

# How Prosocial Motives Shape Market Exchange: Experimental Evidence from Street Vending\*

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## Abstract

Markets are often seen as impersonal mechanisms of exchange, yet many real-world transactions are deeply social. This paper examines how prosocial motives interact with economic exchange and how this affects market outcomes. I study these questions in the context of street vending—a ubiquitous informal market in developing countries—combining multiple experiments with detailed observational data and surveys. Partnering with vendors in a field experiment, I show that buyers are twice as likely to purchase from children as from adults selling identical goods. Sellers, including children, anticipate these preferences, adjusting prices and whom they target. I develop and test a simple model that rationalizes these behaviors: buyers derive utility not only from consumption but also from altruism toward sellers and from avoiding the discomfort of refusal when solicited to buy. Experimental evidence supports both mechanisms and shows that sellers strategically leverage this to extract rents, creating an advantage for children in this market. More broadly, the findings show how social preferences influence market exchange, granting socioeconomically vulnerable sellers a form of market power in competitive environments.

**JEL Codes:** C93, D91, J46, L10, O17

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# 1 Introduction

Markets are often seen as impersonal mechanisms of exchange. Yet many real-world transactions are inherently social. Whether shopping at local farmers' markets, small neighborhood shops, Christmas stalls, or buying from roadside vendors, buyers engage in face-to-face exchanges with sellers whose socio-economic circumstances are apparent. In such settings, purchasing may not only be an economic decision but also, in part, a prosocial one. While a rich behavioral literature shows that social preferences influence generosity and economic choices ([DellaVigna et al., 2012](#); [Bursztyn et al., 2017](#); [Andreoni et al., 2017](#); [Campos-Mercade et al., 2025](#)), identifying their role in market transactions—and whether market actors anticipate and act upon them strategically—is difficult in most naturally occurring markets. Repeated interactions, reputation concerns, and product differentiation make it hard to separate prosocial motives from standard economic forces ([List, 2006](#)). As a result, we know little about whether social preferences meaningfully affect prices and sales in competitive market environments and how sellers strategically respond to them. These questions are fundamental to understanding how markets function when exchange reflects not only preferences over goods, but also prosociality, with implications for earnings and relative market advantage.

I study these questions in the context of street vending—a ubiquitous market setting in developing countries where adult and child vendors often sell similar goods in close proximity. Street vending accounts for roughly 24% of urban employment in Sub-Saharan Africa and about 4% in India (with around 6 million vendors).<sup>1</sup> Vendors often sell relatively homogeneous goods on foot or using temporary structures, limiting quality variation and reducing the scope for long-term relationships. Transactions are brief, take-it-or-leave-it exchanges with limited bargaining, allowing separation of prosocial motives from negotiation ability. The market also lacks price regulation or formal contracts, interactions are personal, and sellers compete in close proximity—features that are common across many informal labor and product markets ([Breza and Kaur, 2025](#)). Together, these characteristics mitigate concerns about many of the confounding factors that complicate the study of prosocial motives in other markets, while also providing insights into an economically important yet understudied informal urban market.

In this paper, I combine field experimentation with novel, detailed observational data and surveys conducted with street vendors and passersby in Delhi, India, to systematically analyze how prosocial motives shape market exchange. I find that buyers are substantially more likely to purchase from children than from adults selling identical goods, despite no differences in product quality or valuation. Sellers anticipate these patterns: they strategically target buyers and adjust prices based on perceived social preferences. I develop and test a simple model of buyer decision-making that incorporates consumption utility, altruism toward sellers, and a refusal cost (the discomfort of denying a request), and show that all three components are necessary to explain the observed purchasing, targeting, and pricing patterns in the market. These findings reveal how social preferences affect prices and sales by generating behavioral rents. In particular, prosocial motives can endow socioeconomically vulnerable sellers with a form of market power in competitive environments, with implications for informal markets where exchange is personal and socially embedded.

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<sup>1</sup>[Roever \(2014\)](#); [Raveendran and Vanek \(2020\)](#) provide details of estimation. Vendors are also commonplace in many developed-country cities like New York and Barcelona ([Hong and Ley, 2023](#); [Burgen, 2023](#)).

