The Economics of Begging*

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Abstract

We provide the first large-scale evidence on the economics of begging, combining field observations with incentivized experiments involving over 2,000 beggars and donors in India. Guided by a signaling model in which donors give less when begging is by choice, we show that 31 percent of beggars use costly effort signaling by offering low-value items. Donors perceive these beggars as less labor-averse and give more. Yet, donors significantly overestimate the share of labor-averse beggars, while most beggars prefer paid work over free cash. Our findings suggest that reducing employment barriers may curb begging more effectively than fairness-driven legal restrictions.

Keywords: Begging, Charitable Giving, Labor, Meritocracy, Signaling, Experiments
JEL Codes: C93, D63, D64, H0, J22, J68

1 Introduction

Begging, the act of soliciting alms in public spaces, is a pervasive phenomenon worldwide. Although exact statistics on the number of beggars are unavailable, the large scale of begging is reflected in charitable behavior: 60% of the global population

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reported "helping a stranger," often a beggar, in the past year (Charity Aid Foundation, World Giving Index, 2023). There is significant policy interest in addressing begging, as street beggars represent a highly vulnerable population and serve as a visible marker of poverty and inequality within society. Governments worldwide allocate millions of dollars to *conceal* begging during international events, frequently employing forced relocations and crackdowns on public spaces.[1] Despite the large scale and political interest, there remains a limited understanding of the drivers of begging and charitable giving to beggars.

Studying begging poses methodological challenges because beggars are an informal and transient population, often lacking fixed addresses or phone numbers and frequently missed by traditional surveys or census efforts. Additionally, existing survey measures and experimental tools designed to study the preferences and behaviors of the general population do not easily translate to highly marginalized groups such as beggars. At the same time, the rhetoric surrounding beggars, both in public discourse and in anti-begging legislation, has historically been shaped by notions of fairness and deservingness. Many laws, beginning with England's Vagabonds and Beggars Act of 1494 and now present in about 65% of countries worldwide, reflect meritocratic beliefs that cast beggars as unwilling to work and therefore undeserving of charity. These beliefs persist despite a lack of empirical evidence or theoretical foundations for the assumption that people choose to beg due to a high aversion to labor.[2]

In this paper, we study how donors' merit-based fairness preferences and beliefs influence charitable giving to beggars, and how these beliefs align, or misalign, with beggars' actual labor-aversion and behavioral responses. We develop a theoretical framework and report findings from a unique, large-scale data collection effort in India to study this two-sided interaction. When donors hold meritocratic preferences and judge beggars' deservingness based on whether they are unable to work or are unwilling to work, beggars may be incentivized to signal effort to increase their charitable receipts. Our theoretical and empirical analyses centre on how beggars' labor-aversion and signaling choices interact with donors' beliefs and giving behavior, with and without such signals.

Since most beggars appear similar and may go unnoticed in brief, informal encoun-

[1]For instance, Brazil during the 2014 FIFA World Cup and 2016 Olympics, India during the 2010 Commonwealth Games, China for the 2008 Beijing Olympics, and the U.S. during events like the 1996 Atlanta Olympics and the 2016 Super Bowl in San Francisco.

[2]The following quote from one of the most prominent philanthropists in American history further illustrates how perceptions of begging, as driven by misfortune versus unwillingness to work, may influence charitable attitudes toward beggars (Carnegie, 1962). "One of the serious obstacles to the improvement of our race is indiscriminate charity. It were better for mankind that the millions of the rich were thrown into the sea than so spent as to encourage the slothful, the drunken, the unworthy."

ters, they need distinctive ways to signal deservingness. One dimension on which beggars differ is that some offer low-value items while soliciting charity, while others do not. Begging with items arguably involves effort in procuring and offering the items and may change donors' perceptions about a beggar from "lazy" or "unwilling to work" to "at-least trying to do something" or "putting in an effort."[3]

We model begging as an alternative to participation in the formal labor market. Labor market participation provides utility through consumption financed by wages, but carries disutility from effort; begging provides utility from donations, but entails disutility from stigma, harassment, and exposure to environmental and legal risk. Individuals choose between labor and begging subject to three key constraints: a minimum consumption requirement below which they cannot supply labor or derive utility from non-consumption sources, such as leisure or dignity (Shah et al., 2012; Mani et al., 2013; Schilbach et al., 2016), heterogeneity in productivity, and heterogeneity in labor-aversion. Individuals with very low productivity may be too impoverished to even supply labor, while others may face poor labor market returns or choose to beg due to a strong preference for non-labor time.

We characterize the conditions under which individuals choose to beg and decompose the equilibrium population into those driven by structural constraints versus those begging by choice. On the donor side, we extend the standard "warm-glow" framework to include merit-based fairness preferences: donors derive less utility from giving to beggars they believe are unwilling to work. Under asymmetric information, this creates incentives for beggars to signal their type. The act of offering low-value items while begging is treated as a costly signal of low labor-aversion, and we derive a partially separating equilibrium in which some beggars signal effort to influence donor beliefs and increase donations.

The model predicts that beggars who offer low-value items are perceived as less labor-averse and more deserving, and therefore receive higher donations. These signaling returns arise because donors interpret the offering of items while begging as a costly signal of effort. The magnitude of the return increases with the donor's fairness preference for merit-based charity, and with their prior belief that most beggars are highly labor-averse. Conversely, signaling is less effective when donors believe that many beggars are unable to work due to low productivity. These predictions guide our empirical tests of donor beliefs, beggar behavior, and the causal effect of signaling on charitable giving.

To test the model's predictions, we combine data from field observations, incentivized

[3]We define "beggars with items" using survey-based validation of which goods are commonly perceived as characteristic of (as opposed to legitimate street vendors). Beggars themselves report that these items are not sold for their intrinsic value, but are offered as a means of eliciting generosity.

donor and beggar experiments, and belief elicitation surveys conducted in Delhi. Our empirical design centers on the signaling effect of begging with items, and how this affects donations involving four distinct data collection exercises. First, we use field data from over 600 donor-beggar interactions to compare actual donations received by beggars with and without items, estimating the average donation gap at the market level across crowded public areas. Second, we elicit within-donor counterfactuals by asking individuals how much they would have given had the same beggar used a different begging style. These measures capture both revealed and stated donor responses to signaling, while controlling for a rich set of observable and unobservable traits on both sides of the market. Third, we conduct a survey experiment with more than 1,200 representative Delhi residents, in which participants allocate a fixed sum between two beggars, one with items, one without, in an incentivized split-the-pie task. This provides an experimentally clean measure of the signaling premium and allows us to examine how it varies across donors classified as meritocratic or non-meritocratic using their responses to standardized questions adapted from the World Values Survey.

In parallel, we conduct survey experiments with more than 1,200 beggars to collect incentivized measures of labor-aversion and ability, and their beliefs about the returns to signaling, along with an unincentivized measure of free-riding preferences, to directly test the signaling mechanism.[4] We then compare these with experimentally elicited beliefs from a sample of donors, who are randomly assigned to view photo collages of a set of beggars, either with or without items and estimate the prevalence of high labor-aversion and ability. This enables us to compare actual and perceived distributions of beggar types, and assess whether signaling shifts donor perceptions in the direction predicted by our model.

Together, these data allow us to test our theory-informed hypotheses. We test whether beggars with items receive higher donations (H1), whether beggars with items are, and are perceived to be, less labor-averse (H2), and whether signaling reveals effort but not ability (H3). We then examine heterogeneity in the signaling premium: meritocratic donors are predicted to respond more strongly to signaling (H4), and the signaling premium is predicted to increase with donors' prior beliefs or perceived proportion of beggars that are highly labor-averse and high ability (H5). These complementary data sources allow us to test the signaling mechanism and evaluate how beliefs and fairness preferences shape charitable behavior.

Our results concerning signaling returns and donor beliefs are consistent with our theoretical predictions. On average, 31% of the beggars per street signal effort by

[4]We also measure beggars' preferences for dishonesty and donors' beliefs about them as a placebo, since dishonesty is not theoretically linked to the signaling mechanism. Indeed, we find no differences in dishonesty preferences or donors' beliefs about them between beggars with and without items.

offering low-value items, and donors reward them with higher donations, the signaling premium systematically varying with donors' meritocratic preferences and prior beliefs. Specifically, we find that beggars with items receive significantly higher donations across three complementary measures: actual donations in the field, donor-reported counterfactuals, and incentivized experimental allocations. The average signaling premium remains statistically significant after accounting for item costs as well as beggar and donor characteristics. Donors perceive beggars with items as significantly less likely to be labor-averse (0.15 sd, $p < 0.01$) and supportive of free-riding (0.12 sd, $p < 0.05$).

While donor beliefs and giving behavior are aligned, the signal itself is not informative of beggars' underlying traits. Instead, the decision to beg with items reflects beggars' beliefs about the returns to signaling. Most beggars, regardless of begging style, are not highly labor-averse and are therefore unlikely to be begging by choice. On the other hand, donors systematically overestimate beggars' labor-aversion, free-riding, and ability (all $p < 0.001$). Signals of effort are thus persuasive even when they convey no real information, underscoring the role of perceived deservingness in shaping charitable behavior.

While we need more research to evaluate different policies to reduce begging and improve welfare, our findings suggest that the rate of begging is likely inelastic to pecuniary and non-pecuniary returns of begging, as beggars are unlikely begging by choice. As a result, policies such as banning or criminalizing begging, which increase the cost of begging by posing the risk of getting caught or police harassment, may not be effective. Welfare policies such as cash transfers and upskilling or workfare policies which pay beggars in return for work would be more effective than legal regulations in reducing begging in such a case. Between welfare and workfare though, workfare policies are more likely to receive support by the general population than welfare policies in societies where people have meritocratic preferences and beggars' willingness and ability to work influence perceived deservingness for charity. Indeed, 80% of our respondents prefer unproductive workfare to unconditional cash transfers to support beggars, similar to employers' preferred way of redistribution found in the literature (Macchi and Stalder, 2023).

Related Literature - The economics of begging is largely a neglected area of study, traditionally left within the realm of other social sciences (Kennedy and Fitzpatrick, 2001; Lee and Farrell, 2003; Mock et al., 2011). Exceptions include small-scale observational studies of beggars' location choice showing profit maximizing behavior among beggars in Manhattan (Dordick et al., 2018; Leeson et al., 2022), and estimating yields to begging

in Brussels (Adriaenssens and Hendrickx, 2011). We introduce the first conceptual framework to study the market for begging, highlighting its economic and behavioral drivers, alongside novel methods for large-scale data collection with this hard-to-study population. Our findings suggest that the supply of beggars is inelastic to changes in costs and benefits, consistent with evidence from Manhattan, underscoring the external validity of our results in meritocratic societies (Dordick et al., 2018).

We contribute to the rich literature on the economics of charitable giving by focusing on giving to beggars, which is arguably distinct from formal charities, government welfare programs, or online giving platforms (Andreoni, 1989, 1990; Glazer and Konrad, 1996; Vesterlund, 2006; List, 2008, 2011; Vesterlund, 2016). Unlike these settings, giving to beggars involves direct, brief interactions shaped by immediate perceptions and contextual cues, with no institutional oversight. Moreover, in low- and middle-income countries like India, where formal charity systems are often underdeveloped, giving to beggars is the dominant form of charitable behavior. By studying this context, we extend existing theories of charitable giving to informal, non-Western settings, addressing the call for research beyond the Western world (List and Price, 2012).[5]

Within the charitable giving literature, our paper also contributes to research on the effect of material offerings on charitable behavior. Prior research suggests two hypotheses: material offerings may increase donations through perceptions of direct repayment, gift exchange, or reciprocity (Buraschi and Cornelli, 2002; Andreoni and Petrie, 2004; Landry et al., 2006; Falk, 2007; Alpizar et al., 2008). Alternatively, they may reduce donations by crowding out intrinsic motivations and warm-glow effects (Zuckerman et al., 1979; Anik et al., 2009; Newman and Shen, 2012). Consistent with our findings, recent work also shows that charitable motivations underlie the purchase of trivial items from street vendors in Delhi, attributing this behavior to perceptions of "hard work" rather than the economic value of the items themselves (Jain, 2024). In contrast, our study focuses on the broader market for begging, directly comparing both donation behavior and beliefs about the preferences of beggars who solicit with versus without items. We show that material offerings by beggars increase donations by signaling higher deservingness, a mechanism distinct from direct benefit, gift exchange, or reciprocity.[6]

This mechanism of signaling deservingness aligns with a broader literature on the role of fairness preferences and beliefs in shaping economic decisions, especially charitable behavior. Previous research shows higher donations to recipients perceived

[5] *"A strong plea is made to engage researchers in the exploration of why non-Westerners give.... A first examination of whether the pecuniary and non-pecuniary incentive effects found in the USA and European data extend to other regions of the world would be of great interest."*(List and Price, 2012)

[6] Most givers to beggars with items either do not take the item or discard it immediately.

as hardworking compared to lazy ones (Fong, 2007; Fong and Luttmer, 2011) and highlights how information about recipient efforts influences altruism (Gangadharan et al., 2023), consistent with our findings. However, much of this literature, including studies on how fairness considerations influence public policy such as tax rates and social security, relies on self-reported values or lab-based dictator games (Eckel and Grossman, 1996; Alesina and Angeletos, 2005; Fong, 2007; Cappelen et al., 2007; Fong and Luttmer, 2011; Almås et al., 2020; Gangadharan et al., 2023). We argue that a passerby-beggar interaction serves as a natural dictator game in the field, involving needier recipients than lab participants, which offers external validity and a robustness test of the economic implications of fairness preferences.

Finally, our finding of policy preference for unproductive workfare over unconditional welfare has been previously shown in employers' choice of hiring for useless but effort intensive tasks rather than giving free cash (Macchi and Stalder, 2023), public support for aid often hinges on whether recipients are perceived as making an effort to improve their situation (Drenik and Perez-Truglia, 2018). Our modeling choice of stigma under begging and the finding that 87% of beggars choose paid work over free cash is also consistent with evidence that employment provides significant psychosocial value, restoring dignity and social inclusion among the poor (Hussam et al., 2022). While givers care about fairness and effort, we find evidence of significant misperceptions about beggars' work preferences, consistent with previous findings of "shallow meritocracy" (Andre, 2024). Such misperceptions suggest that legal regulations are unlikely to reduce begging as donations are responsive to these perceptions and most beggars are unlikely begging by choice. Although workfare may be preferred by voters, our findings and recent evidence suggest that direct welfare programs, such as cash transfers and upskilling, can also be effective without incentivizing more begging (Cunha et al., 2024).

The rest of this paper is structured as follows. We describe our theoretical model of begging as an alternative to the formal labor market and extend it to understand the role of fairness preferences in shaping the begging market in section 2. In section 3, we provide the details of our survey and experimental design. We describe our field context, sampling protocol and key summary statistics from our surveys in Section 4. In section 5, we present our findings, showing that donations and perceptions of beggars improve when items are offered. Finally, we discuss our inferences, policy implications and some future directions for this research in section 6.

2 An economic theory of begging

In this section, we describe a model of begging as an alternative to participation in the labor market. We assume a minimum consumption bundle which restricts an individual's capacity to provide productive labor and to enjoy utility from non-consumption sources such as leisure and dignity.[7] Comparing optimal utility from the labor market and the payoff from begging, we describe the causes of begging based on uncontrollable factors such as labor market barriers versus own choice due to high labor-aversion. Next, we extend the model to understand the effect of donors' fairness preference for donating less to beggars by choice, within a signaling framework.

2.1 The Baseline Model

Preferences and Types People derive utility from consuming goods (c) and enjoying non-labor time (l). However, non-labor time (and other non-consumption sources of utility) only become valuable once the basic survival needs for consumption are met. We denote the minimum consumption requirement as $\underline{c}$. Above this threshold, individuals differ in how they value consumption relative to non-labor time, captured by the labor-aversion parameter $\alpha_i \in [0, 1]$. The utility function is thus defined as follows:

$$U_i(c, l) = \begin{cases} c & \text{if } c \leq \underline{c} \\ \underline{c} + (c - \underline{c})^{(1-\alpha_i)} l^{\alpha_i} & \text{if } c \geq \underline{c} \end{cases} \tag{1}$$

Following are the usual budget constraints where the price of consumption is normalised to 1, w_i is the hourly wage for individual i, h is the hours of work, T is the total time endowment and l and c denote non-labor time and consumption respectively.

$$c = w_i h \qquad \text{and} \qquad T = h + l \tag{2}$$

Productivity and Wages An individual's labor productivity depends on their level of consumption when basic needs are unmet. Specifically, for individuals with consumption below a threshold $\underline{c}$, productivity increases with consumption due to nutritional or cognitive constraints. Once consumption meets or exceeds this threshold, productivity stabilizes at its intrinsic level.

We formalize this relationship using a productivity function $y(c)$, which satisfies $y(0) = 0$, $y'(c) > 0$, and $y''(c) > 0$ for all $c \leq \underline{c}$, and $y(c) = 1$ for all $c \geq \underline{c}$. Each individual

[7] This assumption aligns with findings in behavioral and labor economics, which show that productivity and utility among the poor is often constrained by inadequate consumption (Shah et al., 2012; Mani et al., 2013; Haushofer and Fehr, 2014; Schilbach et al., 2016).

i has a type-specific productivity parameter $\pi_i > 0$, reflecting their intrinsic ability.

Wages are pinned down at the level of effective labor productivity under the assumption of a perfectly competitive labor market, where low-skilled workers have little or no bargaining power due to surplus labor, informality, and weak institutions.

$$w_i = y(c)\pi_i \tag{3}$$

Labor supply Maximizing the utility in equation (1) with respect to budget constraints in equations (2) and (3) gives the optimal values of consumption, labor and non-work time, given ability π_i and labor-aversion α_i. The optimum values of consumption, labor hours, and non-work time is given as follows.

$$(c_i^*, h^*, l^*) = \begin{cases} (0, h, T-h) & \text{if } \pi_i \leq \underline{\pi}_1 \\ \left(\underline{c} + (1-\alpha_i)(T\pi_i - \underline{c}), \dfrac{\underline{c}}{\pi_i} + (1-\alpha_i)\left(T - \dfrac{\underline{c}}{\pi_i}\right), \alpha_i\left(T - \dfrac{\underline{c}}{\pi_i}\right)\right) & \text{if } \pi_i \geq \underline{\pi}_1 \end{cases} \tag{4}$$

where, $h \in [0, T]$ and $\underline{\pi}_1 = \dfrac{\underline{c}}{T}$.

