *virtual* recipient (no deception: participants are told the recipient is simulated).
- **Round 1 – Baseline (control):** only recipient gender is shown (randomly assigned). Allocation captures *altruism* absent norm content.
- **Round 2 – Treatment:** recipient gender is the same as in Round 1 (controls gender-framing and preserves internal consistency); participants additionally observe the recipient's household (fixed to the vignette) and the recipient's *declared unpaid domestic-work share*, which is **randomly varied** around $\bar{y}_G$.
- **Within-subject sanction measure:**

$$\theta_{iG} = \text{Tickets}_i^{(2)} - \text{Tickets}_i^{(1)} \quad \Rightarrow \quad \theta_{iG} < 0 \text{ punishment, } \theta_{iG} > 0 \text{ reward.}$$

Experimental Treatments: Exogenous Variation in Norm Compliance

1. **T1 – Conformity:** recipient's domestic-work share **matches** the elicited social norm $\bar{y}_G$.
2. **T2 – Non-conformity (more domestic work):** recipient performs **20 p.p. more** domestic work than prescribed by $\bar{y}_G$.
3. **T3 – Non-conformity (less domestic work):** recipient performs **20 p.p. less** domestic work than prescribed by $\bar{y}_G$.

- The 20 p.p. shift is calibrated to the *average gender gap* in unpaid domestic and care work in the study context.

Participants and Data Collection

- **Site and timing:** Aug–Sep 2024 in the Sierra Nororiental of Puebla (rural/indigenous region with strong collective identities).
- **Recruitment:** Modified respondent-driven sampling to leverage relational diffusion; cooperative promoters served as initial seeds. Recruitment diffused through cooperative and personal networks and included both cooperative members and non-members.
- **Mode and sample:** Self-administered online questionnaire. 564 accessed the instrument; 239 fully completed all phases. Power planning targeted 238 completed questionnaires.

Descriptive statistics

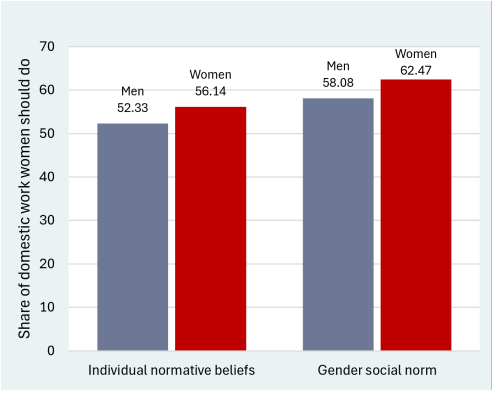
Variable	Mean / Proportion	Standard Deviation
Gender		
Female	0.69	0.46
Male	0.31	0.46
Age	38.00	12.92
Educational Attainment		
Secondary or High School	0.33	0.47
Technical Studies	0.13	0.34
University Degree	0.54	0.50
Number of Children	2.00	1.27
Household Composition		
Lives alone	0.11	0.31
With partner and/or children	0.60	0.49
With other family members	0.28	0.45
With other people	0.02	0.13

Randomization check: baseline covariates are balanced across treatment arms

Balance table (Appendix)

Descriptive findings: Private Beliefs vs. Social Norm

- The perceived social norm is more demanding than their private normative belief ($\bar{y}_G > y_{iG}$) →pluralistic ignorance/reputational pressure in norm perceptions.
- Women report more traditional prescriptions than men both (private beliefs and social expectations) →stronger internalization/greater sensitivity to local sanctions.
- Because perceived norms exceed private beliefs, observed behavior may reflect anticipated enforcement rather than preferences.



Estimation: main effects and heterogeneity

Main effects (by recipient gender g):

$$\theta_i = \beta_0(g) + \beta_+(g) D_{i,+} + \beta_-(g) D_{i,-} + X_i'\gamma + \varepsilon_i,$$

where $D_{i,+} = \mathbf{1}\{\Delta = +0.20\}$ and $D_{i,-} = \mathbf{1}\{\Delta = -0.20\}$ (baseline $\Delta = 0$).

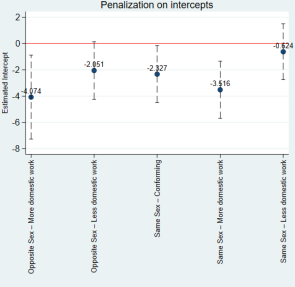
- $\beta_+(g) = \tau_+(g)$ and $\beta_-(g) = \tau_-(g)$ are causal ATEs by random assignment.

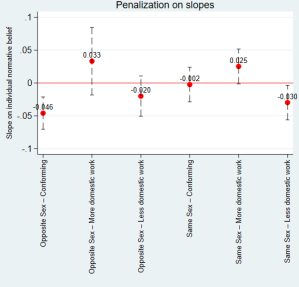
Heterogeneity by evaluator norm (centered): $\tilde{y}_i = y_i - \mathbb{E}[y_i]$

$$\theta_i = \cdots + \pi \tilde{y}_i + \rho_+ \tilde{y}_i D_{i,+} + \rho_- \tilde{y}_i D_{i,-} + \varepsilon_i.$$

Regression Results

- **Intercept:** harshest punishment for male targets with more traditional norms.
- **Slope:** more traditional evaluators punish more.
- **Implication:** enforcement is relational (target × evaluator).