I organize the analysis around three main sets of findings. I first document behavior on each side of the market, showing how buyers treat children and adult vendors differently and how sellers anticipate and respond to this. I then develop a simple model and behavioral tests that clarify the mechanisms driving these patterns.

**Demand-side behavior:** To isolate buyer behavior, I conduct a field experiment partnering with 150 adult and child vendors selling commonly observed, homogeneous goods—masks, roses, pens, and balloons—for over 1,000 hours. Within each hour, I randomize which passersby vendors approach and the price quoted (Rs. 10 or Rs. 30), while ensuring that child and adult vendors sell identical goods, use a standardized script, and sell at the same spot in the market. This design eliminates endogeneity in seller targeting or pricing and allows me to causally compare whether buyers treat children and adult vendors differently, holding all else equal. While inexpensive, these purchases are not trivial for most consumers in this setting: the price for these goods is roughly equivalent to the cost of an auto-rickshaw ride or a street-side meal.<sup>2</sup>

I find that buyers are twice as likely to purchase from child vendors as from adults selling the same goods ( $p = 0.00$ ), leading children to earn double the hourly revenue of adults.<sup>3</sup> Buyer identity also matters as couples and women are more likely ( $p = 0.00$ ) to purchase than men, with these differences consistent across goods, times of day, and locations.<sup>4</sup> To test whether these patterns reflect differences in valuation, I follow standard practice and implement an incentivized Becker–DeGroot–Marshak (BDM) willingness-to-pay exercise (Becker et al., 1964) with over 500 passersby. Valuations are statistically indistinguishable across buyer types ( $p = 0.39$ ), indicating that these purchase differences are not driven by variation in consumption utility but by responses to seller identity. Comparing average willingness to pay with prices paid in the field experiment suggests that buyers pay about 12% more than their maximum willingness to pay—a conservative lower-bound estimate of the behavioral response induced when facing street vendors.

**Supply-side behavior:** To examine seller strategy, I collect detailed observational data and design a lab-in-the-field pricing experiment. The observational data covers nearly 50,000 buyer–seller encounters over 500 hours of direct observation of around 400 adult and child vendors. I find strong evidence of systematic targeting: child vendors are about 80% more likely than adults to approach passersby ( $p = 0.00$ ), and women and couples are roughly 50 percent more likely to be approached than men ( $p = 0.00$ ).

To cleanly isolate vendors’ pricing strategies from targeting behavior, I use an incentivized lab-in-the-field pricing experiment. The design holds constant the set of goods and their costs while vendors set prices for different buyers, allowing me to identify price discrimination by buyer identity without the endogeneity concerns inherent in naturally occurring data. I find that child vendors quote 45% higher prices than adults ( $p = 0.00$ ). Prices also vary by buyer identity: couples and women are quoted different prices than men ( $p = 0.00$ ). In particular, couples are quoted roughly 38% higher prices than men ( $p = 0.00$ ). Taken together, vendors’ targeting and pricing strategies indicate a sophisticated understanding of the demand side behavior.

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<sup>2</sup>At the time, short auto rickshaw rides cost Rs. 10 (New York Times, Khandelwal, 2019).

<sup>3</sup>The experimental estimates capture a partial-equilibrium market advantage—buyers’ greater responsiveness to children holding prices and all else equal. Adults typically work longer hours, can carry larger inventories, and charge lower prices than children, preventing them from being crowded out of the market.

<sup>4</sup>I use the term ‘couple’ to refer to a male-female pair. This does not intend to impose any hetero-normative assumptions but reflects a common perception that vendors hold when encountering a male-female pair in this context.

**Model and Predictions:** The patterns observed on both sides of the market raise a central question: *why* do buyers and sellers engage in systematic two-sided discrimination when goods are identical, and willingness to pay does not differ across buyer groups? To address this question, I develop a simple model of buyer decision-making that embeds prosocial motives into market exchange. Buyer utility depends on three components: the consumption value of the good, altruism toward the seller, and a refusal cost—the discomfort of denying a direct request.<sup>5</sup> Building on [DellaVigna et al. \(2012\)](#), I allow prosocial motives to vary by buyer and seller identity and embed them in a market setting where sellers choose whom to approach and what prices to set.