When productivity is too low i.e., $\pi_i < \underline{\pi}_1$, the labor market is not a feasible option for the individual. This is because even if they put all their hours to work, their income does not cover the cost of even the consumption bundle required to supply labor for those hours. However, when $\pi_i > \underline{\pi}_1$, there is a range of consumption bundles that the individual may choose from, and they can trade off consumption against time not working. The optimal allocation of time to labor depends on an individual's ability and labor-aversion α_i.

Substituting the optimal consumption and leisure from equation (4) in the utility function described in equation (1) gives the corresponding optimized utility from the labor market as follows,

$$U_i^L = \begin{cases} 0 & \text{if } \pi_i \leq \underline{\pi}_1 \\ \underline{c} + (1-\alpha_i)^{1-\alpha}(T\pi_i - \underline{c}))^{(1-\alpha_i)}\alpha_i^{\alpha_i}\left(T - \dfrac{\underline{c}}{\pi_i}\right)^{\alpha_i} & \text{if } \pi_i \geq \underline{\pi}_1 \end{cases} \tag{5}$$

In addition, we assume that there is a probability γ that an individual does not find a job in the labor market.

Donations and payoff from begging Let the average donor's utility from giving x to a beggar be given by,

$$U^D(x) = u(x) - x \tag{6}$$

where, $u(0) = 0, u' > 0, u'' < 0$ captures generosity or warm-glow that the individual experiences from giving x (Andreoni, 1989, 1990). We denote with D the level of donation which optimizes a representative or average donor's utility from charity. Thus, donation D is given by, $u'(D) = 1$.

Beggars face internalized and social stigma, harassment and exposure to risks such as weather and the risk of incarceration when begging is legally regulated (Hussam et al., 2022). We denote these socio-psychological costs of begging by s, deducted from the time endowment payoff. The stigma of begging imposes not only psychological and social costs but also precludes simultaneous participation in the labor market, resulting in $h = 0$ and $l = T$ for a beggar. Thus, utility payoff from begging is given as follows.

$$U_i^B(D, s) = \begin{cases} D & \text{if } D \leq \underline{c} \\ \underline{c} + (D - \underline{c})^{1-\alpha_i}(T - s)^{\alpha_i} & \text{if } D \geq \underline{c} \end{cases} \tag{7}$$

Assumption 1 (Bounded Stigma)**.** *Stigma s lies in the interval*

$$0 < s < \min\left(T - D + \underline{c},\ \frac{\underline{c}}{D} \cdot T\right).$$

This ensures that utility from begging is well-defined and non-degenerate. The first bound, $s < T - D + \underline{c}$, implies that $D - \underline{c} < T - s$, which ensures that utility from begging is increasing in labor-aversion α_i when $D > \underline{c}$. The second bound, $s < \frac{\underline{c}}{D} \cdot T$, ensures that the time equivalent cost from stigma does not outweigh the consumption value of donations after meeting basic needs. This assumption ensures that begging remains an interior option for at least some labor-aversion types.

Assumption 2 (Relevant Population)**.** *Productivity π_i satisfies*

$$\pi_i < \underline{c}/s = \pi_{max}$$

This assumption guarantees that we examine the begging-labor trade off for relevant population, which does not have such a high productivity that begging can never be an optimal choice even if they are highly labor-averse (i.e., have $\alpha_i = 1$).[8]

Labor market participation versus begging Comparing the payoffs from labor market participation and begging provides the conditions under which an individual engages

[8]This ensures that the disutility from stigma is less than the minimal labor effort required to survive for the most labor-averse individuals (i.e., those with $\alpha_i = 1$). At $\alpha_i = 1$, the optimal labor supply is $h_i^* = \underline{c}/\pi_i$, and the assumption implies $s < h_i^*$. If productivity were higher, such that $s > h_i^*(1)$, even the most labor-averse individuals would strictly prefer labor to begging.

in begging, leading to our first theoretical result.

Proposition 1. *Given the optimized utility from labor (equation (5)) and begging (equation (7)), and under Assumptions 1 and 2, the following results hold:*

(i) If $D > 0$ and $\pi_i < \underline{\pi}_1$, begging is the only feasible option.

(ii) If $D > \underline{c}$ and $\underline{\pi}_1 < \pi_i < \underline{\pi}_2$, begging strictly dominates labor market participation for all $\alpha_i \in [0, 1]$.

(iii) If $D > \underline{c}$ and $\pi_i \geq \underline{\pi}_2$, then there exists a threshold $\underline{\alpha}(D, \pi_i, s) \in (0, 1)$ such that:

- *If $\alpha_i > \underline{\alpha}(D, \pi_i, s)$, begging is preferred over labor market participation.*
- *If $\alpha_i < \underline{\alpha}(D, \pi_i, s)$, labor market participation is preferred over begging.*

where, $\underline{\alpha}(D, \pi_i, s)$ is determined by equating payoffs from begging and labor market participation.

(iv) If $D < \underline{c}$ and $\pi_i > \underline{\pi}_1$, labor market participation strictly dominates begging for all $\alpha_i \in [0, 1]$.

where $\underline{\pi}_1 = \underline{c}/T$ and $\underline{\pi}_2 = D/T$

The proofs of all propositions is provided in Mathematical Appendix A.

Building on Proposition 1, we classify equilibrium begging behavior into distinct categories based on productivity and labor-aversion thresholds. This allows us to formally decompose the population of beggars by their cause of begging and analyze how the share of each group responds to changes in donation levels D and stigma costs s.

Proposition 2 (Distributional Decomposition of Begging)**.** *Let $F_\pi(\cdot)$ and $G_\alpha(\cdot)$ denote the cumulative distribution functions of productivity $\pi_i \in [1, \pi_{max}]$ and labor-aversion $\alpha_i \in [0, 1]$, respectively. For any donation level $D > \underline{c}$, stigma cost s, and unemployment probability γ, the composition of beggars by cause of begging can be described as follows. In each case, we discuss whether a reduction in donation D or an increase in begging cost s can move those beggars out of begging.*

(i) ***Infeasibility of Labor:*** *Occurs when begging is the only feasible option for survival due to an inability to participate in the labor market, i.e., $\pi_i < \underline{\pi}_1$ and $D > 0$.*

$$\textit{Probability}_{\text{infeasible}} = F_\pi(\underline{\pi}_1), \quad \textit{where } \underline{\pi}_1 = \frac{\underline{c}}{T}$$

Their prevalence is unaffected by changes in donations D, stigma s, or unemployment γ.

(ii) ***Poor Labor-Market Returns:*** *Occurs when labor market participation is feasible ($\pi_i \geq \underline{\pi}_1$), but begging strictly dominates labor for all individuals regardless of their labor-aversion. This arises when $\pi_i < \underline{\pi}_2$ and $D > \underline{c}$.*

$$Probability_{\text{poor returns}} = F_\pi(\underline{\pi}_2) - F_\pi(\underline{\pi}_1), \quad where\ \underline{\pi}_2 = \frac{D}{T}$$

In this case, the decision to beg does not change with begging cost s or donations D as long as $D > \underline{c}$.

(iii) ***Labor-Aversion (begging by choice):*** *Occurs when labor market participation is viable, but begging is preferred due to labor-aversion or a high preference for non-work time, i.e., $\pi_i \geq \underline{\pi}_2$ and $\alpha_i > \underline{\alpha}(D, \pi_i, s)$.*

$$Probability_{\text{preference}} = \left[1 - F_\pi(\underline{\pi}_2)\right] \cdot \left[1 - G_\alpha\left(\underline{\alpha}(D, \pi_i, s)\right)\right]$$

As D decreases or s increases, the threshold $\underline{\alpha}$ increases, reducing the size of this group such that some of these beggars now prefer labor market participation.

(iv) ***Unemployment:*** *Occurs when labor market participation is both viable ($\pi_i \geq \underline{\pi}_2$) and preferred ($\alpha_i < \underline{\alpha}(D, \pi_i, s)$), but unemployment forces the individual to beg with probability γ.*

$$Probability_{\text{unemployment}} = \gamma \cdot \left[1 - F_\pi(\underline{\pi}_2)\right] \cdot G_\alpha\left(\underline{\alpha}(D, \pi_i, s)\right)$$

A reduction in D or an increase in s cannot move them out of begging as they already prefer labor.

Among all categories, only the individuals who beg out of labor-aversion respond to changes in donation levels or begging costs at the extensive margin. In contrast, those begging due to labor infeasibility, poor labor-market returns, or involuntary unemployment remain unaffected by such changes. Consequently, legal regulations that seek to reduce begging by restricting donations (for instance, imposing fines on giving to beggars), or by raising the cost of begging (for instance, through anti-begging ordinances, police harassment, or incarceration risk), primarily reduce the welfare of those who cannot exit begging without meaningfully reducing the number of beggars in equilibrium. However, the marginal beggars by choice are incentivized to shift into the labor market as a result of legal regulations on begging.

2.2 Fairness concerns and Signaling

Having derived the conditions under which a beggar may optimally choose to beg due to labor-aversion, we now turn to a discussion of donors' fairness preferences and their beliefs regarding the underlying causes of begging.

Fairness Preferences A meritocratic donor derives less utility from giving to a beggar who begs by choice due to labor-aversion, compared to giving to a beggar who is constrained by unfeasible, low-return, or inaccessible labor market opportunities. A meritocratic donor's utility from giving to a beggar by choice is given as follows.

$$U^D(x) = \beta u(x) - x \tag{8}$$

where $\beta \leq 1$, and $1-\beta$ measures the intensity of donor's fairness preference for meritocracy.

Under complete information regarding the beggar's type, an indifferent donor donates $u'^{-1}(1)$, regardless of the beggar's ability (π) or labor-aversion (α), consistent with equation (6). A meritocratic donor, however, gives $u'^{-1}(1)$ to those not begging by choice, and a lower amount $u'^{-1}(\beta^{-1})$ to those who beg by choice due to high labor-aversion.

Asymmetric Information and beliefs In practice, while beggars are aware of their own type and the underlying cause of their begging, this information is not observable to donors. An exception may exist for the least able beggars, such as those who are very old or suffer from physical or mental disabilities, for whom labor market participation is clearly infeasible ($\pi_i < \underline{\pi}_1$). However, distinguishing among other causes of begging, such as poor labor-market returns, high labor-aversion, or unemployment is considerably more difficult for donors, making inference under asymmetric information inherently complex. Under such uncertainty, a meritocratic donor's giving behavior depends on their belief that a beggar is begging by choice. Let μ denotes a donor's belief that a beggar is not begging by choice, then they donate, $\mu u'^{-1}(1) + (1-\mu)u'^{-1}(\beta^{-1})$.

Signaling through Begging with Items We model begging with items as a costly signal of low labor-aversion (and hence a signal of not begging by choice). Each beggar chooses whether to signal their type by offering an item while begging by choosing effort cost $e \in [0, T-s]$ which gets deducted from their non-consumption source of utility. For any level of e, the effective signaling cost thus increases in labor-aversion.

Donors observe the signal e, but not the beggar's underlying type (π, α), which determines whether begging is by choice, as formalized in Proposition 2. Donors update their beliefs accordingly.

Let $\mu(e)$ denote the donor's posterior belief that a beggar who chooses signal level e is not begging by choice:

$$\mu(e) = \Pr[\text{not begging by choice} \mid e].$$

Given belief $\mu(e)$, and the donor utility function defined in equation (8), the optimal donation by the average donor (with meritocratic preference $\beta \in (0, 1]$) is:

$$x(e, \beta) = \mu(e) \cdot u'^{-1}(1) + (1 - \mu(e)) \cdot u'^{-1}(\beta^{-1}), \tag{9}$$

A Perfect Bayesian Equilibrium (PBE) in this setting consists of: (i) a signaling strategy for each beggar type, $e(\pi, \alpha) \geq 0$; (ii) a donation function $x(e, \beta)$, specifying optimal giving based on signal and fairness preferences; and (iii) a belief function $\mu(e)$, mapping signals to updated beliefs about whether the beggar is not begging by choice, such that beggars maximize expected utility given the donation function; donors maximize their utility given beliefs and preferences; and beliefs are updated via Bayes' rule.

We focus on a partially separating (hybrid) equilibrium in which, regardless of their ability, beggars with high labor-aversion choose $e(\alpha > \underline{\alpha}) = 0$, while those with low labor-aversion mix, choosing to signal $e(\alpha < \underline{\alpha}) = e_L$ with probability $q \in (0, 1)$.[9,10] This yields posterior beliefs:

$$\mu(e = e_L) = 1, \quad \mu(e) = F_\pi(\pi_2) + (1 - F_\pi(\pi_2)) \cdot \frac{\gamma G_\alpha(\underline{\alpha})(1 - q)}{\gamma G_\alpha(\underline{\alpha})(1 - q) + 1 - G_\alpha(\underline{\alpha})} \forall e \neq e_L \tag{10}$$

Let $D_{\text{with}} = x(e = e_L, \beta)$ and $D_{\text{without}} = x(e = 0, \beta)$ denote the donations received by beggars who signal (i.e., beg with items) and those who do not, respectively. The signaling return (R), defined as the difference in donations between these two cases, is

[9] We focus on a hybrid equilibrium as it avoids knife-edge predictions, permits belief heterogeneity across donors, and yields interior comparative statics, allowing us to examine how donor responses vary with their priors about beggar types.

[10] We treat $\underline{\alpha}$ as fixed, based on its value derived from the labor-versus-begging trade-off stage, and do not endogenize it via backward induction from the signaling stage. We argue that this simplification does not affect our main results, as both the decision to beg and the decision not to signal are driven by high-α types; allowing for feedback from signaling returns would not alter the qualitative structure of the equilibrium.

derived by combining equations (9) and (10), and is given by:

$$R = D_{\text{with}} - D_{\text{without}} = [1 - \mu(e = 0)] \cdot \left(u'^{-1}(1) - u'^{-1}(\beta^{-1})\right) \tag{11}$$

Given the beggar utility function in equation (7), and assuming donations $D \geq \underline{c}$, the beggar's utility when signaling is[11]:

$$U^B(e = e_L) = \underline{c} + (D_{with} - \underline{c})^{1-\alpha}(T - s - e_L)^{\alpha},$$

and when not signaling:

$$U^B(e = 0) = \underline{c} + (D_{without} - \underline{c})^{1-\alpha}(T - s)^{\alpha}.$$

Incentive Compatibility Constraints: To sustain a hybrid equilibrium, we first determine the signaling effort level $e_L \in (0, T - s)$ and mixing probability $q \in (0, 1)$ such that high labor-averse beggars strictly prefer not to signal, while the low labor-averse beggar are exactly indifferent between signaling and not signaling.

$$U^B_{\alpha_H}(e = e_L) < U^B_{\alpha_H}(e = 0) \tag{12}$$

$$U^B_{\alpha_L}(e = e_L) = U^B_{\alpha_L}(e = 0) \tag{13}$$

Solving these two conditions yields the equilibrium (e_L, q) pair.

Equilibrium Properties Under the partially separating Perfect Bayesian Equilibrium defined above, the following properties hold:

(i) In equilibrium, beggars with items are less likely to be highly labor-averse ($\alpha > \underline{\alpha}$) than those without items:

$$\Pr(\alpha > \underline{\alpha} \mid e = e_L) < \Pr(\alpha > \underline{\alpha} \mid e = 0).$$

Donors correctly interpret this signal and update their beliefs accordingly:

$$\mu(e = e_L) > \mu(e = 0).$$

(ii) Begging with items does not reveal information about ability:

$$\Pr(\pi \geq \pi_2 \mid e = e_L) = \Pr(\pi \geq \pi_2 \mid e = 0), \quad \mu(\pi \geq \pi_2 \mid e = e_L) = \mu(\pi \geq \pi_2 \mid e = 0).$$

[11]The case of $D < \underline{c}$ is trivial as begging versus labor market participation only depends on whether ability $\pi_i < \underline{\pi}_1$ or $\pi_i > \underline{\pi}_1$, and signaling is irrelevant.

These equilibrium properties shape the signaling return, which captures the donation premium associated with begging with items and underpin the comparative statics of the signaling return.

Proposition 3 (Signaling Return and Comparative Statics)**.** *Under the partially separating Perfect Bayesian Equilibrium defined above, the following results hold:*

(i) Beggars who signal (beg with items) receive higher donations than those who do not:

$$R \equiv D_{with} - D_{without} > 0.$$

(ii) $\dfrac{\partial R}{\partial F_{\pi}(\pi_2)} > 0$*: The signaling return increases with the donor's prior belief about the probability that the beggar has such low ability that labor market participation is non-viable, rendering labor-aversion irrelevant to the decision to beg.*

(iii) $\dfrac{\partial R}{\partial \beta} < 0$*: The signaling return increases as donors become more meritocratic (i.e., as* β *decreases).*

(iv) $\dfrac{\partial R}{\partial G_{\alpha}(\underline{\alpha})} < 0$*: The signaling return decreases with the donor's prior belief about the probability that the beggar has low labor-aversion (i.e.,* $\alpha < \underline{\alpha}$*).*

Taken together, the equilibrium properties and this resultant proposition highlight that begging with items increases donations by shifting donors' beliefs: donors are more likely to infer that the beggar is not begging by choice, which changes donation when they hold meritocratic preferences. Beggars with items are less likely to be highly labor-averse but similarly able as ability is unobservable and assumed to be independent of labor-aversion in our model. Part (ii) shows that the signaling return is amplified when donors assign higher prior probability to the beggar being sufficiently able (i.e., $\pi > \pi_2$), making labor-aversion a more plausible explanation for the choice to beg. Part (iii) further shows that the return is stronger for more meritocratic donors (i.e., those with lower β), who penalize beggars they believe are begging by choice due to high labor-aversion. Finally, in part (iv), we show that when donors perceive a high likelihood that a beggar is highly labor averse, then signaling has a greater impact on moving the donor's beliefs and the premium is higher.