Full regression table

Conclusions and Implications

- **Norm perceptions are biased.** The perceived social norm $\bar{y}_G$ exceeds private prescriptions y_i, consistent with coordination on a stricter benchmark (pluralistic ignorance / reputational pressure).
- **We causally identify evaluative enforcement, and it is asymmetric.** Using θ_i and randomized norm-compliance signals, sanctions depend on *direction* of deviation and *target gender*: the same-sized deviation is not treated symmetrically.
- **Enforcement is relational.** Enforcement intensity rises with more traditional personal norms, indicating systematic heterogeneity in the sanction function (not "noise" around a common norm).
- **Implication for persistence and policy design.** When deviations carry *social costs*, households face an additional constraint beyond resources and preferences: reforms that expand options (childcare, jobs, transfers) may underperform unless they also (i) shift *what is publicly perceived as normal* and/or (ii) reduce the returns to sanctioning.

Limitations and Future Research

Limitations

- **What is identified:** θ_i captures an *evaluative* response to norm information (withholding generosity), not strategic deterrence or equilibrium enforcement.
- **Simulated recipients:** methodologically clean, but may understate or alter sanctions when a real person is affected.
- **Single channel:** we observe reductions in transfers, but not costly, active punishment.
- **Stylized signal:** one domestic-work share may bundle norm violation with inferences about effort/choice; the design does not isolate *why* the share is high/low.

Future research (most promising extensions)

- **Add costly punishment:** allow evaluators to pay to reduce the recipient's payoff; compare withholding vs. active punishment.
- **Mechanism test:** hold the share fixed and randomize whether the deviation is framed as *chosen* vs. *imposed*; test intent-sensitivity.
- **Real (anonymous) recipients:** keep anonymity and one-shot structure, but make payoffs consequential; benchmark against the simulated-recipient design.

Thank you for your attention!

maria.villegas@ibero.mx

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Randomization checks: Baseline balance (women subsample)

	(1) Conform Same	(2) +20pp Same	(3) -20pp Same	(4) Conform Opp.	(5) -20pp Opp.	(6) +20pp Opp.
N	24	28	26	32	25	31
Age	36.33 (12.25)	39.50 (15.73)	39.23 (10.27)	40.88 (13.66)	34.84 (13.66)	36.45 (12.82)
Educational attainment	2.29 (0.81)	2.50 (0.64)	2.50 (0.71)	2.16 (0.85)	2.40 (0.71)	2.26 (0.68)
Indigenous identification	0.63 (0.50)	0.61 (0.50)	0.77 (0.43)	0.72 (0.46)	0.68 (0.48)	0.65 (0.49)
Number of children	2.33 (1.37)	2.36 (1.22)	2.62 (1.17)	2.53 (1.05)	2.16 (1.25)	2.10 (1.19)

Notes: Women subsample used in main estimations. Cell entries are mean (SD). Arms are defined by norm-compliance condition × recipient gender pairing (same vs opposite). "Indigenous identification" corresponds to self-identification with an indigenous group in the study region. Full pairwise t-tests in Appendix Table A1. Back to Descriptive stats

Regression Results: Penalization for Non-Conformity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Excluded category: T1 (Same norm)									
T2: More domestic work performed by women	0.388				0.384				
	(0.27)				(0.27)				
T3: Less domestic work performed by women	-0.208				-0.243				
	(0.26)				(0.26)				
Excluded category: Same sex									
Opposite sex		-0.412*				-0.459**			
		(0.22)				(0.22)			
Individual Normative Belief (y_{iG})			-0.010		-0.011	-0.012	-0.013*		
			(0.01)		(0.01)	(0.01)	(0.01)		
Excluded category: Opposite sex×T1 (Same norm)									
Opposite sex×T2 (More domestic work performed by women)				0.308			0.288		-4.074**
				(0.37)			(0.37)		(1.93)
Opposite sex×T3 (Less domestic work performed by women)				-0.522			-0.573		-2.051
				(0.35)			(0.35)		(1.32)
Same sex×T1 (Same norm)				0.104			0.144		-2.327*
				(0.37)			(0.37)		(1.31)
Same sex×T2 (More domestic work performed by women)				0.545			0.583		-3.516***
				(0.36)			(0.36)		(1.32)
Same sex×T3 (Less domestic work performed by women)				0.264			0.270		-0.624
				(0.37)			(0.36)		(1.28)
Opposite sex×T1×(y_{iG})								-0.017**	-0.046***
								(0.01)	(0.01)
Opposite sex×T2×(y_{iG})								-0.009	0.033
								(0.01)	(0.03)
Opposite sex×T3×(y_{iG})								-0.026***	-0.020
								(0.01)	(0.02)
Same sex×T1×(y_{iG})								-0.012	-0.002
								(0.01)	(0.02)
Same sex×T2×(y_{iG})								-0.003	0.025
								(0.01)	(0.02)
Same sex×T3×(y_{iG})								-0.012	-0.030*
								(0.01)	(0.02)
Constant	-0.143	0.128	0.445	-0.188	0.474	0.803*	0.532	0.647	2.384***
	(0.19)	(0.16)	(0.42)	(0.25)	(0.46)	(0.45)	(0.47)	(0.42)	(0.87)
R2	0.031	0.021	0.010	0.060	0.043	0.036	0.078	0.097	0.156
N	166	166	166	166	166	166	166	166	166

Notes: Standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

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