The framework clarifies that neither a pure charitable giving model nor a pure consumption model can account for the observed heterogeneity in prices and purchasing by buyer and seller identity. In particular, in a pure consumption model, where social preferences play no role, purchasing should depend only on prices and product characteristics and should not vary systematically by buyer or seller identity. In a pure charitable giving model, where goods have little real consumption value, demand, prices, and markups would not vary across goods. In contrast, the model shows how prosocial motives interact with market exchange, with altruism and refusal costs jointly shaping buyers' purchase decisions and giving sellers an incentive to target and price discriminate across buyer types, even when product valuations do not vary.

The model delivers two simple and intuitive predictions that I test empirically. First, refusal costs matter only when a seller makes a (verbal) request. That is, if refusal costs are important, being approached by a seller should increase the likelihood of purchase; if refusal costs are absent, a seller's request should have no effect. Second, altruism toward sellers can still affect purchases even in the absence of a request. In particular, if buyers derive more utility from helping certain sellers—such as children—then purchase rates can systematically vary across sellers even when no request is made. Importantly, refusal costs and altruism generate distinct empirical patterns: refusal costs predict differences in responsiveness to being approached, while altruism predicts differences in purchasing across seller identities even without any requests.

**Empirical Evidence for Mechanisms:** Consistent with the model's predictions, I find strong evidence that refusal costs play a central role. In the field experiment, being verbally requested by a seller doubles the probability of purchase, with the effect roughly twice as large for child vendors as for adults. Refusal costs also vary systematically by buyer identity: women and couples are substantially more responsive to requests—especially from child sellers—than men. Importantly, randomization of the verbal request, with seller visibility held constant, isolates refusal costs from attention or salience. Standardizing seller visibility, script, and behavior further mitigates alternative explanations related to attention, search costs, and perceived need.

At the same time, refusal costs alone cannot explain all observed patterns, as buyers are more likely to purchase from child vendors even when no request is made. Direct evidence of differential altruism comes from an incentivized dictator game with over 500 passersby. Participants donate Rs. 5 (16%) more to child than adult vendors, confirming stronger altruism toward children. Interestingly, women and couples do not donate significantly more than men, suggesting that refusal costs are needed to explain the observed differences in purchasing across buyers.

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<sup>5</sup>I use these terms in line with the recent behavioral economics literature on prosocial motives ([DellaVigna et al., 2012, 2013](#); [Andreoni et al., 2017](#)). We can relabel 'altruism' as generosity, sympathy, pity, or compassion, and 'refusal cost' as guilt or social pressure without loss of generality.

Additionally, survey data shows that vendors are aware of and strategically leverage buyers' social preferences to influence sales. Seventy-three percent of vendors report preferring to target women or couples over men, because they consider "*who would find it hardest to refuse.*" Moreover, very few believe that women earn more than men, indicating that sellers' strategies reflect beliefs about social preferences rather than income differences. Consistent with the model, gender is also among the most cited factors vendors consider when setting prices.

Together, these results show that prosocial motives affect both sides of market exchange. Altruism and refusal costs affect buyer decision-making, and sellers anticipate and strategically leverage this through targeting and pricing. This gives rise to what I term '*socio-emotional markups*'—price differentials rooted in inferences about buyers' prosocial preferences rather than product quality or cost—helping sustain vulnerable sellers in these competitive informal markets.

***Is street vending a market or just charity?*** Having theoretically shown that behavior in these exchanges reflects both economic and prosocial motives, I next present evidence that street vending operates as a functioning market. Transactions display the core features characteristic of market exchange: prices, markups, and purchases vary systematically across goods in line with demand. For instance, roses and masks are priced and bought about twice as much as pens, contradicting a pure charitable-giving interpretation and aligning closely with elicited willingness to pay for these goods. Vendors also adjust behavior in response to demand, frequently switching products across seasons and festive events; for example, many vendors in my sample switched to selling flags on Independence Day, demonstrating responsiveness to local demand conditions.