Before turning to our empirical design, we note that the equilibrium above assumes that donors hold correct priors and interpret signals accurately. In practice, however, perceptions may diverge from this benchmark. Beggars may signal strategically not only due to low labor-aversion but also because they anticipate donor preferences, while donors may misinterpret signals or hold systematically biased beliefs about the

distribution of beggar types. These deviations have important implications for policy: if signaling is effective and perceptions are accurate, then both sides are behaving optimally, and informational interventions may have limited impact. But if donors misperceive either the meaning of signals or the prevalence of constrained beggars, well-intentioned policies restricting giving or begging may harm the truly disadvantaged without achieving their intended goals.

The next section outlines our empirical strategy, which combines field data on actual donation behavior with experimental surveys to directly test the impact of signal on donation behavior and assess the extent to which signaling affects donor beliefs (a test of the signaling mechanism) versus actual differences in beggar types.

3 Empirical Design

Our research design aims to understand the effect of signaling through begging with items on the donation behavior of meritocratic and non-meritocratic donors. We measure the signaling effect using three complementary measures.

First, we compare actual charitable donations to beggars with and without items in the field to estimate the average donation difference at the market level.

Second, we examine individual-level responses by asking each donor to state how much they would have donated to the same beggar had the begging style been different. This counterfactual comparison identifies how donors react to signaling conditional on their own preferences and perceptions. While we control for an extensive set of observable and unobservable characteristics of beggars, donors, and locations, these two field-based measures may still be subject to selection biases on both sides of the market.

Third, we elicit an incentivized measure of the signaling effect through a survey administered to a representative sample of Delhi residents. Participants engage in a split-the-pie task in which they allocate a fixed sum (INR 100) between a beggar with items and a beggar without items. In this setting, we define the individual signaling effect as the deviation from an equal (50-50) split in favor of the beggar with items. The survey also includes questions on economic values adapted from the World Values Survey Wave VII to classify donors as meritocratic and non-meritocratic to study how the signaling premium varies by meritocracy.

In addition, we collect incentivized measures of beggars' economic preferences, including their labor-aversion, basic cognitive ability, beliefs about the signaling returns, and labor market opportunities. These data provide insight into both the underlying causes of begging and selection into signaling. In parallel, we use a survey experiment

to elicit donors' incentivized beliefs about the distribution of labor-aversion and ability among beggars with and without items. This enables us to causally estimate what donors infer from the signal and assess whether donors systematically overestimate or underestimate beggars' actual characteristics. Consistent with our threshold model, we classify both beggars and donors' beliefs into binary categories to examine the actual and perceived distributions of beggars' characteristics, specifically, the proportion of beggars who are highly labor-averse and the proportion who are sufficiently able to meet a bare-minimum productivity or skill threshold.

Our design allows us to test the following hypotheses corresponding to the properties of the signaling equilibrium and proposition 3:

H1. **Positive average signaling effect:** On average, beggars with items receive higher donations in the field and a higher share of the pie in the survey experiment, reflecting a positive signaling effect.

H2 **Labor-aversion sorting and signaling mechanism:**

- H2a. Beggars with items are less likely to be highly labor-averse than beggars without items.
- H2b. Donors perceive beggars with items to be less likely to be highly labor-averse than those without items

H3 **Ability distribution by begging styles:**

- H3a. Beggars with items are equally likely to be sufficiently able or meet the bare-minimum ability level as beggars without items.
- H3b. Donors perceive beggars with items to be equally likely to be sufficiently able or meet the bare-minimum ability level as beggars without items.

H4. **Effect of fairness preferences:** Meritocratic donors allocate a higher signaling premium to beggars with items.

H5. **Effect of prior beliefs about beggars' labor-aversion and ability:**

- H5a. The signaling premium is increasing in donors' prior beliefs (formed about beggars who do not signal) regarding the proportion of beggars who are highly labor-averse.
- H5b. The signaling premium is increasing in donors' prior beliefs (formed about beggars who do not signal) regarding the proportion of beggars who are sufficiently able to meet a bare-minimum skill threshold.

The signaling premium is increasing in donors' prior beliefs (formed about beggars who do not signal) regarding the proportion of beggars who are highly labor-averse and sufficiently able to meet a bare-minimum skill threshold.

We now provide details about the two main components of our research design: field surveys that generate observational evidence on donation behavior in the Delhi begging market (subsection 3.1), and experimental tools used to elicit beggars' economic preferences and donors' perceptions (subsection 3.2).

3.1 Field surveys design

To examine the average donation behavior towards beggars with and without items, we use two complementary field surveys in crowded streets of Delhi including religious sites, metro stations and marketplaces. To measure differences in donation frequencies (extensive margin), we conducted an observational survey of begging activities, capturing the rate at which passers-by donated to beggars with and without items. To measure differences in donation amounts (intensive margin), we conducted a real-time survey of successful interactions where some money was donated. We conducted the field surveys during peak hours i.e., 8:30am to 11:30am and 4:30pm to 7:30pm to fully capture the begging market activities.

Observational Survey - Extensive margin The observational survey is designed to capture two sets of information. First, we document the composition of beggars' characteristics and their begging styles to understand the broader context of the begging market in Delhi. We refer to this as the Observational Survey of Beggars. At both the beginning and end of the survey period, surveyors recorded the total number of beggars, categorized by begging style (with or without items), present during a 20-minute window across 75 crowded streets in Delhi. Surveyors worked in pairs: one recorded observable characteristics for beggars with items, while the other simultaneously recorded the same characteristics for beggars without items. These characteristics included gender, age category (child, adolescent, adult, or senior), whether the beggar was part of a group, whether they were carrying an infant, whether they were stationary or mobile in their solicitation, and visible indicators of vulnerability such as physical disability, lack of footwear, and state of clothing.

Second, we observe and document interactions between beggars and passers-by over 120 minutes. We refer to this as the Observational Survey of Interactions. Each surveyor observed up to six beggars of their assigned type for 20 minutes each, recording details of each passer-by approached by the beggar and whether the interaction resulted in a

donation.[12] Surveyors did not interact with beggars or donors and instead recorded interactions passively while blending into the crowd. We restricted our sample to mobile beggars whose solicitation behavior was unambiguous and excluded stationary beggars (for whom establishing whether solicitation occurred was more difficult). We also exclude interactions at traffic lights, where solicitation is directed at people in vehicles, as it is harder to observe whether a donation was made. This survey enables us to compare donation behavior toward beggars with and without items along the extensive margin.

Survey of Successful Interactions - Intensive margin This survey captures charitable interactions between beggars and passers-by to compare average donation amounts to beggars with and without items. Surveyors worked in pairs and, immediately after observing an interaction, one approached the beggar while the other approached the donor to ask about the amount of money (and any item, if applicable) that was exchanged. The survey was intentionally kept short and typically took between 5 and 10 minutes to complete. To ensure credible measurement of charitable transfers, both the beggar and the donor were informed that the same question was being asked to each of them and that their reported amounts would be matched. In all observed pairs, the reported donation amounts matched exactly. Participation was incentivized with a flat fee of 100 INR. This survey provides the first measure of the signaling effect: the average difference in donation amounts to beggars with and without items in the field.

In the absence of exogenously varying the beggar type on the street, i.e., randomly assigning beggars to solicit charity with and without items,[13] the observed differences in donation amounts may reflect the underlying characteristics of both donors and beggars, rather than the effect of signaling through items. We, therefore, collect and control for a comprehensive set of covariates in our analysis to get as close as we can to estimating the effect of begging with an item on donation amounts.

For donors our additional covariates include: the donor's age, education level, observable disabilities, whether they are alone or in a group, monthly income, the number of earning and non-earning members in their household (dependency ratio), willingness to give, innate altruism (using experiment-validated survey question from the Global Preferences Survey (Falk, 2007)), self-perceived gullibility, and whether they regularly donate to this beggar. For beggars, we include: their age, gender, religion, whether they are a first-generation migrant to Delhi, education, type of residence,

[12]Surveyors documented interactions of all the beggars of their assigned type on that street if fewer than six were present within the 3-hour window.

[13]This choice was made due to ethical concerns with such an approach, especially as begging is an illegal activity in India.

self-reported persuasiveness, and some appearance-based features of vulnerability and neediness such as whether they are fully clothed, wearing footwear and have observable disability or serious wounds. In addition, for donors donating to beggars with items, we collect information on donors' use of the product, reason for buying, whether they kept the item, and whether they would like to dispose off or are willing to give away the item for free, which helps us identify the truly charitable interactions between donors and beggars with items and conduct sub-sample analysis.

To examine further the soliciting choices of beggars and donation choices of donors, we ask them about their counterfactual beliefs regarding the amount of donation if the begging style had been reversed. This provides the second measure of the signaling effect: the individual-level difference between actual and counterfactual donations conditional on the same beggar.

3.2 Experimental design

The experimental design consists of two components. First, we measure the innate preferences and abilities of beggars with and without items. Second, we elicit donors' beliefs about beggars' preferences and abilities and measure signaling effect by having donors split a fixed pie between beggars with and without items. We conduct both these surveys during non-peak hours to ensure respondents' availability and attentiveness.

Beggars' Preferences Survey Through this survey, we collect incentivized measures of beggars' economic preferences (labor-aversion, free-riding, and dishonesty) and cognitive ability. The sample includes beggars with and without items observed on the same crowded streets in Delhi where our field surveys were conducted, but data were collected by a different team of surveyors to maintain separation between components. In addition, we document each beggar's socio-economic and family background, labor market experience, economic values, aspirations, and migration status. Each interview lasted approximately one hour and was conducted with every beggar observed on the selected streets. Each participant received a fixed compensation of 400 INR, and nearly all provided informed consent. Although interviews were conducted in public spaces, surveyors ensured privacy by sitting with beggars individually on the roadside, away from others, so conversations could not be overheard.

To measure labor-aversion and classify beggars as highly labor-averse or not, we ask beggars to choose between receiving INR 50 in free cash or completing a real-effort task involving sorting black and white chickpeas into up to four boxes, compensated at a piece-rate of INR 25 per box. The task is deliberately simple, designed to minimize

variation due to ability or confidence. On average, completing all four boxes takes approximately 10 minutes and gives a payoff of 100 INR, double of the free-cash payoff[14]. All beggars who chose the sorting task completed all four boxes. We measure free-riding preferences using a vignette that describes an individual who chooses not to contribute effort in a community setting. Beggars are asked whether they agree or disagree with this person's decision and classified as free-riders or not based on this choice. Dishonesty is measured at the group level (for beggars with or without items) using the coin-flipping task where each beggar privately flips a coin ten times, and receives INR 5 for every head reported (Bucciol and Piovesan, 2011). While individual lying cannot be detected, deviations from the expected 50-50 distribution across large samples (approximately 6,000 coin flips per group) allow us to infer and compare dishonesty at the group level. Finally, we measure beggars' cognitive ability using a simple numeracy task in which they are asked to count aloud from 1 to 100. They are paid an amount equal to the highest number they successfully reach. Again, owing to the simplicity of this task, beggars who successfully count to 100 are considered to meet the bare-minimum ability threshold. All tasks were incentivized, except the free-riding vignette, and were presented in random order to each beggar. Each task was contextually adapted and validated through multiple rounds of field testing.

Donors' Perceptions Survey Experiment This survey comprises four parts. Part 1 elicits respondents' beliefs about the economic preferences and abilities of one type of beggars, either with or without items, randomly assigned at the individual level in a between-subjects design. Part 2 collects data on respondents' socio-economic and family background, economic values or fairness preferences, and policy views related to addressing begging. Part 3 elicits beliefs about the other type of beggar, enabling within-subject comparisons. Finally, Part 4 implements the third measure of the signaling effect: an incentivized split-the-pie task in which each respondent allocates INR 100 between a beggar with items and a beggar without items.

In Parts 1 and 3, beliefs are elicited by showing participants photo collages of real beggars corresponding to the type they were randomly assigned to report beliefs about. Appendix Figure E.1 shows the four collages used.[15] Participants predict, for the type of beggar shown in the collage, (i) how many out of 600 beggars chose free cash over work, (ii) how many agreed with free-riding, (iii) how many could count to 100, and (iv) how

[14]We find that beggars earn INR 23 on average within a 10 minute window during peak crowd hours (calculations based on average donations per successful interaction shown in Table 2 and average rate of successful interactions shown in Appendix Table D.1).

[15]All beggars provided informed consent for photography and use of their images. The study design and use of images were approved by the Institutional Review Board at New York University.

many total heads were reported in a coin-flipping task across 6000 flips conducted by the group (Bucciol and Piovesan, 2011). Belief elicitation is incentivized: participants receive INR 100 if their prediction lies within 10 percent of the actual values. Within each part, tasks are presented in random order, and one of the eight predictions is randomly selected for payment, ensuring that participants evaluate each task independently.

The survey lasted approximately 30 minutes and was conducted in participants' homes with adults who had been outside at least once in the past week, ensuring similarity to typical passers-by. Participants received a flat participation fee of INR 400. The consent rate was 68%, which is comparable to the Consumer Pyramids Household Survey (CPHS), which reports response rates of 66–70% (Centre for Monitoring Indian Economy (CMIE), 2025), and higher than the NFHS-5, which recorded 53% in Delhi (Deshmukh and Banerji, 2023). Conducting the survey at home ensured participant attention and privacy, both of which are difficult to secure in public spaces.

4 Context and Data

Our field site is Delhi, India, a sprawling metropolitan capital city with a population of approximately 34.7 million in 2025.[16] Although it is one of the wealthiest cities in India, with a Gross State Domestic Product (GSDP) of approximately $130 billion USD in 2023-24, Delhi is also among its most unequal, pushing many into extreme poverty and even begging. Begging has been criminalized in Delhi under the *Bombay Prevention of Begging Act, 1959*, which was extended to the National Capital Territory and remains in effect. The Act defines begging as follows.

> *"Begging" means soliciting or receiving alms, in a public place whether or not under any pretence such as singing, dancing, fortune telling, performing or offering any article for sale.*

This legal definition explicitly includes begging in the pretense of selling items as begging. Consistent with this legal framework, both the general public and the beggars themselves overwhelmingly interpret the act of offering low-cost, low-value items on the street as begging rather than legitimate vending.[17]

We confirm this through our own primary data collection. As part of our *Successful Interactions Survey* with donors who gave to beggars offering items, we asked: "Why did you purchase this item?" "Did you take the item?" "Would you like to give it away for

[16] World Population Review, 2025 estimate.

[17] We identify the items associated with begging by directly asking the general population of Delhi as part of our *Donors' Perceptions Survey*. Items such as pens, pencils, stickers, balloons and flowers are overwhelmingly classified as associated with begging.

free?" and "What did the beggar say to persuade you to buy the item?" As shown in Appendix Table C.5, 64% of the donors reported buying the item and giving only out of sympathy or charitable intention. 18% did not even take the item, and 75% (= .62/.82%) of those who did take it, gave it away for free to be disposed off immediately. Donors also reported that even among the beggars with items, a majority did not even mention the item, with their appeals primarily framed in religious and emotional terms related to hunger and vulnerability.

Our surveys with beggars further reinforce this interpretation. As part of the *Successful Interactions Survey* with beggars, we asked: "As per you, why did the person purchase the item from you?", and "What exactly did you say to this person?" 65% of the beggars with items themselves acknowledge that charity is the reason people purchase items from them. Morover, almost 50% of them report that they only mentioned religious, moral and vulnerability based reasons to pursuade the previous passer-by to purchase items from them, as shown in Appendix Table C.3.

Taken together, this evidence confirms that the practice of begging with items, offering trivial goods in exchange for donations, is both legally and socially understood as a form of begging rather than street vending. In our analyses, we therefore term this behavior as "begging with items" and analyze it as a costly signal of willingness to work, not as micro-entrepreneurship. Next, we describe our sampling design and discuss the key summary statistics of the participants from each of the four surveys conducted on the streets and in households.

4.1 Sampling

Our field data on begging is collected across 75 crowded streets in Delhi, India. We collected information on the backgrounds, preferences and experiences of beggars by conducting incentivized surveys of 1219 beggars (607 with items and 612 without items) across the streets of Delhi. Further, we conducted the donors' perceptions survey experiment with an income-representative sample of 1204 potential donors, i.e., people from the general population of Delhi in their households. Our sample sizes for each survey are summarized in Table 1.

Street Sampling Our sample size for the observational survey of interactions is 4614 interactions between beggars and donors across 75 streets, spanning 461 unique beggars and 1627 unique passers-by. The survey of successful interactions has a sample size of 607 interactions, implying 607 unique beggars and 607 unique donors. The beggars' perceptions survey includes evidence from 1219 beggars. Each of these three surveys

Table 1: **Sample Size by Survey**

		Beggars		Donors	
Survey Type	**N**	**With**	**Without**	**With**	**Without**
Observational Survey of Interactions	4614	221	240	812	815
Survey of Successful Interactions	607	305	302	305	302
Beggars' Preferences Survey	1219	607	612	-	-
Donors' Perceptions Survey Experiment	1204	-	-	597	607

Notes: This table reports the sample sizes for each of the four survey components. In all four cases, we disaggregate participants by begging style: for beggars, this reflects whether the individual was observed begging with or without items; for donors in the interaction-based surveys, it reflects the begging style of the beggar with whom they interacted; and for donors in the perceptions survey experiment, it reflects whether the respondent was randomly assigned to report beliefs about preferences and abilities of beggars with or without items.

was conducted across 75 crowded streets in Delhi, where begging is most prominently observed. To select the sample of streets, we gathered data on prominent temples, shopping centers, and metro stations in Delhi using available online information. We used the live traffic data (obtained using a third-party service provider) and merged it with each site. We provide comprehensive details about sampling and use of live traffic data along with the final list of locations in Appendix B.

Households Sampling For the potential donors' survey, our sampling strategy uses information from two main sources: Municipal Corporation of Delhi (MCD) and the Chief Electoral Officer (CEO) Delhi. All information is publicly available. Specifically, the MCD dataset that categorizes colonies by income is merged with the Geo IQ data that provides the population details by locality and the polling booths' data, which contains information on the nearest polling booth for assembly constituencies in Delhi. We provide further details about household sampling in Appendix B.