Perceptions on both sides of the market reinforce this view. Passersby overwhelmingly distinguish vending from begging: over 80% agree that they should buy from vendors, compared with less than 20% who support giving money to beggars. The most common reasons cited are that "*begging is wrong*" or "*a bad habit*." Consistent with these attitudes, fewer than 0.3 percent of observed interactions involve giving money or food without purchasing a good. Anecdotally, vendors express pride in their work, emphasizing the effort involved in carrying and maintaining the goods. Taken together, perceptions and behaviors on both sides suggest that vending is seen and operates as a genuine market exchange.<sup>6</sup>

***Broader implications:*** These results have implications for policy. Prosocial motives can sustain vulnerable sellers in competitive environments by supporting markups, but they also create a market advantage for children and may unintentionally reinforce child participation in street markets. In settings without social protection, banning children from markets without compensating households, however, may risk pushing children into worse forms of work ([Edmonds, 2007](#)). In this context, most children report feeling safe on the streets and three-quarters attend school.<sup>7</sup> Without taking a normative stance, the results highlight that evaluating child labor policy requires accounting for demand-side responses and their interaction with household constraints and social protection. More broadly, prosocial motives toward socioeconomically vulnerable sellers may have beneficial effects in other market settings—for example, by increasing demand for fair-trade products and supporting purchases from small farmers relative to supermarkets—thereby sustaining livelihoods that might otherwise be unviable in competitive markets.

<sup>6</sup>This is consistent with emerging research on the psychosocial value of employment ([Hussam et al., 2022](#); [Macchi and Stalder, 2023](#); [Sharma and Malik, 2024](#)).

<sup>7</sup>Interviews with local NGOs and the police suggest that these children are not under the control of criminal gangs.

This paper makes three key contributions to the literature. First, it advances our understanding of how prosocial motives shape market outcomes by showing that sellers strategically leverage this to influence pricing and sales. While a growing literature documents that prosocial and image concerns affect charitable giving (DellaVigna et al., 2012; Andreoni et al., 2017), status goods consumption (Bursztyn et al., 2017), environmental actions (Campos-Mercade et al., 2025), and consumption with externalities (Kaufmann et al., 2024), much less is known about the supply-side: whether, and how, market actors leverage these motives. The findings provide field evidence that sellers adjust targeting and pricing based on buyers' perceived altruism and responsiveness to requests, translating social motives into behavioral rents.<sup>8</sup> Relatedly, the results identify perceived prosocial motives as a new basis for price variation: sellers discriminate based on buyers' perceived altruism and discomfort of refusal even when goods and willingness to pay are identical.<sup>9</sup>

Second, the paper contributes to the child labor literature by causally identifying a novel demand-side mechanism that may inadvertently sustain children's participation in urban markets. While most studies have focused on household poverty and labor supply decisions (Edmonds and Pavcnik, 2005; Edmonds, 2007), I show that buyers' prosocial motives can create a form of market advantage for children, leading to higher purchasing rates and markups relative to adults, all else equal. This mechanism can help explain the persistence of child work in informal urban markets, complementing existing evidence that emphasizes labor market conditions and household constraints as drivers of children's work (Shah and Steinberg, 2017, 2021; Bau et al., 2020; Basu and Van, 1998). The findings suggest that child labor policies may need to account not only for household constraints but also for how market incentives shape children's participation.

More broadly, the paper contributes new evidence on how economic and prosocial motives can interact in informal markets. These markets—characterized by limited price regulation and personal exchanges—employ a large share of the urban workforce in developing countries (Breza and Kaur, 2025). By combining multiple experiments with rich observational data, the paper offers a systematic analysis of buyer-seller interactions in informal street markets.<sup>10</sup> The findings show how prosocial motives sustain participation and earnings for the poor despite competition. Similar dynamics likely influence buyer decisions in scenarios where exchanges involve personal contact and sellers are of lower socioeconomic status, such as door-to-door sales, spot labor markets, informal auto/taxi rides, and local festive fairs and farmers' markets.

The rest of the paper proceeds as follows. Section 2 describes the context. Section 3 details the study design, and Section 4 describes the findings. Section 5 outlines the model. Sections 6 and 7 discuss mechanisms and alternative explanations. Section 8 discusses perceptions of the market and welfare, and Section 9 concludes.

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<sup>8</sup>Research in marketing documents the effectiveness of personal selling (e.g., Simester, 2017; Dube and Rossi, 2019; Misra, 2019), the underlying behavioral mechanisms remain underexplored. The results show that personal selling can operate through the activation of buyers' social preferences and prosocial motives during interaction.

<sup>9</sup>While prior work documents identity-based price discrimination linked to inferences about income or taste-based discrimination (e.g., List, 2004; Riach and Rich, 2002; Gneezy et al., 2012; Bertrand and Duflo, 2017), this paper isolates a distinct mechanism: sellers engage in third-degree price discrimination based on buyers' *perceived prosocial motives*—rather than demographics or purchasing power.

<sup>10</sup>Most vendors in developing countries use a makeshift structure or sell on foot, and fewer than 25% operate from fixed stalls (Vanek et al., 2012). This paper is the first to study mobile and makeshift vendors, including children, who are difficult to access and track for research. Existing studies have examined food safety (Daniele et al., 2021), borrowing and credit access (Karlan et al., 2019), profit maximization (Banerjee et al., 2023), and gender gaps in performance (Delecourt and Ng, 2021), focusing exclusively on adult vendors with fixed stalls or locations.

## 2 Context and Sample Descriptives

**Site Selection:** In the absence of a registry of vendors, locations were selected based on an extensive scouting exercise of the well-known markets, transit stations, and traffic lights in Delhi, as well as conversations with NGOs that work with vendors or street-connected children. Appendix Table A.1 lists the 68 regions that enumerators visited between 11 a.m. and 7 p.m. on multiple days and gives details of the procedure. Locations where we could find multiple vendors meeting the selection criteria outlined below were selected for the study. Appendix Figure A.1 maps the sites selected, which include eight marketplaces, four metro stations, and six traffic lights.

**Sample Selection:** At every selected site, all vendors selling homogeneous goods either on foot, sitting on the ground, or using makeshift structures were invited to participate. These mobile and makeshift vendors represent the modal form of street trade in developing countries.<sup>11</sup> To minimize selection, the research team visited a location at varying times of the day between 11 a.m. and 7 p.m. on different days of the week. Child vendors were screened according to age (7+ years) to allow for comprehension and parental/guardian consent was obtained first.<sup>12</sup> A total of 403 vendors participated in the observational study: 75% operated in markets, 18% near metro stations, and 7% at traffic lights. The refusal rate was 4%, so this sample is representative of vendors selling homogeneous goods.

**Goods:** Examples of goods include pens, balloons, roses, tissue boxes, masks, fashion accessories, hair accessories, envelopes, key chains, and home decor items. A complete list of the goods included is given in Appendix Table B.3.<sup>13</sup> The price of these goods ranges from Rs. 10 to Rs. 200 (\$0.13 - 2.6). These are low-cost but nontrivial purchases: the cost of the cheapest goods was roughly equivalent to the cost of a short auto-rickshaw ride or a street-side meal.<sup>14</sup>

**Context:** Street vendors operate in dense, high-foot-traffic environments—markets, transit stations, and traffic lights—where transactions are brief and personal with largely take-it-or-leave-it offers.<sup>15</sup> On average, 104 passersby walk past a vendor each hour (around nine every five minutes). As these vendors frequently move and lack a permanent location, transactions are typically one-shot. Observing nearly 50,000 passersby-vendor encounters, I find that vendors target/approach roughly 40 passersby an hour, making roughly three to four sales.

**Sample Descriptives:** Nearly half of the vendors in my sample are children (Table 1). Adult vendors are, on average, 34 years old and have over five years of market experience; child vendors are, on average, 11 years old, with most having less than five years' experience. 75% of children report attending school, while most adult vendors lack any schooling. Adults typically work slightly longer hours (around eight) per day than children.<sup>16</sup> Average daily earnings are Rs. 450 (\$6), about 40% of Delhi's daily per capita income.<sup>17</sup>

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<sup>11</sup>See footnote 10.

<sup>12</sup>Individuals up to the age of 16 were classified as children. The Ethics Appendix details the safety protocols.