4.2 Summary Statistics

Beggars Appendix Table C.1, describes the observable demographic composition of beggars and is based on the Observational Survey of Beggars. We find that the 75 crowded streets in our sample have an average of 8.4 beggars per street. The gender composition is roughly balanced, with 52% women, 47% men and 1% visibly transgender people. Children comprise approximately 11% of the population, adolescents are 15% and 9% are seniors (aged 60 years and older). The remaining 65% are adults. Visible hardship is present but not ubiquitous: 4% of beggars are visibly disabled, 19% lack footwear, and 10% are partially clothed. Around 15% are observed begging with a

small child. Approximately 31% (= 2.63/8.44 %) of the beggars beg with items, while the remaining 69% do not. We find that beggars with items are more likely to be male, adolescent, begging alone (rather than in a group or with a small child or infant).[18]

From the detailed survey of beggars' preferences and backgrounds as summarized in Appendix Table C.2, both groups have similar rates of migration from rural areas (around 57%), high housing insecurity (about 80% live in temporary shelters), low educational attainment (over 85% have no or less than primary education) and limited labor market experience (only about 30% have ever held a paid job). They are also similar in caste composition, with about 45% belonging to marginalized groups (Scheduled Castes, Scheduled Tribes, or Other Backward Classes), and an additional 45% reporting being unaware of their caste identity. Finally, we note that most beggars make religious or hunger-related appeals while begging, and even among beggars with items, less than half even reference the product as shown in Appendix Table C.3.

Donors As reported in Panel B of Appendix Table C.4, the gender composition of passers-by who are approached by beggars is similar across begging styles, with approximately 48% women in both groups. However, beggars with items are more likely to approach individuals who are seniors, in groups, or accompanied by children, compared to beggars without items. Among those who give (as reported in Appendix Table C.5), the characteristics of donors to beggars with and without items are highly comparable: both groups are demographically similar in terms of gender, age, education, migrant status, and income. Finally, in the Donors' Perceptions Survey Experiment, the sample was stratified by income to reflect Delhi's population and randomly assigned to treatment (reporting beliefs about beggars with or without items). As verified in Appendix Table C.6, the resulting samples are balanced in demographic and socioeconomic characteristics, by treatment.

In Appendix C, we provide further details of the summary statistics on the characteristics of beggars and donors who participated or were observed in each of our surveys.

5 Empirical Analyses and Findings

In this section, we present our findings on the role of fairness preferences in shaping the begging market and test the hypotheses outlined in Section 3.

[18]Consistent with Hypothesis H3, these demographic differences suggest that beggars not visibly constrained (e.g., males, adolescents, infant caregivers) may benefit more from signaling and are thus more likely to select into it.

In Section 5.1, we document a robust signaling premium in donation amounts for beggars who offer items. In Section 5.2, we show causal evidence that begging with items reduces donors' perceived likelihood that a beggar is highly labor-averse or prefers free-riding. We also find that the resulting signaling premium increases with donors' preference for meritocracy and their prior beliefs that beggars are both able and unwilling to work. Finally, in Section 5.3, we show that begging style is not informative of actual differences in preferences or ability, but is instead predicted by beggars' beliefs about the returns to signaling.

5.1 Signaling Premium: Donation Differences by Begging Style

Our empirical strategy to test hypothesis H1, which predicts that beggars with items receive higher donations than beggars without items, leverages three complementary measures of the signaling effect: (i) actual donation behavior observed in the field, (ii) donor-reported counterfactuals, and (iii) allocations in a split-the-pie experimental task. Across all three measures, we find a large and statistically significant premium associated with begging with items.

Field evidence on observed donation amounts Using data from the survey of successful interactions, we compare average donation amounts to beggars with and without items on the streets of Delhi. Controlling for a rich set of beggar and donor characteristics as well as street fixed effects, we estimate that beggars with items receive 60% more in donations per successful interaction than those without items (an effect size of 0.76 sd, p-value < 0.001), as shown in Column 1 of Table 2.

In Appendix Table C.5, we show that 17% of the donors who donate to beggars with items did not even take the item, and among those who did, 62% were willing to give it away for free, which suggests that the donation premium is not entirely driven by the item's consumption value. In Column 2 of Table 2, we restrict the sample to donors who either did not take the item or were willing to discard it, and still find a smaller but statistically significant premium of 37% (an effect size of 0.47 sd, p-value < 0.001) for beggars with items. Column 3 nets out the beggars' self-reported cost of the item, likely an overestimate, and we continue to find a significant premium, implying that the signaling effect persists even after accounting for monetary costs. The net premium remains substantial at 20% (an effect size of 0.26 standard deviations, p-value < 0.001).

To assess whether the higher donations per successful interaction ultimately result in positive overall signaling returns (as posited in hypothesis H1), we use data from our Observational Survey of Interactions to examine the rates of solicitation and successful

Table 2: **Intensive Margin: Donation in the Field**

	Donations	Donations (sub-sample)	Donations Net Cost
Beggar with Item	6.014	3.720	2.022
	(1.020)	(0.915)	(0.923)
	[0.000]	[0.000]	[0.031]
Mean [of beggar w/o item]	9.87	9.87	9.87
Effect size [SD]	0.76	0.47	0.26
Controls	Yes	Yes	Yes
No. of Observations	607	511	607

Notes: Coefficients are based on OLS regressions. Standard errors, clustered at the street level, are reported in parentheses, and p-values are shown in square brackets. Regressions control for beggars' characteristics (age, gender, religion, migration status, education, type of residence, whether fully clothed, wearing footwear, observable disability, mobility and persuasive) and passers-bys' characteristics (age, education, whether in group, monthly income, earning members, non-earning members in household, willingness to give, donation behavior, gullible and regular interaction with the beggar). Fixed effects for street type (religious, commuting or marketplace) are included. Data are drawn from the Successful Interactions Survey, where, having observed a successful interaction in the field, we survey the beggars and passers-by after the interaction and collect information on the amount and price of goods exchanged and ask additional survey questions. These amounts, our measure for *donations*, are cross-verified by both the beggar and the passer-by. *Donations (sub-sample)* is the subset of donations where the value of the good assigned by the passer-by is zero, captured by if the passers-by donated to beggars with items without taking the item or wanted to dispose off the item by giving it to the surveyors for free. *Donations Net Cost* is the donation amount after deducting the cost of the item (as reported by the beggar).

interactions by begging style to estimate the total proceeds from begging.

As shown in Appendix Table D.1, beggars with and without items have similar rates of solicitation and similar probabilities of receiving charity per solicitation. The higher donations per successful interaction received by beggars with items are not offset by fewer successful interactions. As a result, beggars with items earn higher total proceeds from begging, confirming the presence of a positive signaling return on average, as predicted by hypothesis H1 and consistent with the theoretical model. These results are robust to alternative model specifications, including Poisson and negative binomial regressions (Appendix Table D.2).[19]

Donor counterfactuals (stated signaling premium) To isolate the signaling effect from unobserved donor or beggar heterogeneity, we use data from the Survey of Successful Interactions, in which donors were asked how much they would have given to the same beggar had their begging style been different. Within-donor comparisons reveal

[19]This finding also suggests that the observed donation premium is not driven by differences at the extensive margin i.e., beggars with items are not more likely to solicit or convert interactions into donations, but rather by differences at the intensive margin, namely the amount donated conditional on giving.

that 49% of donors report greater generosity towards beggars with items, 37% report no difference, and 14% report giving lesser to beggars with items. Overall, we find a significant signaling premium: donations when a beggar offers a trivial item average 13.5 INR, compared with 9 INR when the same beggar does not offer an item (p-value < 0.001).[20]

Experimental evidence: split-the-pie game To further test the signaling effect, we elicit charitable allocations in a controlled experimental setting using the split-the-pie task, conducted as part of the Donors' Perceptions Survey. Participants are shown two photo collages, one featuring four beggars with items, and the other with four similarly composed beggars without items. They are then asked to divide a fixed sum of INR 100 between the two styles, with the specified amount subsequently donated by the surveyor to beggars on the street who beg in each respective style.[21] The allocation choices reflect an underlying preference structure similar to that revealed through counterfactual donations elicitation. 43% of donors allocated more to beggars with items, 42% split the amount equally, and 15% gave more to beggars without items. As shown in Figure 1, the average allocation to the beggar with items is INR 58, a significant deviation from an equal split (p-value < 0.001). This provides experimental evidence that, on average, donors perceive beggars with items to be more deserving of charity.

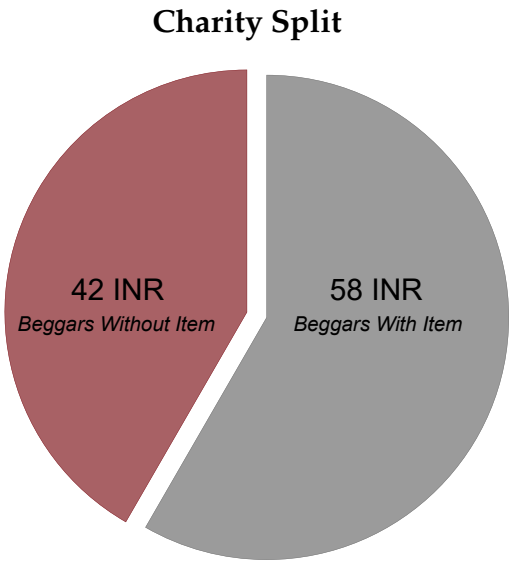

Figure 1: This figure shows the average split of 100 INR to beggars with and without items. Data are drawn from the Donors' Perception survey, in which participants are asked to allocate 100 INR between beggars with and without items while knowing that their preferred charitable donations are then implemented in the field.

[20]This premium is primarily driven by donors who actually gave to beggars with items.
[21]The order in which the two collages are presented is randomized at the individual level.

Taken together, the evidence from field behavior, donor counterfactuals, and incentivized experimental allocations robustly supports hypothesis H1.

Finding 1. Beggars who offer items receive significantly higher donations across actual behavior, stated preferences, and revealed preferences.

5.2 Signaling Mechanism: Donors' Perceptions

Having established that beggars who offer items receive higher donations, we now turn to test our proposed mechanism that begging with items shifts donors' perceptions about beggars' labor-aversion (hypothesis H2b) and abilities (hypothesis H3b). We also test whether the signaling premium is moderated by donors' preferences for meritocracy (hypothesis 4) and their prior beliefs about beggars' ability and labor-aversion (hypothesis 5). These analyses draw on data from the Donors' Perceptions Survey, which included incentivized belief elicitation tasks designed to measure donors' beliefs about beggars' choices under different experimental tasks.

Donors' perception of beggars' preferences and abilities Using a between-subjects design, we find that donors perceive the beggars with items to be significantly less likely to be highly labor-averse i.e, choose free-cash when easy paid work is available for double the wage (an effect size of 0.15 standard deviations), as shown in Figure 2 and Table 3. On average, respondents believe that 49% of the beggars with items chose free cash compared with 45% of the beggars without items (p-value < 0.01).

We also find significant differences in donors' perceptions about beggars' free-riding preferences, similar to labor-aversion. On average, donors believe that 41% of beggars without items support free-riding (even when supporting free-riding or not is an unincentivized choice for beggars using a hypothetical vignette), compared to 38% of beggars with items (p-value < 0.05), corresponding to a difference of 0.12 standard deviations.[22] This difference in perceived free-riding rates provides additional support for our interpretation that donors view item-based signaling as informative of beggars' underlying preferences for effort and work, as posited in hypothesis H2b. We further show that begging with items is not interpreted as a signal of other moral virtues such as honesty. Donors predict that both groups of beggars report the paid outcome of heads in 65% of their private coin flips.

Finally, donors perceive that beggars with items are more likely to have basic numeracy skills (ability to count to 100), with a difference of 0.1 standard deviations

[22]Donors' beliefs about free-riding were also incentivized, but the task itself was unincentivized for beggars.

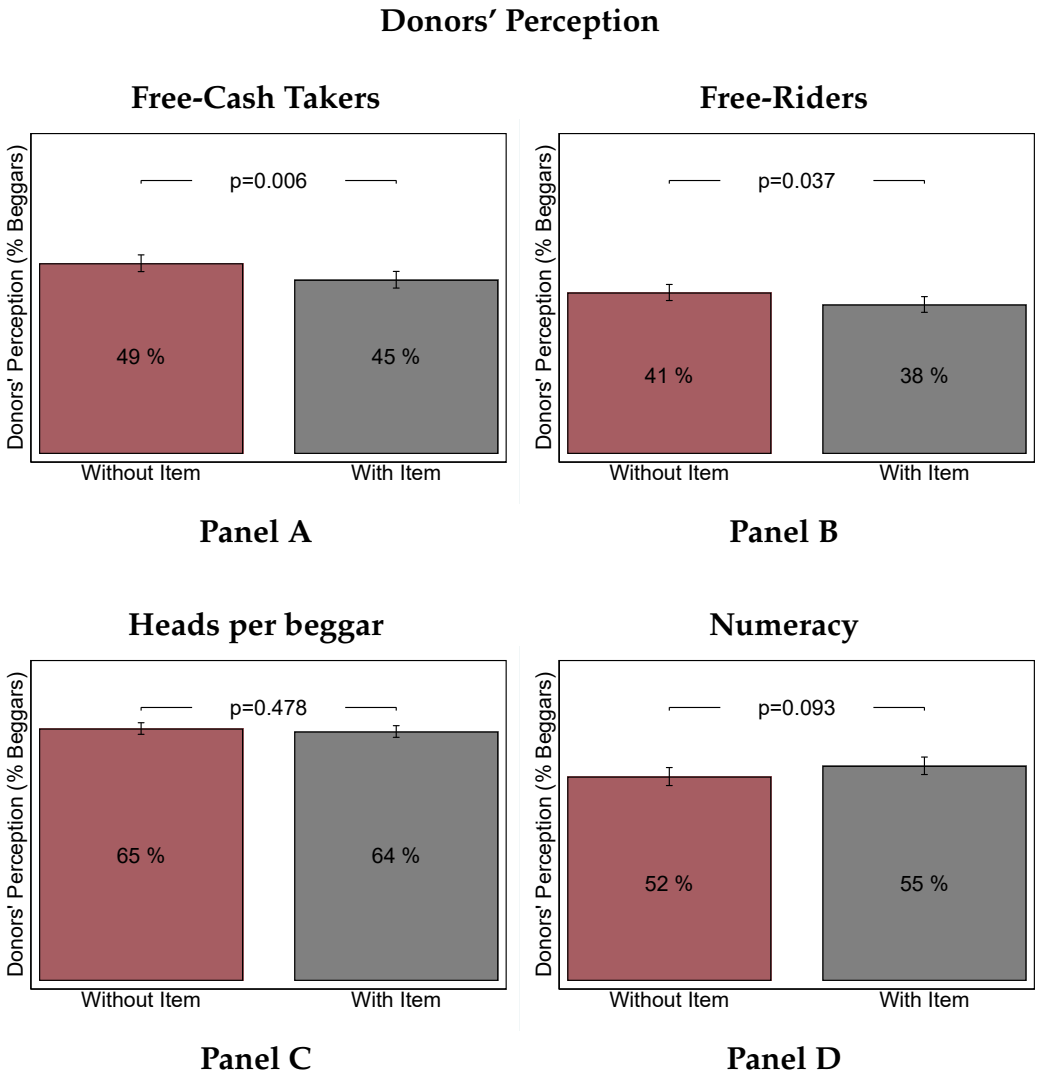

Figure 2: This figure illustrates donors' average perceptions of beggars across various metrics: **Panel A** shows the perceived percentage of beggars who chose free cash, **Panel B** shows the perceived percentage of beggars who agree with free-riding, **Panel C** displays the perceived percentage private coin flips for which heads was reported per beggar (with values above 50 reflecting perceptions of dishonesty) and **Panel D** shows the perceived percentage of beggars who could count to 100. Data are drawn from the Donors' Perception Survey, in which participants are randomly assigned to view photo collages of beggars either with or without items. Donors estimate, out of 600 beggars, how many meet each criterion, including dishonesty measured over 6,000 coin flips. Beliefs were incentivized using the random lottery payment mechanism: participants earned Rs. 100 for being within 10% of the true value in the belief elicitation task, which was randomly selected for payment. Donors' average perceptions and p-values for differences across beggar types are estimated using OLS without control variables.

(p-value < 0.1), suggesting a marginally significant perception difference.[23] This finding is inconsistent with our hypothesis of no perceived differences in abilities of beggars by begging styles (hypothesis H3b), suggesting that donors may interpret being highly labor-averse and not having (or acquiring) bare-minimum skills to be correlated traits.

[23]Recall that this basic numeracy measure serves as a proxy for the minimum ability threshold required for labor-aversion to influence the choice between begging and labor market participation.

Table 3: **Donors' Perceptions: Between-subjects**

	Preferences		**Morals**	**Ability**
	Free-cash takers	Free-riders	Heads per beggar	Numeracy skills
Beggar with item	-4.017	-3.130	-0.693	2.940
	(1.537)	(1.450)	(1.073)	(1.636)
	[0.009]	[0.031]	[0.519]	[0.073]
Mean [of beggar w/o item]	48.82	41.33	64.61	52.31
Effect size [SD]	-0.15	-0.12	-0.04	0.10
Controls	Yes	Yes	Yes	Yes
No. of Observations	1204	1204	1204	1204

Notes: Coefficients are estimated using OLS regressions using the between-subject design. Robust standard errors are reported in parentheses, and p-values are shown in square brackets. Regressions control for donors' characteristics, including age, gender, caste, migration status, education, marital status, number of children, and the ratio of non-earning members to household size, with fixed effects for neighborhood income strata included. The Donors' Perceptions Survey elicited donors' beliefs about beggars' preferences and abilities. Participants reported, how many out of the 600 beggars, did they believe chose *free cash* over paid work, justified *free-riding*, the number of heads that the beggars reported out of the 6,000 coin flips (*heads per beggar*) and how many could count to 100 *numeracy skills*; these responses are converted to percentages. Belief elicitation was incentivized: participants earned INR 100 if they were within 10% of the true value for the tasks. One belief task was randomly selected for payment using the random lottery payment mechanism.

As expected due to randomization, our findings remain the same regardless of whether we include control variables or not. We observe similar differences in perceptions of beggars in Figure 2 (without controls) and Table 3 (with controls).[24] Our findings on the significant differences in donors' perceptions of beggars' preferences, based on whether they have items, are further supported by distributional comparisons and non-parametric tests. Appendix Figure E.2 presents between-subjects distributional comparisons and Kolmogorov-Smirnov and Somers' D statistics, which confirm these patterns. We also find similar within-subjects differences as shown in Appendix Table D.3 and distributional comparison in Appendix Figure E.3. Overall, the above findings partially support hypothesis 2, summarized as follows.