<sup>13</sup>Food items like fruit and vegetables were not eligible because these goods are heterogeneous in quality, and are typically found at distinct weekly markets (Banerjee et al., 2023; Delecourt and Ng, 2021).

<sup>14</sup>See footnote 2.

<sup>15</sup>In nearly 80% of the observed transactions, the price paid equals the price quoted.

<sup>16</sup>Working hours were collected during intermittent school closures due to COVID-19. Children shifted to work in the evenings and weekends once schools resumed.

<sup>17</sup>This is based on Delhi Economic Survey 2021 referenced in [The Indian Express](#) and [exchange rate](#) in 2021. Although adults report higher earnings, hourly revenues do not differ significantly between adult and child vendors after controlling for product, location, and time (Supplemental Appendix Table B.6).

Table 1: Summary Statistics

	Child	Adult
<i>Panel A: Collected during the Observational Study</i>		
<b>Demographics</b>		
Age	11.24	34.02
Female	0.52	0.35
<b>Experience</b>		
Less than 1 year	0.18	0.16
1-2 years	0.23	0.11
2-5 years	0.43	0.21
5-10 years	0.13	0.15
10+ years	0.02	0.37
Observations	199	204
<i>Panel B: Collected during the Lab-in-the-Field Experiment</i>		
<b>Schooling</b>		
None	0.25	0.50
Primary (up to grade 5)	0.57	0.12
Secondary (up to grade 10)	0.17	0.24
Higher Secondary (up to grade 12)	0.01	0.11
College	0.00	0.02
<b>Labor</b>		
Hours Worked Daily	6.96	8.41
Observations	174	162

**Note:** The table presents summary statistics on child and adult vendors collected during the Observational Study (Panel A) and the Lab-in-the-Field Experiment (Panel B). See text for details on sampling.

### 3 Study Design

I now describe each study component in detail. I begin by describing the observational study, which was conducted first to document naturally occurring buyer–seller interactions and inform the design of the field experiment. All parts of the study had a separate consent procedure, as it was anticipated that street vendors would be hard to track.

#### 3.1 Observational Study

**Protocol:** The observational study was conducted with each vendor for an hour at a time, up to three times across multiple visits if we could find the vendor again. The aim was to collect detailed, real-time, objective data on buyer-seller interactions. A ‘passerby’ was any individual walking in the direction of the seller within 15-20 feet away (or as far as the seller could see if it was crowded). We noted passersby’s observable characteristics, the quoted price, whether a sale occurred, and if so, the quantity sold and the price paid. We also noted who initiated the interaction (seller or passerby) and whether the passerby avoided the seller, purchased the good, walked away, or engaged in verbal abuse (details in Supplemental Appendix Figure A.5).

**Minimizing Observer Effects:** Direct observation reduces recall and reporting error but may raise concerns about Hawthorne effects. Several design features mitigate this. Vendors kept all sales revenue, and compensation was a modest fixed Rs. 50 per hour—about one-sixth to one-tenth of daily earnings—limiting effort distortions. They were told that compensation did not depend

on sales and that we would simply observe interactions without mentioning anything explicitly about approach or pricing decisions. Moreover, any observer effects would affect levels of effort but not systematically bias differences in approach rates or price quotes across customer types. Furthermore, neither vendors nor enumerators knew the study hypothesis, avoiding experimenter-demand concerns. Regressions also include surveyor fixed effects to absorb any residual observer-related variation.