Finding 2. Beggars with items are perceived to be significantly less likely to be highly labor-averse, consistent with the signaling mechanism. However, beggars with items are also perceived to be more likely to meet the bare-minimum ability threshold.

Signaling Premium and Fairness Preferences We now examine whether the signaling premium is associated with donors' fairness preferences. We test hypothesis H4, which predicts that donors who value meritocracy will respond more strongly to signaling of

[24]The control variables include donor characteristics (gender, age, marital status, migrant status, education, caste, parenthood), household characteristics (ratio of non-earning members), and neighborhood income-level fixed effects.

low-labor-aversion by begging with items.

We construct a binary indicator of meritocracy based on responses to three 10-point scale value statements adapted from the World Values Survey. Each item contrasts a meritocratic view with a non-meritocratic one, specifically, whether (i) income differences stem from effort versus luck, (ii) life outcomes are within personal control versus determined by external factors, and (iii) whether they view hard work as sufficient to improve one's circumstances. We construct a binary indicator coded as 1 for respondents who select meritocratic responses more frequently than non-meritocratic ones across the three items. Using this classification, we compare the signaling premium, defined as the deviation from an equal split of 100 INR, in the split-the-pie task across meritocratic and non-meritocratic donors.

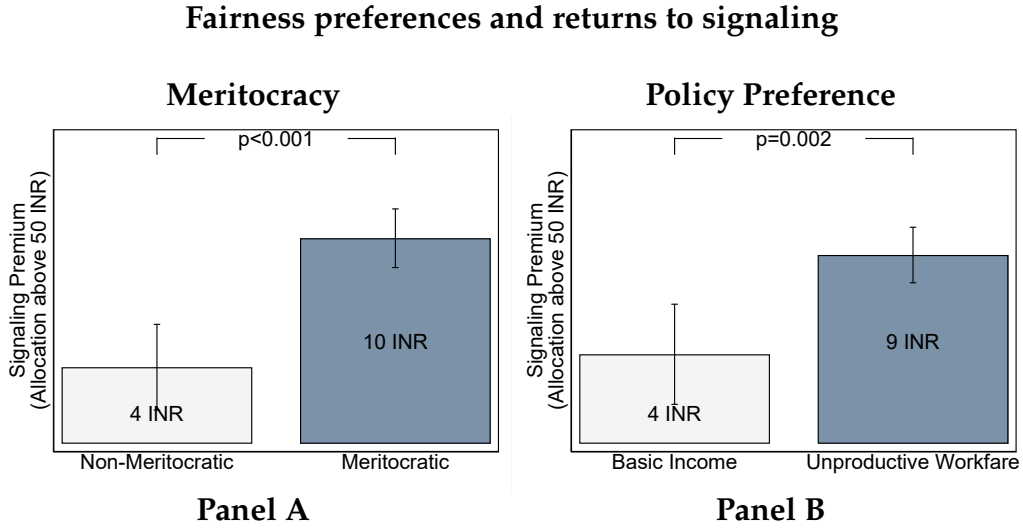

Figure 3: This figure illustrates how the signaling premium varies with donors' meritocratic beliefs and their policy preferences for addressing poverty when paid work is unavailable. **Panel A** presents differences in signaling returns between meritocratic and non-meritocratic donors. **Panel B** shows differences by donors' preferences for policy approaches to support beggars. The *Signaling Premium* is measured as the deviation from an equal split of 100 INR, that is, allocation to beggars with items minus 50. The survey also included an economic values module adapted from the World Values Survey, capturing meritocratic and egalitarian beliefs across three opinion statements: (1) whether differences between the rich and poor reflect hard work or luck; (2) whether individuals have control over their life outcomes; and (3) whether hard work improves life circumstances. We define a binary meritocracy indicator equal to 1 if the donor endorses meritocratic responses more frequently than non-meritocratic ones. Policy preference is measured using a question on how to support beggars when paid work is unavailable. Respondents rate their agreement on a scale from 1 (support for basic income) to 10 (support for workfare). Since 80% of respondents select 10, we code a binary indicator equal to 1 for those who select 10 (support for workfare) and 0 otherwise (support for basic income), to retain sufficient variation. Data are drawn from the Donors' Perception Survey, which included incentivized belief elicitation and a real-stakes allocation task.

Panel A of Figure 3 shows that meritocratic donors allocate an average of 60 INR to beggars with items, while non-meritocratic donors allocate 54 INR, implying a premium difference of 6 INR. This difference is statistically significant and consistent

with hypothesis H4.

We also test whether the signaling premium varies with donors' views on how the government should support individuals when paid employment is unavailable. This measure is based on a 10-point scale question asking respondents to position themselves between two opposing views: unconditional basic income versus state-provided workfare, even if the work has no intrinsic value. Higher scores indicate stronger support for workfare. Since 80% of respondents selected the maximum value on the scale, we construct a binary indicator equal to 1 for those who selected 10 (support for workfare) and 0 otherwise (support for basic income), in order to retain sufficient variation in responses.

As shown in Panel B of Figure 3, we find that the premium awarded to beggars with items in the allocation game is significantly correlated with the likelihood that the respondent states a strong support for unproductive workfare policies. This finding suggests that donors' responses to labor-aversion signals also reflect their broader views on anti-poverty policy.

Appendix Table D.7 provides further detail by disaggregating the signaling premium by responses to each individual meritocratic belief. In addition to the three economic values questions and the policy preference question, we also include two questions directly related to opinions on beggary: whether donors believe that giving money helps the poor versus promotes beggary, and whether people beg because they are lazy versus because they have no other means. Across all questions, donors who endorse more meritocratic or effort-focused views allocate a higher share of the charitable pie to beggars with items.

Finding 3. Donors with stronger meritocratic beliefs or a preference for workfare over basic income assign a significantly larger signaling premium to beggars with items.

Signaling premium and prior beliefs We now test hypothesis H5, which predicts that the signaling premium is higher among donors who hold prior beliefs that beggars are highly labor-averse (H5a) or have sufficient ability (H5b). If a donor already believes that most beggars are unwilling to work or have some basic ability for the labor market to be viable and yet beg, then observing effortful behavior, such as offering an item while begging shifts their perception more significantly, resulting in a larger signaling premium.

We define donors' beliefs about labor-aversion and ability (numeracy) among beggars without items as their prior beliefs, representing their perceptions in the absence of a signal. To construct binary indicators of high versus low priors, we first compute

the median perceived percentage (across all donors) of beggars without items who are highly labor-averse (i.e., choose free cash over paid work) and those who are sufficiently able (i.e., can count to 100). We then classify each donor as having a high prior if their individual perception exceeds the median, and a low prior otherwise. Figure 4 shows the average signaling premium, defined as the deviation from an equal split of 100 INR to beggars with items, by donors' prior beliefs. Panel A shows the premium by beliefs about beggars' labor-aversion, and Panel B shows it by beliefs about beggars' abilities. In both cases, donors who perceive beggars without items as more likely to be highly labor-averse or high-ability, allocate significantly more to beggars with items. The difference in signaling premium between the top and bottom halves of each belief distribution is both economically large and statistically significant.

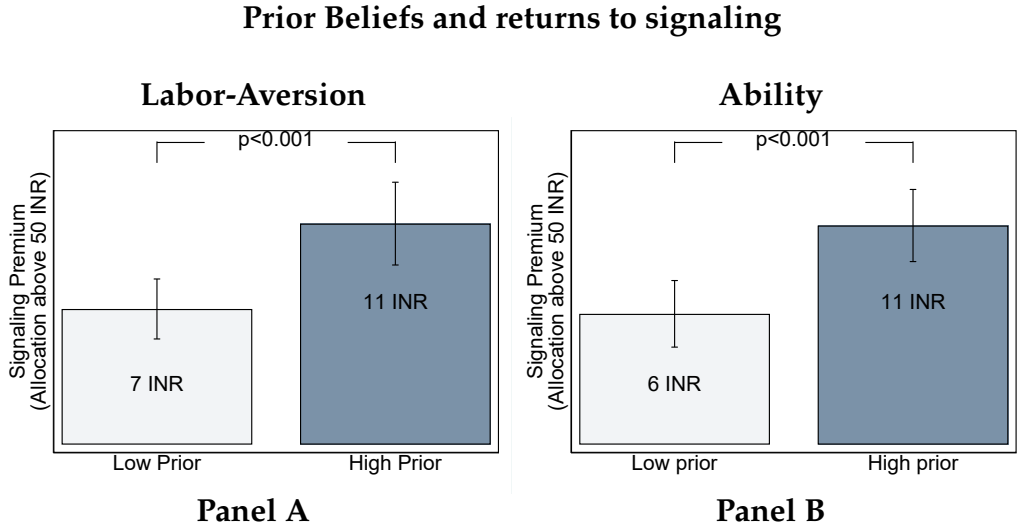

Figure 4: This figure illustrates how the signaling premium varies with donors' prior beliefs about beggars' ability and labor-aversion. The signaling premium is measured as the deviation from an equal split of 100 INR in the split-the-pie task, that is, allocation to beggars with items minus 50. Donors are categorized into above- and below-median groups based on their baseline beliefs about beggars without items. High and low priors are defined as above and below the median donor belief about beggars without items. **Panel A** presents the average signaling premium separately for donors with above- and below-median beliefs that beggars are highly labor-averse (i.e., prefer free cash over paid work). **Panel B** shows corresponding results for donors' beliefs about beggars' ability (i.e., the perceived proportion who can count to 100). Data are drawn from the Donors' Perception Survey, which included incentivized belief elicitation and a real-stakes allocation task. Beliefs about beggars without items are considered prior beliefs.

In Appendix Table D.4, we show that these patterns are also evident in regression analyses using continuous belief measures. A one percentage point increase in the perceived share of labor-averse beggars increases the signaling premium by 1 INR, and a one percentage point increase in perceived numeracy increases the premium by 0.9 INR; both effects are statistically significant. These findings are robust to including both predictors simultaneously and to controlling for the order in which beliefs were elicited

(i.e., whether beliefs about beggars without items were reported before or after those about beggars with items). These results provide support for the role of donors' beliefs in mediating the effect of signaling, summarized as follows.

Finding 4. Signaling premium increases in donors' prior belief that beggars are highly labor-averse and that beggars are sufficiently able.

5.3 Signal Informativeness

In this section, we examine whether the choice to beg with items predicts beggars' underlying traits (labor-aversion, ability, dishonesty, and free-riding preferences) in line with hypothesis H2a and H3a or whether it primarily reflects strategic choices based on perceived signaling returns. We then assess whether donors hold accurate or biased beliefs about these signals. This comparison allows us to evaluate the informativeness of the signal specifically, whether it conveys meaningful information about beggars' traits or results in systematic misperceptions and belief misalignment.

Beggars' preferences and abilities Using the data from the Beggars' Preferences Survey, we show in Figure 5, that both types of beggars equally prefer paid work over free cash and disagree with free-riding behavior, inconsistent with hypothesis H2a. Beggars' dishonesty rates are also similar by begging styles. Consistent with hypothesis H3a, both groups of beggars show similar distributions of ability and have limited basic numeracy skills or the ability to count to 100. Controlling for beggars' characteristics in Appendix Table D.5 reveals similar results, summarized in the finding below.

Finding 5. We find similar rates of high labor-aversion, free-riding, dishonesty and low ability among beggars with and without items, implying that begging with items is not informative of beggars' underlying preferences and abilities.

Beggars' counterfactuals (expected signaling returns) To examine whether the decision to beg with items reflects strategic signaling based on expected returns, we asked beggars how much charity they believed they would have received had they adopted the alternative style as part of the Successful Interactions Survey. Overall, 63% of beggars believed that begging with items elicits higher donations, net of the item's cost. However, these beliefs differ significantly by actual begging style. Among beggars with items, 77% reported a smaller expected donation had they begged without items, with an average perceived signaling premium of INR 6 per successful interaction

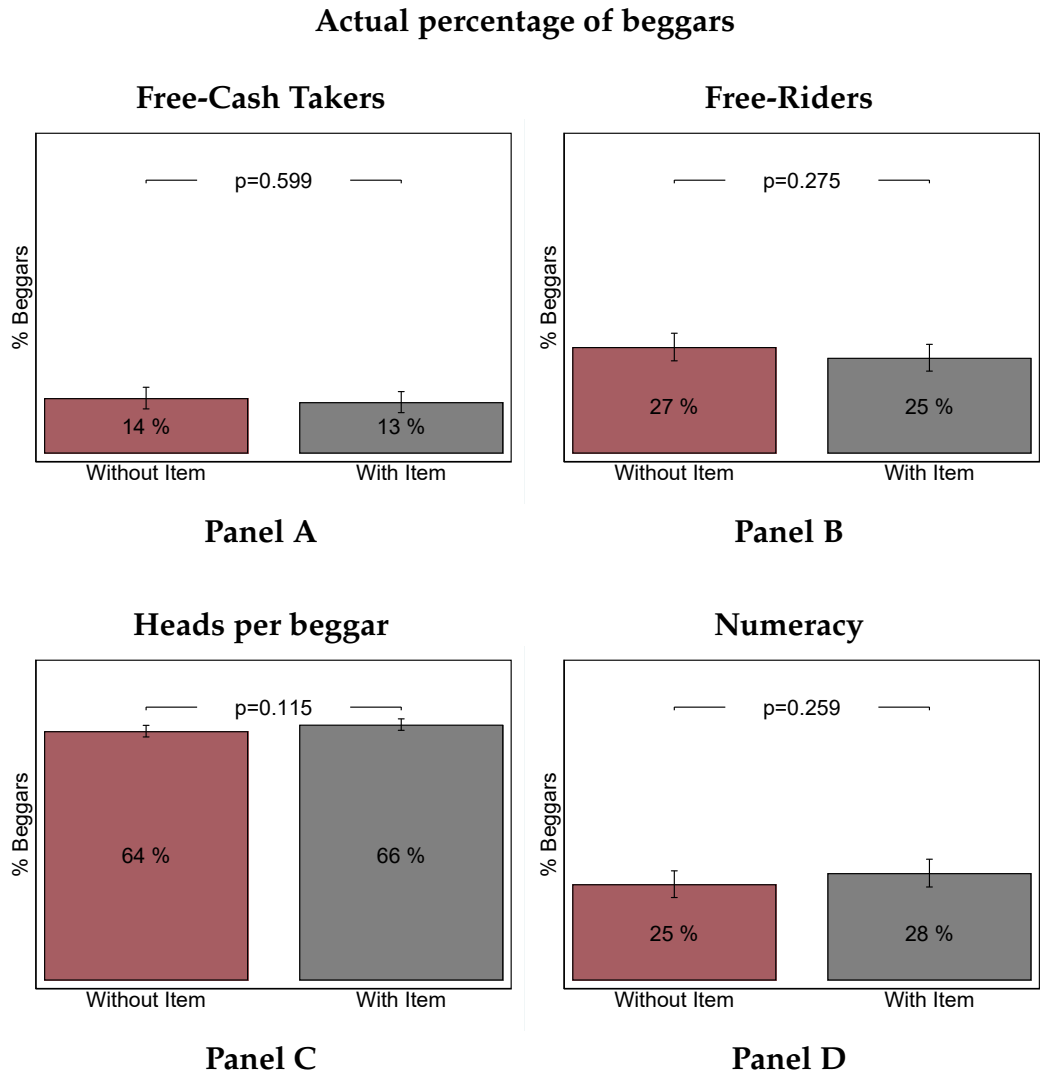

Figure 5: This figure illustrates beggars' average preferences, morals and abilities: **Panel A** shows the percentage of beggars who chose free cash, **Panel B** shows the percentage of beggars who agree with free-riding, **Panel C** displays the percentage private coin flips for which heads was reported per beggar (with values above 50 reflecting perceptions of dishonesty) and **Panel D** shows the percentage of beggars who could count to 100. Data are drawn from the Beggars' Preference Survey. *Free-cash* preference is measured through participants' choice between receiving INR 50 in cash and a real-effort task to earn upto INR 100. *Free-riding* preferences are elicited using a hypothetical vignette describing a free-rider, with participants indicating whether they agree or disagree with the behavior. *Dishonesty* is assessed through a coin-flipping task in which each beggar privately flips a coin ten times and reports the number of heads; deviations from the expected 50-50 distribution are used to infer lying at the group level. *Numeracy* is measured by asking participants to count aloud from 1 to 100, with successful completion indicating basic numeracy skills.

(p-value < 0.001). In contrast, only about 50% of beggars without items believed that offering an item would have increased their earnings, and by a much smaller margin, an average perceived signaling premium of INR 1.9 (p-value < 0.001).[25] This asymmetry suggests that the choice to signal is driven by stronger beliefs in the effectiveness of signaling, rather than differences in underlying preferences or traits.

Finding 6. Beggars who offer items are significantly more likely to expect positive returns to signaling and perceive a significantly higher expected premium than those who do not.

Donors' biased perceptions Finally, we compare donors' beliefs about beggars' preferences and abilities to the actual distribution of these traits, using data from two separate surveys. Donor beliefs are taken from the Donors' Perceptions Survey, which elicited initial beliefs after donors were shown a collage of beggars, either with or without items, randomly assigned. For each trait (labor-aversion, support for free-riding, basic numeracy, and dishonesty measured by the number of heads per beggar), we calculate the average percentage that donors perceived to apply to the beggars shown in the initial collage. We then compare these perceived averages to the actual distributions of the same traits among beggars, as elicited in the Beggars' Preferences Survey.

We find that donors systematically overestimate beggars' labor-aversion, free-riding preferences, and ability as shown in Panel A of Appendix Table D.6. While only 14% of the beggars choose free cash over paid work, donors estimate that about 47% are highly labor-averse and choose free cash over paid work. Similarly, 26% of beggars agree with free-riding in a hypothetical vignette, whereas donors estimate the rate to be 40%. For ability, donors believe that 54% of beggars can count to 100, compared to an actual rate of only 26%. Biases in donors' perceptions about beggars' labor-aversion, free-riding and ability are all statistically significant (p-value < 0.001). Further, we show in Panels B and C of Appendix Table D.6, that these misperceptions or biases in donors' beliefs are similar and significant for both beggars with and without items.

In contrast, perceptions of dishonesty are largely accurate: donors estimate that beggars report heads in about 65% of incentivized coin flips, the same as the observed rate among beggars.[26] These findings suggest that donors significantly overestimate both beggars' reluctance to work and their ability to work, as summarized below.

[25]The perceived signaling premium among beggars with items is significantly higher than that among beggars without items (p-value < 0.001).

[26]The perceived and actual dishonesty rate of beggars also matches the average dishonesty rate found in global studies. A meta-analysis shows that, on average, 65% of coin flips in similar experiments are reported as the paid side (Gerlach et al., 2019). This suggests that people do not perceive beggars as more dishonest than the general population, nor do beggars exhibit distinct levels of dishonesty.

Finding 7. Donors significantly overestimate beggars' labor-aversion, free-riding preferences, and ability, but accurately perceive average dishonesty.

6 Discussion

In this paper, we offer a conceptual and empirical analysis of the economics of begging, focusing on the role of signaling, fairness preferences, and beliefs in shaping charitable behavior. We develop a theoretical framework in which individuals choose between labor market participation and begging based on their productivity, labor-aversion, and minimum consumption needs. On the donor side, we incorporate merit-based fairness preferences and asymmetric information, deriving a signaling equilibrium in which beggars with low labor-aversion may offer trivial items to credibly signal effort and increase donations from meritocratic donors.

To test the model's predictions, we conduct large-scale field and experimental surveys in Delhi, combining data from more than 2000 beggars and 2000 donors across all surveys. Our results reveal a robust signaling premium for beggars who offer items, consistent across actual donation behavior, counterfactual donor reports, and incentivized experimental allocations. Donors interpret begging with items as a signal of effort and respond with significantly higher donations, particularly those with strong meritocratic beliefs and prior perceptions that many beggars are able but unwilling to work.

However, we also find that signaling is not actually informative of beggars' underlying traits. Most beggars, regardless of whether they signal or not, are not highly labor-averse and have limited ability, suggesting that they are unlikely to be begging by choice. Donors, however, systematically overestimate beggars' labor-aversion, free-riding preferences, and ability, resulting in donations that are shaped more by perceived than actual deservingness. In this context, signaling succeeds not by conveying true differences in effort or merit, but by shifting donor beliefs in predictable ways.

Overall, our findings caution against punitive or deterrence-based regulations aimed at reducing begging, such as criminalization or donation bans. Most choose paid work over free cash when given a choice and about 82% express desire to work in a formal job if available (Appendix Table C.2), which suggests that the supply of beggars might be inelastic to marginal changes in returns or risk, and policies around regulation of begging are unlikely to reduce the prevalence of begging and may instead harm the truly disadvantaged. Further, our results suggest that direct welfare support such as cash transfers and upskilling may be more effective in addressing the root causes of begging as only 25% of beggars could even count to 100 and more than 84$ have

less than primary education (Appendix Table C.2). However, public support for these policies may be limited in meritocratic societies. Indeed, consistent with prior work, we find that 80% of donors prefer unproductive workfare over unconditional cash transfers, highlighting a preference for effort, even when it serves no productive purpose.

Finally, we conclude by discussing directions for future research on the economics of begging and ways to mitigate its incidence. While this paper explores the trade-offs between formal labor and begging, as well as public perceptions of these trade-offs, a more detailed examination of the labor supply schedules of beggars would provide valuable insights for designing effective workfare or employment programs targeted at this population. Additionally, our findings reveal significant negative perceptions of beggars' work preferences among the general public, as well as the public's responsiveness to signals of effort, contributing to a lack of support for welfare policies addressing begging. This suggests the need for information interventions to investigate whether correcting public beliefs can enhance support for welfare policies or whether people inherently prefer rewarding effort, even when it reveals no meaningful information about beggars' actual work preferences. Finally, as we find that 26% of beggars are children or adolescents, further research on child begging is crucial, given its complex relationship with child labor and the risk of perpetuating a "begging trap." Understanding these dynamics is essential for developing strategies to address this deep-rooted issue.

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A Mathematical Appendix

Proof of Proposition 1. (i) If $D > 0$ and $\pi_i < \underline{\pi}_1$, begging is the only feasible option.

Define:

$$\text{Income: } i(c) = y(c)\pi_i T, \quad \text{Expenditure: } e(c) = c.$$

We want to show that when $\pi_i < \underline{\pi}_1 = \frac{\underline{c}}{T}$, we have $i(c) < e(c)$ for all $c > 0$.

Case 1: $c \geq \underline{c}$. Since $y(c) = 1$ for all $c \geq \underline{c}$, it follows that:

$$i(c) = \pi_i T < \underline{c} \leq c = e(c),$$

which implies $i(c) < e(c)$.

Case 2: $c < \underline{c}$. Suppose for contradiction that there exists some $c_0 \in (0, \underline{c})$ such that:

$$i(c_0) = y(c_0)\pi_i T > c_0 = e(c_0).$$

Define the difference function:

$$\Delta(c) = i(c) - e(c) = y(c)\pi_i T - c.$$

Then $\Delta(c_0) > 0$, but:

$$\Delta(\underline{c}) = \pi_i T - \underline{c} < 0.$$

Since $y''(c) > 0$, $i(c)$ is convex. As $e(c)$ is linear, $\Delta(c)$ is convex on $[0, \underline{c}]$. Hence, $\Delta(c) < 0$ for all $c < \underline{c}$, and thus $i(c) < e(c)$ for all $c > 0$. □

(ii) If $D > \underline{c}$ and $\underline{\pi}_1 < \pi_i < \underline{\pi}_2 = \frac{D}{T}$, then begging strictly dominates labor for all $\alpha_i \in [0, 1]$.

From Equation (4), we have:

$$c^* = \underline{c} + (1 - \alpha_i)(\pi_i T - \underline{c}), \quad l^* = \alpha_i \left(T - \frac{\underline{c}}{\pi_i} \right).$$

Substituting into U_i^L:

$$U_i^L = \underline{c} + \left((1 - \alpha_i)(\pi_i T - \underline{c}) \right)^{1-\alpha_i} \left(\alpha_i \left(T - \frac{\underline{c}}{\pi_i} \right) \right)^{\alpha_i}.$$

Let $j(\alpha_i) = U_i^L - \underline{c}$. Then:

$$\log j(\alpha_i) = (1-\alpha_i)\log\left((1-\alpha_i)(\pi_i T - \underline{c})\right) + \alpha_i \log\left(\alpha_i\left(T - \frac{\underline{c}}{\pi_i}\right)\right).$$

Taking derivative with respect to α_i and simplifying:

$$\frac{d}{d\alpha_i}\log j(\alpha_i) = \log\left(\frac{\alpha_i(T - \frac{\underline{c}}{\pi_i})}{(1-\alpha_i)(\pi_i T - \underline{c})}\right).$$

This equals zero when:

$$\alpha_i^* = \frac{\pi_i T - \underline{c}}{\pi_i T - \underline{c} + T - \frac{\underline{c}}{\pi_i}} = \frac{\pi_i}{1+\pi_i}.$$

Hence U_i^L is U-shaped in $\alpha_i \in [0,1]$.

For begging:

$$U_i^B = \underline{c} + (D-\underline{c})^{1-\alpha_i}(T-s)^{\alpha_i}, \quad k(\alpha_i) = U_i^B - \underline{c}.$$

$$\log k(\alpha_i) = (1-\alpha_i)\log(D-\underline{c}) + \alpha_i \log(T-s),$$

$$\frac{d}{d\alpha_i}\log k(\alpha_i) = \log\left(\frac{T-s}{D-\underline{c}}\right) > 0 \quad \text{(from Assumption 1)}.$$

So U_i^B is strictly increasing in α_i.

We now evaluate endpoints:

$$U_i^B(0) = D > \pi_i T = U_i^L(0) \quad (\text{since } \pi_i < \frac{D}{T}),$$

$$U_i^B(1) = \underline{c} + T - s > \underline{c} + T - \frac{\underline{c}}{\pi_i} = U_i^L(1) \quad \text{(from Assumption 2)}.$$

Since $U_i^B > U_i^L$ at both endpoints and U_i^L is U-shaped, $U_i^B > U_i^L$ for all $\alpha_i \in [0,1]$. □

(iii) If $D > \underline{c}$ and $\pi_i \geq \underline{\pi}_2$, then there exists a threshold $\underline{\alpha}(D, \pi_i, s) \in (0,1)$ such that:

- If $\alpha_i > \underline{\alpha}(D, \pi_i, s)$, begging is preferred over labor market participation.
- If $\alpha_i < \underline{\alpha}(D, \pi_i, s)$, labor market participation is preferred over begging.

where, $\underline{\alpha}(D, \pi_i, s)$ is determined by equating payoffs from begging and labor market participation. From Part (2) above, we have:

- U_i^B is strictly increasing in α_i,

- U_i^L is U-shaped in α_i with unique minimum at $\alpha_i^* = \dfrac{\pi_i}{1+\pi_i} \in (0,1)$.

Since $\pi_i \geq \frac{D}{T}$, we have:

$$U_i^B(\alpha_i = 0) = D \leq \pi_i T = U_i^L(\alpha_i = 0) \quad \Rightarrow \quad U_i^B < U_i^L \text{ at } \alpha_i = 0.$$

But by Assumption 2,

$$U_i^B(\alpha_i = 1) = \underline{c} + T - s > \underline{c} + T - \frac{\underline{c}}{\pi_i} = U_i^L(\alpha_i = 1),$$

so $U_i^B > U_i^L$ at $\alpha_i = 1$.
Since both U_i^B and U_i^L are continuous in $\alpha_i \in [0,1]$, the Intermediate Value Theorem implies the existence of a unique threshold $\underline{\alpha}(D, \pi_i, s) \in (0,1)$ at which:

$$U_i^B = U_i^L.$$

Moreover, because U_i^B is strictly increasing and U_i^L is U-shaped, it follows that:

$$U_i^B < U_i^L \text{ for } \alpha_i < \underline{\alpha}, \quad U_i^B > U_i^L \text{ for } \alpha_i > \underline{\alpha}.$$

□

(iv) If $D < \underline{c}$ and $\pi_i > \underline{\pi}_1$, labor market participation strictly dominates begging for all $\alpha_i \in [0,1]$.

In this case, from Equation (7), $U_i^B = D < \underline{c}$. Meanwhile, $\pi_i > \underline{\pi}_1$ implies that labor is feasible, and Equation (5) gives:

$$U_i^L = \underline{c} + (\text{positive term}) > \underline{c}.$$

Therefore, $U_i^L > U_i^B$ for all α_i.

□

Proof of Proposition 2. The decomposition follows directly from Proposition 1 and the cumulative distribution functions of π_i and α_i. □

Proof of Proposition 3. Recall the donor and beggar utility functions as defined in Equations (1) and (7), and the cumulative distribution function of productivity $\pi_i \in [1, \pi_{\max}]$ denoted by $F_\pi(\cdot)$ and the cumulative distribution function of labor-aversion $\alpha_i \in [0,1]$ denoted by $G_\alpha(\cdot)$. The partially separating Perfect Bayesian Equilibrium (PBE) is characterized as follows.

(i) High labor-averse beggars ($\alpha > \underline{\alpha}$) choose not to signal ($e = 0$), while low labor-averse beggars ($\alpha < \underline{\alpha}$) mix between signaling effort $e = e_L \in (0, T - s)$ and not signaling, with probability $q \in (0, 1)$;

(ii) Donors update their beliefs $\mu(e)$ and choose donation levels $x(e, \beta)$ optimally, as defined in Equations (10) and (9);

(iii) The pair (e_L, q) satisfies incentive compatibility for high-α types ($(\alpha > \underline{\alpha})$) and indifference for low-α types ($(\alpha < \underline{\alpha})$):

$$U^B_{\alpha_H}(e_L) < U^B_{\alpha_H}(0), \quad \text{and} \quad U^B_{\alpha_L}(e_L) = U^B_{\alpha_L}(0);$$

Given this PBE, we prove the following results stated in Proposition 3:

(i) Signaling leads to higher donations, i.e., $R > 0$:
From Equation (11), the signaling return R is given by

$$R = [1 - \mu(e = 0)] \cdot \left[u'^{-1}(1) - u'^{-1}(\beta^{-1})\right].$$

From Equation (10), we have:

$$\begin{aligned}\mu(e = 0) &= F_\pi(\pi_2) + (1 - F_\pi(\pi_2)) \cdot \frac{\gamma G_\alpha(\underline{\alpha})(1 - q)}{\gamma G_\alpha(\underline{\alpha})(1 - q) + 1 - G_\alpha(\underline{\alpha})} \\ &< F_\pi(\pi_2) + (1 - F_\pi(\pi_2)) \cdot 1 = 1\end{aligned}$$

since the fraction lies strictly below 1, given that $G_\alpha(\underline{\alpha}) < 1$ and $\gamma, q \in (0, 1)$.
Hence, $\mu(e = 0) < 1$, and since $g'^{-1}(1) > u'^{-1}(\beta^{-1})$ due to $u'' < 0$, both terms in the product for R are positive:

$$R = [1 - \mu(e = 0)] \cdot \left[u'^{-1}(1) - u'^{-1}(\beta^{-1})\right] > 0.$$

□

(ii) $\dfrac{\partial R}{\partial F_\pi(\pi_2)} < 0$:

Differentiating R with respect to $F_\pi(\pi_2)$, we obtain:

$$\frac{\partial R}{\partial F_\pi(\pi_2)} = -\frac{\partial \mu(e = 0)}{\partial F_\pi(\pi_2)} \cdot \left(u'^{-1}(1) - u'^{-1}(\beta^{-1})\right).$$

Now observe that:

$$\mu(e=0) = F_\pi(\pi_2) + (1 - F_\pi(\pi_2)) \cdot \frac{\gamma G_\alpha(\underline{\alpha})(1-q)}{\gamma G_\alpha(\underline{\alpha})(1-q) + 1 - G_\alpha(\underline{\alpha})}$$

so:

$$\frac{\partial \mu(e=0)}{\partial F_\pi(\pi_2)} = 1 - \frac{\gamma G_\alpha(\underline{\alpha})(1-q)}{\gamma G_\alpha(\underline{\alpha})(1-q) + 1 - G_\alpha(\underline{\alpha})} > 0,$$

since $\frac{\gamma G_\alpha(\underline{\alpha})(1-q)}{\gamma G_\alpha(\underline{\alpha})(1-q)+1-G_\alpha(\underline{\alpha})} \in (0,1)$.

Therefore:

$$\frac{\partial R}{\partial F_\pi(\pi_2)} = -\frac{\partial \mu(e=0)}{\partial F_\pi(\pi_2)} \cdot \left(u'^{-1}(1) - u'^{-1}(\beta^{-1})\right) < 0$$

□

(iii) $\frac{\partial R}{\partial \beta} < 0$: Differentiating R with respect to β, we obtain:

$$\frac{\partial R}{\partial \beta} = -[1 - \mu(e=0)] \cdot \frac{d}{d\beta} u'^{-1}(\beta^{-1})$$

Note that,

$$\frac{d}{d\beta} g'^{-1}(\beta^{-1}) = -\frac{1}{\beta^2 \cdot u''(u'^{-1}(\beta^{-1}))}$$

Substituting back, we get:

$$\frac{\partial R}{\partial \beta} = -[1 - \mu(e=0)] \cdot \left(-\frac{1}{\beta^2 \cdot u''(u'^{-1}(\beta^{-1}))}\right) = \frac{1 - \mu(e=0)}{\beta^2 \cdot u''(u'^{-1}(\beta^{-1}))}$$

Since $u'' < 0$ and $\mu(e=0) \in (0,1)$,

$$\frac{\partial R}{\partial \beta} < 0$$

□

(iv) $\frac{\partial R}{\partial G_\alpha(\underline{\alpha})} < 0$:

Denote $G \equiv G_\alpha(\underline{\alpha})$, and $\phi(G) = \frac{\gamma G(1-q)}{\gamma G(1-q)+1-G}$
Differentiating R with respect to G, we obtain:

$$\frac{dR}{dG} = -\frac{d\mu(e=0)}{dG} \cdot \left(u'^{-1}(1) - u'^{-1}(\beta^{-1})\right) = -(1 - F_\pi(\pi_2)) \cdot \phi'(G) \cdot \left(u'^{-1}(1) - u'^{-1}(\beta^{-1})\right)$$

As $1 - F_\pi(\pi_2) > 0$ and $u'^{-1}(1) - u'^{-1}(\beta^{-1}) > 0$, given $F_\pi(\pi_2) \in (0,1)$, $\beta \in (0,1)$, and $u'' < 0$, it follows that $\frac{dR}{dG} < 0$ if $\phi'(G) > 0$, which we show below.

Deriving $\phi'(G)$:

$$\begin{aligned}
\phi'(G) &= \frac{d}{dG}\left(\frac{\gamma G(1-q)}{\gamma G(1-q)+1-G}\right) \\
&= \frac{[\gamma(1-q)]\cdot[\gamma(1-q)+1-G]-\gamma G(1-q)\cdot[-1]}{[\gamma G(1-q)+1-G]^2} \\
&= \frac{\gamma(1-q)[\gamma(1-q)+1-G]+\gamma G(1-q)}{[\gamma G(1-q)+1-G]^2} \\
&= \frac{\gamma(1-q)[\gamma(1-q)+1]}{[\gamma G(1-q)+1-G]^2}
\end{aligned}$$

Since $\gamma \in (0,1)$, $q \in (0,1)$, and $G \in (0,1)$, every term in the numerator and denominator is strictly positive. Hence, $\phi'(G) > 0$, and so:

$$\frac{dR}{dG} < 0 \implies \frac{\partial R}{\partial G_\alpha(\underline{\alpha})} < 0$$

□

B Appendix Survey Locations

B.1 Streets Sample

The following are details about the street sample selection for an observational survey of begging activity, a survey of successful interactions of donated amounts, and a survey of beggars' backgrounds and preferences.

1. Temples: We compile the data on temples in Delhi by using travel- and tourism-related sites with the Government of India's website about Delhi Tourism (https://delhitourism.gov.in/) as our primary source.[27] We conduct manual searches for temples, their official websites, Google Business profiles and other available directories to gather complete address of each temple.

2. Shopping Centers and marketplaces: Similar to the process we follow for temples, we collect information about the most popular shopping centers in Delhi using the relevant travel- and tourism-websites where the Government of India's website about Delhi Tourism (https://delhitourism.gov.in/) remains our primary

[27] Additional websites used to compile the list of temples in Delhi include Travelogy India (https://www.travelogyindia.com/), Tour My India (https://www.tourmyindia.com/), and Lonely Planet (https://www.lonelyplanet.com/).

source.[28] After compiling the list, we use the shopping center's Google Business profile or other available directories to get complete addresses.

3. Metro Stations: Dehli metro website https://delhimetrorail.info/ provides a comprehensive list and network of metro stations in Delhi.

4. Live Traffic Data: We append their corresponding GPS coordinates for each site. Using the latitude and longitude information corresponding to each location, we obtain live traffic information within a 100-meter radius of the geographic coordinates. For each road segment within the 100-meter radius of the geo-coordinate, we use "HERE" https://www.here.com/ which provides traffic-related information such as speed (the expected speed in meters per second along the roadway), jamFactor (a value indicating the amount of traffic on the roadway), traversability (whether the road is open or closed), among other statistics.

Based on the information retrieved from the HERE service, we construct a "Jam Score" for each location, reflecting the degree of congestion in the neighborhood within the 100-meter radius. Using local contextual knowledge, we further review the locations (temples, shopping centers, and metro stations) and shortlist them. When finalizing the selection of sample locations, we prioritize locations with a higher "Jam Score" as a proxy for busy spots, indicating a higher probability of location our respondents would visit/ individuals soliciting charity with or without items would be found.

B.2 Households Sample

Following are the details of the sample selection of households for the perceptions survey experiment with potential donors or the general population of Delhi.

1. MCD Dataset: The Municipal Corporation of Delhi (MCD) provides a dataset containing various colonies under its jurisdiction. These colonies are categorized into A, B, C, D, E, F, G, and H based on the property circle rate in each colony. Category A comprises colonies with the highest property circle rate, while Category H includes colonies with the lowest property circle rate, mostly comprising slums. We use the property circle rate as a proxy for the income level of the residents of the colony.

   The dataset comprises 2311 observations, with details such as the colony name, colony category (A-H), ward name, and ward zone.[29] Using publicly available

[28] Additional websites used for compiling the list included Trip Advisor (https://www.tripadvisor.in/), Trip Savvy (https://www.tripsavvy.com/), among others.

[29] The full dataset is available here: https://app.mapmyindia.com/mcdApp/colonyList.jsp.

GEO IQ data on population and area by locality, we merged this data with MCD dataset. The resulting dataset contains income categories (A, B, C, D, E, F, G, or H), population, and the area (in square km) of each locality.

We calculate the population density of each locality i. We create a dummy taking a value of 1 if the population density of locality i is within 1 standard deviation of Delhi's average population density. We keep all the localities that have a dummy of 1 and belong to income categories D, E, F, or G (removing the extreme tails and retaining upper and lower middle income localities). We conduct 30 surveys in 10 colonies for a total of 300 surveys within each category. We randomize the order of colonies within each income category and conduct the surveys in that order, moving to the next colony if any colony from the random order fails to be included for logistical reasons.

2. Polling Stations Data: The website of Chief Electoral Officer (CEO), Delhi, provides district- and assembly-constituency-wise data for the polling booths in Delhi. Separate files, one for each assembly constituency, are used from this source to create a comprehensive list of polling booths in Delhi. The dataset contains information such as the district name, assembly constituency name, locality, polling area coverage, and the address of each polling station.[30]

   For each selected colony from our merged MCD and GEO IQ dataset, our team identifies the nearest polling stations using the polling data and communicates this information to the field team. The polling stations serve as the starting point for the field team, from which they initiate the data collection process. In cases where a colony has multiple associated polling stations, we randomly select one station as the primary polling station, designating the others as backups in case the primary option is inaccessible for any logistical reasons. Surveyors knocked on every fifth household starting from the polling station to conducted the survey, and the surveys within a colony are completed within a day to avoid selection and spillover concerns.

[30]The full dataset is available here: https://ceodelhi.gov.in/PS_ListOn15thOctn.aspx.

C Detailed Summary Statistics

Observational Survey - Extensive Margin Using the *Observational Survey of Beggars'* demographic composition, we present detailed information on the observable demographic composition of the beggars observed in these streets in Appendix Table C.1. Our sample of 75 crowded streets includes 45% religious areas (near temples) and 55% non-religious areas (32% commuting zones - near metro stations and 23% marketplaces). Overall, there are, on average, 8.4 beggars per street, and the beggar population comprises approximately (= 2.63/8.44) 31% who offer items and (= 5.81/8.44) 69% who do not. Gender composition is roughly balanced, and age distribution shows that a majority of the beggars are adults (62%), while the rest are either children and adolescents (26%) or seniors over 60 (9%). A small proportion of beggars display extreme vulnerabilities such as disabilities, lack of footwear, or partial clothing (4%, 18%, and 10%, respectively). While most beggars actively move around to solicit charity, a significant proportion (around 30%) position themselves in one place while begging. About 22% of the beggars beg in groups, while a majority beg alone (78%). Only about 15% are observed begging with a small child.

The table also presents disaggregated information by begging style (with items versus without items). The gender composition differs between the two groups: a higher proportion of beggars with items are men (56% men, 44% women), whereas beggars without items are more likely to be women (44% men, 55% women). Although adults constitute the majority in both groups (63% among beggars with items and 68% among those without items), the share of adolescents is significantly higher among beggars with items. Beggars with items are also less likely to solicit as part of a group or while carrying a child. In contrast, both groups exhibit similar indicators of extreme vulnerability, such as visible disability, absence of footwear and being partially clothed.

Using the *Observational Survey of Interactions*, we present summary statstics on the specific beggars whose interactions with passers-by we examine for evaluating the extensive margin differences in solicitation and donation (i.e., successful interaction) rates between beggars with and without items, as reported in Panel A of Table **??**. We show that the demographic patterns of these beggars are similar to those observed in the broader Observational survey of beggars' demographic composition at the street level, suggesting representativeness and mitigating concerns of over-sampling any demographic subgroup by begging style (with and without items). In Panel B of Table C.4, we examine the observable demographics of the passers-by who were approached. Beggars without items are equally likely to solicit donations from men and women, whereas those with items approach men more often. This may suggest that beggars

perceive men as more responsive to signals of deservingness, which is consistent with previous findings of higher prevalence of meritocratic preferences among men than women(Almås et al., 2020).

Interactions Survey - Intensive Margin We describe the demographic characteristics of the beggars and passers-by included in the *Successful Interactions Survey*, which documents interactions where a passer-by gave money to a beggar. Conducted in the same 75 locations as the Observational Survey of Beggars, the final dataset comprises 607 successful interactions (305 to beggars with items and 302 to beggars without items), each representing a donation from a passer-by to a beggar. This results in a sample of approximately six to eight such interactions per street, with about three to four interactions involving beggars with items and the same number involving beggars without items, in each street.

As shown in table C.3, we do not find a significant difference in the gender composition by begging style. However, a majority of the beggars without items are adults (60%) while the beggars with items are evenly split between children and adults (44% and 48%, respectively). Most beggars of both kinds have no formal education but beggars with items are more likely to have primary education than the beggars without items. Only about 20% of the beggars have ever had a job and about 40% are migrants from rural parts of India, with no significant differences by begging style. Interestingly, among the beggars with items, only about half of them even mentioned the item, the rest solicited charity and invoked passers'-by generosity by mentioning faith, God, hunger or children, or a combination of these.

As shown in table C.5, approximately 48% of the donors, both donating to beggars with and without items, are women. Donors to both categories exhibit similar demographic characteristics, including gender, age, education, migrant status, and income. Donors report similar soliciting words used by beggars with and without items, where charity is most frequently solicited in the name of God and hunger, with roughly 50% of beggars with items mentioning the specific item. Most donors report charity as the primary reason for their giving, while a small percentage cite wanting to get rid of the beggar (9%) or some use of the item (27% of donors to beggars with items). While 83% of the donors to beggars with items accepted the item from the beggar, 67% of them were willing to give it away for free.

Beggars' Preferences Survey Out of the 1219 beggars with whom we conducted our preferences surveys, 607 beggars beg with items and 612 beg without items. For beggars with items, column (4) in Appendix Table C.2 shows that among the population

of beggars, there are about 63% women, 58% migrants from rural India, 74% living in temporary houses or shacks, 44% are unaware of their caste, and 48% belong to backward castes, with no significant differences in these characteristics among beggars without items (in column (6)). However, the sampled beggars differ in age distribution, education, and labor market experience. 43% of the beggars with items are children compared with 35% of the beggars without items. Beggars with items are less likely to have no education than beggars without items. Finally, beggars with items are less likely to have ever worked in a paid job.

Donors' Perceptions Survey Experiment We conducted this survey with 1204 participants, with 597 participants assigned to report beliefs about beggars with items and 607 to beggars without items. In this subsection, we verify and confirm that our sample is balanced across treatments as shown in Appendix Table C.6. Specifically, we check that the demographic and socio-economic characteristics of participants randomly assigned to report beliefs about beggars with items are not significantly different from those assigned to report about beggars without items. Among the experiment participants assigned to report beliefs about beggars with items, 45% are women, 52% belong to forward castes, 63% are married, out of which 93% have children and 31% are migrants from other parts of India. The participants assigned to report beliefs about the beggars without items are similar in all of these characteristics.

The sample is stratified based on income such that surveys are conducted in households across Municipal Corporation of Delhi's (MCD) Neighborhood Income Categories D, E, F and G, which cover 80% of Delhi's population.[1]

[1]These categories span from A to H, going from the richest to poorest neighborhoods (see more details in appendix B).

Table C.1: **Observational Survey of Beggars**

	All	With Item	Without Item	p-value
No. of Beggars	8.44	2.63	5.81	0.0026
	(9.29)	(3.47)	(8.33)	
Female (%)	51.89	43.99	55.39	0.0499
	(25.40)	(25.39)	(27.76)	
Other Gender (%)	0.87	0	1.17	0.0740
	(3.61)	(0)	(4.15)	
Children below 12 (%)	11.30	8.38	13.35	0.2008
	(17.26)	(15.03)	(20.17)	
Adolescents (%)	15.19	23.74	7.57	0.0001
	(19.10)	(21.00)	(16.35)	
Seniors (%)	9.07	6.40	11.62	0.1150
	(14.28)	(11.93)	(17.72)	
Disabled (%)	4.04	3.05	5.00	0.4746
	(9.20)	(16.00)	(8.69)	
Without Footwear (%)	18.14	20.06	15.71	0.3273
	(18.50)	(23.77)	(17.29)	
Partially Clothed (%)	10.39	11.37	9.39	0.6209
	(16.27)	(16.83)	(20.05)	
Religiously Clothed (%)	3.48	3.19	4.48	0.5939
	(7.56)	(12.57)	(9.97)	
Stationary (%)	30.14	29.94	33.14	0.6497
	(26.70)	(34.75)	(30.73)	
In Group (%)	22.19	20.27	30.60	0.0978
	(21.97)	(23.43)	(25.36)	
Group w/ Child (%)	7.60	4.07	15.06	0.0137
	(15.07)	(7.99)	(19.00)	
Alone w/ Child (%)	7.00	7.02	12.49	0.1451
	(10.71)	(12.65)	(14.11)	
No. of Streets	75			
Marketplace (%)	23%			
Commute Zone (%)	32%			
Religious Place (%)	45%			

Notes: The table is based on the observational survey of beggars and it reports beggars' descriptive statistics in the marketplace, commuting zone and religious places in 20 minute window at the end of the observational survey. Surveyors worked in pairs: one recorded observable demographic characteristics for beggars with items, while the other did the same for those without. Standard deviations are reported in paranthesis below means. P-values in the last column are for test of difference of means for beggars with and without items.

Table C.2: **Beggar Descriptive Statistics**

Variable		Beggars' Preferences Survey		
		With Item (1)	Without item (2)	p-value (3)
Female		0.628	0.631	0.912
Age Category				
	Child	0.427	0.345	0.003
	Adult	0.506	0.528	0.442
	Senior	0.068	0.127	0.000
Education				
	None	0.410	0.461	0.075
	Less than Primary	0.423	0.412	0.681
	Greater than Primary	0.157	0.123	0.087
Migrant		0.581	0.558	0.528
House Type				
	None	0.053	0.042	0.401
	Kuccha	0.740	0.752	0.632
	Pucca	0.203	0.206	0.888
Ever had a job		0.275	0.330	0.037
Beggar Partially Clothed		0.310	0.337	0.316
Caste Category				
	General	0.077	0.101	0.144
	SC	0.208	0.201	0.775
	ST	0.035	0.031	0.728
	OBC	0.241	0.193	0.043
	Unknown	0.437	0.472	0.211
Want to do a job		0.840	0.801	0.072
Police misbehavior		0.264	0.194	0.004
Have an ID card		0.858	0.830	0.174
Treatment in hospital		0.654	0.691	0.167
Married		0.381	0.400	0.479
Have children		0.926	0.930	0.878
Want to study		0.555	0.573	0.580
Want to educate children		0.744	0.735	0.871
Monthly Expenditure (Rs.)		7050.878	7044.977	0.985
How much money (Rs.) do you collect in a day (Exp)?		238.797	200.163	0.000
Observations		607	612	.

Notes: This table presents descriptive statistics from the Beggar's Preferences Survey. The Beggars Preferences Survey was primarily designed to elicit incentivized measures of preferences for paid work, free-riding, honesty, and basic numeracy. In addition, it collected detailed information on beggars' socio-economic background, labor market experience, economic values, aspirations, and migration status and this table presents their basic information.

Table C.3: **Beggar Descriptive Statistics**

	Successful Interactions Survey		
Variable	**With Item (1)**	**Without item (2)**	**p-value (3)**
Female	0.682	0.659	0.546
Age Category			
Child	0.443	0.281	0.000
Adult	0.475	0.589	0.005
Senior	0.082	0.129	0.058
Education			
None	0.597	0.702	0.007
Less than Primary	0.351	0.215	0.000
Greater than Primary	0.052	0.079	0.180
Migrant	0.367	0.397	0.445
House Type			
None	0.331	0.417	0.028
Kuccha	0.603	0.523	0.047
Pucca	0.066	0.056	0.633
Ever had a job	0.223	0.192	0.348
Beggar Partially Clothed	0.315	0.305	0.787
Share Income	0.725	0.613	0.003
Soliciting words			
God related	0.479	0.613	0.001
Hunger related	0.521	0.705	0.000
Children related	0.118	0.113	0.834
Nothing	0.052	0.079	0.180
Product related	0.521		
Amount received (in Rs.)	16.066	9.868	0.000
Observations	305	302	.

Notes: This table presents descriptive statistics from the Successful Interaction Survey. The Successful Interaction Survey was conducted on the streets of Delhi and reports beggars characteristics separately for beggars with and without items, along with p-values testing for differences between the two groups. The survey aimed to capture charitable exchanges between beggars and passers-by. Surveyors worked in pairs: after observing an interaction, one approached the beggar and the other the donor to record the amount exchanged (cash or item) and collect basic socio-economic information. The table reports this information for the beggars.

Table C.4: **Observational Survey of Interactions**

Variable	With Item (1)	Without item (2)	p-value (3)
Panel A: Beggars' Characteristics			
Female	0.382	0.567	0.000
Age Category			
Child	0.326	0.200	0.002
Adult	0.593	0.646	0.241
Senior	0.054	0.138	0.003
With Child	0.125	0.172	0.165
Observations	221	240	
Panel B: Givers' Characteristics			
Female	0.482	0.480	0.943
Senior	0.282	0.183	0.000
In Group	0.534	0.345	0.000
With Child	0.352	0.146	0.000
Observations	812	815	
Panel C: Beggar-Donor Interactions			
Total Interactions	10.158	9.871	0.432
Successful Interactions	0.446	0.442	0.827
Observations	2245	2369	

Notes: This table is based on the observational survey of interactions, conducted in the 75 crowded streets of Delhi. It involves systematically observing streets to record multiple interactions—both repeated interactions between the same beggar and different passers-by, and vice versa. We report the number of unique beggars and their characteristics in Panel A, the number of unique donors/passers-by observed in this survey and their characteristics in Panel B, and the number of unique interactions and interactions where donation was made in Panel C.

Table C.5: **Donors Descriptive Statistics**

Variable	Successful Interactions Survey		
	With Item (1)	Without item (2)	p-value (3)
Female	0.479	0.480	0.972
Age Category			
Child	0.059	0.060	0.976
Adult	0.938	0.934	0.843
Senior	0.003	0.007	0.557
Education			
None	0.030	0.050	0.203
Less than Primary	0.023	0.013	0.370
Greater than Primary	0.948	0.937	0.581
Religion			
Hinduism	0.803	0.712	0.009
Islam	0.108	0.189	0.005
Christianity	0.026	0.023	0.809
Sikhism	0.030	0.050	0.203
Migrant	0.367	0.397	0.445
Dependency	0.272	0.269	0.717
Do you give money to this specific person regularly?	0.256	0.235	0.555
What they said			
Product related	0.492		
God related	0.443	0.639	0.000
Hunger related	0.534	0.642	0.007
Children related	0.072	0.086	0.524
Nothing	0.059	0.079	0.321
Why donated			
I had a need for the product	0.272		
For charity/help/need	0.636	0.897	0.000
To get rid of the person	0.092	0.093	0.969
Beggar received money	0.934	0.987	0.001
Are you willing to give this item away for free?	0.619		
Giver accepted item	0.826		
Amount (Rs.) just donated	15.918	9.762	0.000
Amount (out of Rs. 10K) that the giver will donate (hyp.)	5151.803	5151.803	4460.430
Expected monthly income (in Rs.)	33016.300	32154.150	0.674
Expected monthly expenditure (in Rs.)			
Observations	305	302	

Notes: This table presents descriptive statistics from the Successful Interaction Survey. The Successful Interaction Survey was conducted on the streets of Delhi and reports donor characteristics separately for those who gave to beggars with and without items, along with p-values testing for differences between the two groups. The survey aimed to capture charitable exchanges between beggars and passers-by. Surveyors worked in pairs: after observing an interaction, one approached the beggar and the other the donor to record the amount exchanged (cash or item) and collect basic socio-economic information. The table reports this information for the passers-by.

Table C.6: **Donor Perception Survey - Balance Table**

Variable	**With Item (1)**	**Without Item (2)**	**p-value (3)**
Female	0.449	0.473	0.405
Age (Years)	34.482	34.046	0.530
Caste			
General	0.519	0.494	0.385
SC	0.214	0.208	0.772
ST	0.008	0.018	0.140
OBC	0.204	0.236	0.191
Education (Years)	12.22	12.21	0.939
Married	0.632	0.621	0.709
Have Children (Sample: Married Respondents)	0.928	0.947	0.292
Migrant	0.310	0.290	0.450
Monthly Expenditure (INR)	13960	13297	0.530
MCD Category			
D	0.235	0.260	0.300
E	0.253	0.244	0.715
F	0.248	0.249	0.973
G	0.265	0.247	0.486
Dependency Ratio	0.584	0.598	0.182
Observations	597	607	0.779

*Notes:*This table presents the summary statistics for the donor's covariates by their random assignment to two groups: beggars with items and without.

D Additional Tables

Table D.1: **Extensive Margin (LPM Specification)**

	Interaction Rate	Donation Rate
Beggar with item	0.095	-0.023
	(0.635)	(0.028)
	[0.882]	[0.424]
Mean [of beggar w/o item]	9.87	0.44
Effect size [SD]	0.02	-0.11
Controls	Yes	Yes
No. of Beggars	461	461
No. of Interactions	4614	4614

Notes: Coefficients are based on linear probability model (LPM) estimated at the beggar level. Robust standard errors, clustered at the street level, are reported in parentheses, and p-values are in square brackets. Controls include beggars' characteristics (age group, gender, whether in group, whether with child, whether wearing footwear, whether fully clothed) and passers-by's characteristics (gender, age, whether in group). Fixed effects for the day of the week and street type (religious, commuting, or marketplace) are included. Data are drawn from the Observational Survey of Interactions, which documents the number of passer-by interactions with each beggar and whether a donation occurred. *Interaction rate* is defined as the number of interactions per beggar within a 20-minute window. *Donation rate* is a binary variable equal to 1 if an interaction resulted in a donation.

Table D.2: **Extensive Margin**

	Negative Binomial		**Poisson**	
	Interaction Rate	Donation Rate	Interaction Rate	Donation Rate
Beggar with item	0.013	-0.052	0.007	-0.052
	(0.068)	(0.064)	(0.064)	(0.064)
	[0.847]	[0.415]	[0.909]	[0.415]
Mean [of beggar w/o item]	9.87	0.44	9.87	0.44
Effect size [SD]	0.00	-0.24	0.00	-0.24
Controls	Yes	Yes	Yes	Yes
No. of Beggars	461	461	461	461
No. of Interactions	4614	4614	4614	4614

Notes: Coefficients in columns (1) and (2) are based on the Negative Binomial model and columns (3) and (4) are based on the Poisson model at the beggar level. Robust standard errors, clustered at the street level, are reported in parentheses, and p-values are in square brackets. Controls include beggars' characteristics (age group, gender, whether in group, whether with child, whether wearing footwear, whether fully clothed) and passers-by's characteristics (gender, age, whether in group). Fixed effects for the day of the week and street type (religious, commuting, or marketplace) are included. Data are drawn from the Observational Survey of Interactions, which documents the number of passer-by interactions with each beggar and whether a donation occurred. *Interaction rate* is defined as the number of interactions per beggar within a 20-minute window. *Donation rate* is a binary variable equal to 1 if an interaction resulted in a donation.

Table D.3: **Potential Donors' Perception: Within-subjects**

	Preferences		**Morals**	**Ability**
	Free-cash takers	Free-riders	Heads per beggar	Numeracy skills
Beggar with item	-6.532	-4.619	-1.781	5.800
	(0.793)	(0.812)	(0.576)	(0.780)
	[0.000]	[0.000]	[0.002]	[0.000]
Mean [of beggar w/o item]	50.34	43.16	65.37	51.39
Effect size [SD]	-0.24	-0.17	-0.10	0.20
Controls	Yes	Yes	Yes	Yes
No. of Observations	2408	2408	2408	2408

Notes: Coefficients are estimated using OLS regressions using the within-subject design. Robust standard errors clustered at an individual level are reported in parentheses, and p-values are shown in square brackets. Regressions control for donors' characteristics, including age, gender, caste, migration status, education, marital status, number of children, and the ratio of non-earning members to household size, with fixed effects for neighborhood income strata included. The Donors' Perceptions Survey elicited donors' beliefs about beggars' preferences and abilities. Participants reported, out of 600 beggars, how many they believed chose *free cash*, justified *free-riding*, the number of heads reported in 6,000 coin flips to measure dishonesty (*heads per beggar*) and could count to 100 to measure *numeracy skills*; these responses are converted to percentages.

Table D.4: **Signaling Premium and Donors' Prior Beliefs**

	(1)	(2)	(3)	(4)
Percentage Perceived Free-cash Takers	0.096		0.086	0.087
	(0.022)		(0.022)	(0.022)
	[0.000]		[0.000]	[0.000]
Percentage Perceived Numerate		0.077	0.064	0.064
		(0.022)	(0.022)	(0.022)
		[0.000]	[0.003]	[0.003]
Order				-0.597
				(1.219)
				[0.624]
No. of Observations	1204	1204	1204	1204

Notes: Robust standard errors in parentheses and p-values in square brackets. Dependent variable: signaling premium (allocation to beggars with items minus 50 INR). Column (1) includes only perceived labor aversion; (2) includes only perceived ability; (3) includes both; and (4) adds an order control (whether beliefs about beggars without items were elicited first or second). Data are drawn from the Donors' Perceptions Survey.

Table D.5: **Beggars' Behavior**

	Preferences		**Morals**	**Ability**
	Free-cash takers	Free-riders	Heads per beggar	Numeracy
Beggar with item	0.003	-0.020	0.012	0.033
	(0.025)	(0.008)	(0.011)	(0.028)
	[0.907]	[0.126]	[0.382]	[0.364]
Mean [of beggar w/o item]	0.14	0.27	0.64	0.25
Effect size [SD]	0.01	-0.05	0.07	0.08
Controls	Yes	Yes	Yes	Yes
No. of Observations	1219	1219	1219	1219

Notes: Coefficients are based on OLS regressions. Robust standard errors, clustered at the street level, are reported in parentheses and p-values are reported in square brackets. Regressions control for beggars' characteristics, including age, gender, caste, migration status, education, marital status, religion. Fixed effects for street type (religious, commuting or marketplace) are included. Data are drawn from the Beggars' Preference Survey. *Free-cash* preference is measured through participants' choice between receiving INR 50 in cash or completing a real-effort task. *Free-riding* preferences are elicited using a hypothetical vignette describing a free-rider, with participants indicating whether they agree or disagree with the behavior. *Dishonesty* is assessed through a coin-flipping task in which each beggar privately flips a coin ten times and reports the number of heads; deviations from the expected 50-50 distribution are used to infer lying at the group level. *Numeracy* is measured by asking participants to count aloud from 1 to 100, with successful completion indicating basic numeracy skills.

Table D.6: **Comparison of Donor Beliefs and Actual Traits Among Beggars**

Panel A: Pooled Across Begging Styles

	Donors' Beliefs	Beggars' Actual Traits	t-stat	p-value
Free Cash Takers	46.73	13.70	26.37	<0.001
	(0.77)	(0.99)		
Free-Riders	39.81	25.92	9.55	<0.001
	(0.74)	(1.26)		
Numerate	53.68	26.09	18.37	<0.001
	(0.82)	(1.26)		
Heads Per Beggar	64.23	64.69	-0.61	0.543
	(0.54)	(0.53)		

Panel B: Beggars Without Items

	Donors' Beliefs	Beggars' Actual Traits	t-stat	p-value
Free Cash Takers	50.34	14.22	22.31	<0.001
	(27.47)	(34.95)		
Free-Riders	43.16	27.29	8.11	<0.001
	(26.41)	(44.58)		
Numerate	51.39	24.67	13.86	<0.001
	(28.42)	(43.15)		
Heads Per Beggar	65.37	63.86	1.63	0.104
	(18.67)	(18.73)		

Panel C: Beggars With Items

	Donors' Beliefs	Beggars' Actual Traits	t-stat	p-value
Free Cash Takers	43.81	13.18	19.45	<0.001
	(26.68)	(33.85)		
Free-Riders	38.54	24.55	8.10	<0.001
	(25.40)	(43.07)		
Numerate	57.18	27.51	13.86	<0.001
	(27.52)	(44.69)		
Heads Per Beggar	63.59	65.54	-2.12	0.034
	(18.56)	(18.45)		

Notes: Donor beliefs are based on initial beliefs elicited in the Donors' Perceptions Survey about the percentage of beggars concerning each trait. Beggar traits are based on data from the Beggars' Preferences Survey. Panel A averages across donors' beliefs about the beggars corresponding to the begging style in the initial collage they were shown and pools across all beggars. Panels B and C make separate comparisons for beggars without and with items, respectively. Standard errors are reported in parentheses. Welch's two-sample t-tests are used to test for differences between means.

Table D.7: **Meritocracy and Donation Behavior**

	Inequality due to Hardwork	Circumstances Control	Life Better by Hardwork	Giving Money Beggary	Begging because Lazy	Poverty Solution Workfare
Meritocratic	0.910	5.927	2.715	6.692	2.030	4.024
	(1.359)	(1.297)	(1.239)	(1.286)	(1.296)	(1.744)
	[0.503]	[0.000]	[0.029]	[0.000]	[0.118]	[0.021]
Mean [of Non Meritocratic]	7.72	4.30	6.53	5.14	6.54	4.86
Effect size [SD]	0.04	0.31	0.13	0.32	0.11	0.21
Controls	Yes	Yes	Yes	Yes	Yes	Yes
No. of Observations	1204	1204	1204	1204	1204	1204

Notes: Coefficients are based on OLS regressions. Robust standard errors are reported in parentheses and p-values are reported in square brackets. Controls include potential donors' covariates and include age, gender, caste, first-generation migrant to Delhi, education, marital status, children, the ratio of non-earning member to household size. Fixed effects for income-strata by colonies are included.

E Appendix Figures

E.1 Photo collages used for the belief elicitation experiment

Set 1: Beggars without items **Set 1: Beggars with items**

Set 2: Beggars without items **Set 2: Beggars with items**

Figure E.1: This figure illustrates the two sets of collages that we used in the belief elicitation survey experiment with the general population of potential donors at their households. The pictures are of actual beggars, photographed with their consent for research purposes.

E.2 Distribution of donors' perceptions of beggars (between-subjects differences)

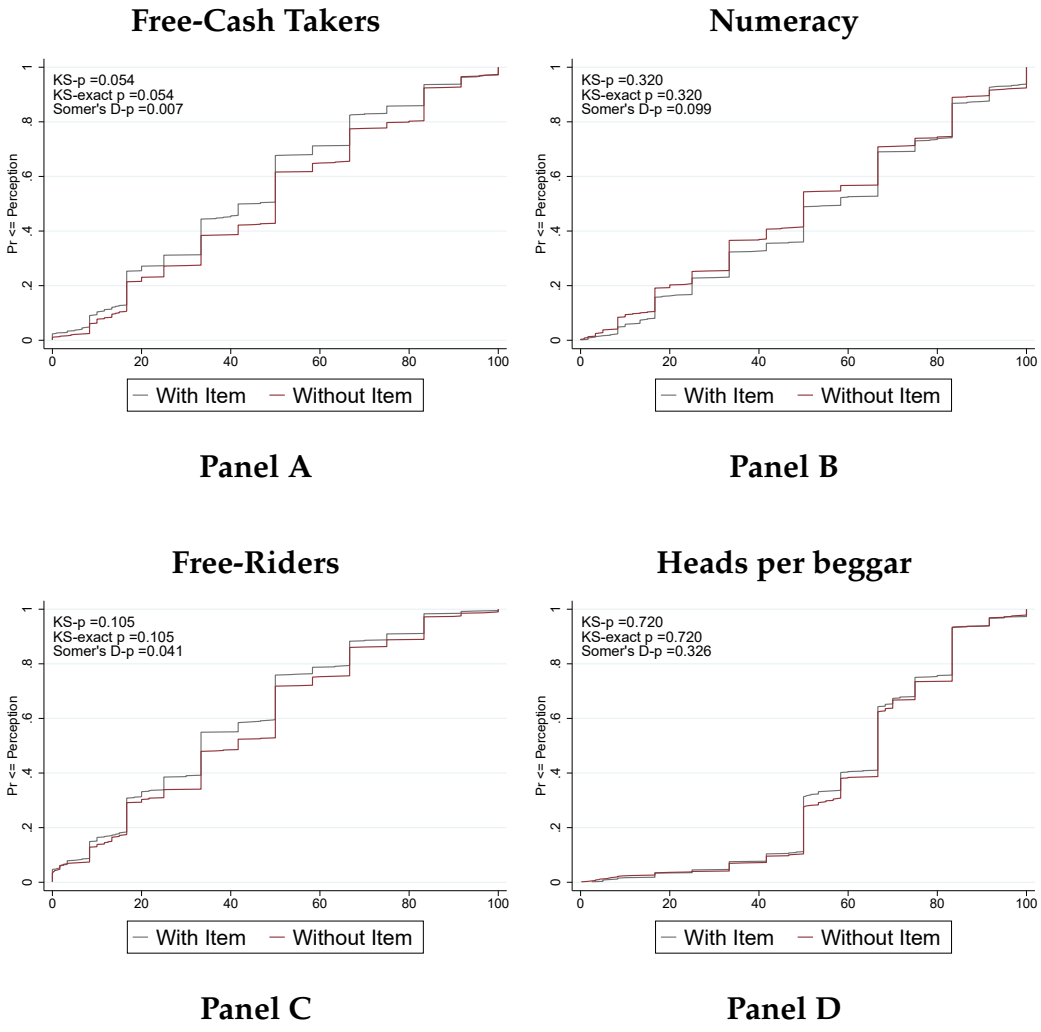

Figure E.2: This figure illustrates the distribution of potential donors' perceptions of beggars across various metrics using the between-subject analysis: **Panel A** shows the percentage opting for free cash, **Panel B** presents the percentage with numeracy levels below 100, **Panel C** indicates the percentage perceived as free-riding, and **Panel D** displays the number of times heads is reported per beggar (with values above 50 reflecting perceptions of dishonesty).

E.3 Distribution of donors' perceptions of beggars (within-subjects differences)

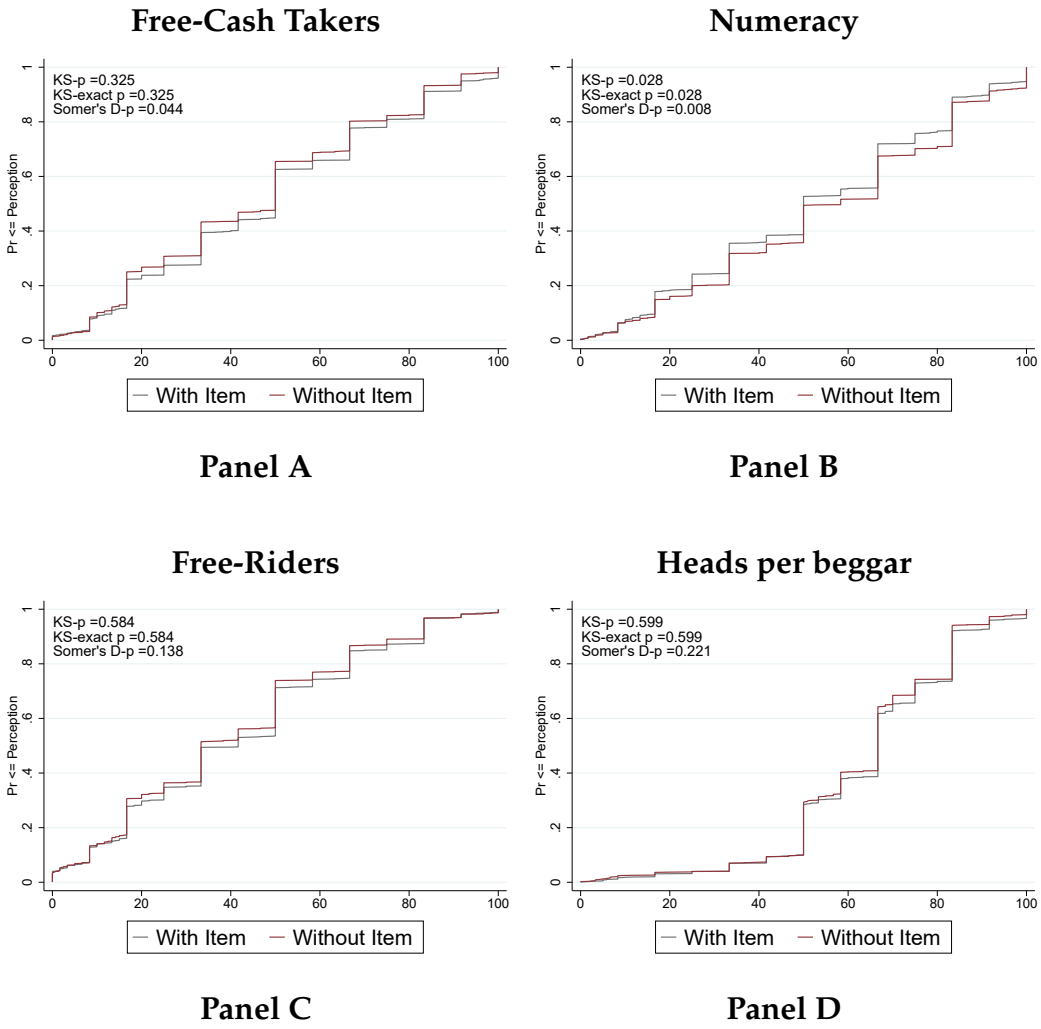

Figure E.3: This figure illustrates the distribution of donors' perception of beggars across various metrics using the within analysis: **Panel A** shows the perceived percentage opting for free cash, **Panel B** presents the perceived percentage with numeracy levels below 100, **Panel C** indicates the percentage perceived as free-riding, and **Panel D** displays the predicted number of times heads is reported per beggar (with values above 50 reflecting perceptions of dishonesty).