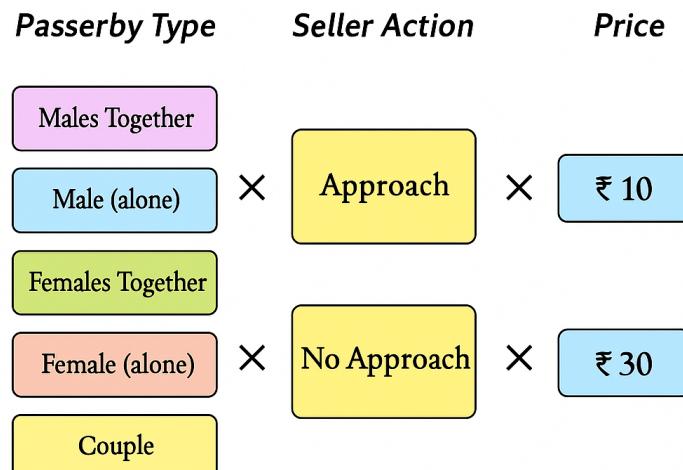
**Sample:** Appendix Table B.1 provides summary statistics for the 403 vendors who consented to participate. The refusal rate for the observational study was 4.2%. Therefore, the sample is representative of adult and child vendors selling homogeneous goods on foot or with makeshift structures. Among these vendors, we could conduct more than one round of observation with 16% of the vendors. The reason for not being able to complete three rounds with each participant was the inability to find them on subsequent visits rather than refusals to participate. Table B.1 in the Supplemental Appendix shows that there is no difference in characteristics across vendors by participation rounds. Appendix Table B.3 lists the goods these vendors sold.

## 3.2 Field Experiment

### 3.2.1 Randomization Design

The field experiment with the street vendors was similar to the observational study except for inducing random variation in the seller's approach and pricing. In particular, partnering with both adult and child street vendors, I randomized whether and which buyer category (Single Male, Single Female, Males Together, Females Together, and Couples) they approached to sell, and the price (Rs. 30 or Rs. 10) they quoted. The randomization was within-vendor. This yields a  $5 \times 2 \times 2$  experimental design illustrated in Figure 1. A partnering vendor would go through each of the combinations twice in a random order in each session of participation (lasting roughly an hour). That is, each session involved going through recording the reactions of 40 passersby in total. The randomization was pre-programmed.

Figure 1: Field Experiment Design



**Note:** The experiment used within-vendor randomization of (i) approach vs. no approach, (ii) passerby type, and (iii) the quoted price. 'Approach' means the vendor requested a passerby using the script outlined in the text. 'No Approach' means the vendor passively stood by not making any request or gesture toward the passerby during that interval.

### 3.2.2 Script For Vendors

When asked to ‘approach’ a buyer, the vendor used the following script (translated in Hindi): “*Brother/Sister, would you like to buy this [item] for Rs. [price]? Please buy it brother/sister.*”

The script closely mimics the natural way vendors approach buyers, as noted in our observational study. Vendors use similar language, combining direct product offers with repeated polite appeals. To ensure consistency, vendors were instructed to refrain from saying anything else, negotiating, or making additional gestures.

The use of a standardized script as part of the experimental protocol ensures comparability across vendors while maintaining the authenticity of a typical buyer-seller interaction. All vendors practiced the experimental protocol before partnering with us, ensuring there were no discrepancies between children and adult vendors concerning adherence.

### 3.2.3 Implementation of the Field Experiment

**Products:** Goods used in the experiment were the most commonly sold, similarly priced goods identified during the observational study: pens, balloons, masks, and roses (Appendix Table B.3). Collectively, they constitute a diverse set of goods (Supplemental Appendix Figure A.4).

**Implementation Logistics and Randomization Process:** A surveyor stood next to the vendor throughout the experiment to ensure adherence to the protocol. For each interaction, the surveyor identified the closest passerby from the randomized buyer category who was walking toward the vendor. The surveyor informed the vendor of the randomized price (High or Low) to be charged for the interval and monitored compliance with instructions.

In the ‘Approach’ condition, the vendor was directed to request the passerby using the script. In the ‘No Approach’ condition, the vendor was instructed to stand passively, and the randomized price was the price to be quoted if the passerby initiated the interaction. Importantly, seller visibility is held constant as the experimental protocol focused on passersby who walked directly in front of vendors. Throughout the experiment, the selection of buyers, the decision to make a request, and prices to quote followed the experimental protocol and were not left to the discretion of vendors.

**Incentives for Participation:** Vendors received a fixed compensation of Rs. 100 per hour, approximately a fifth of their average daily earnings, for their time and participation. It was explicitly communicated that this participation compensation was independent of their sales to mitigate concerns about income dependency on outcomes. Vendors kept any earnings they made during the experiment, ensuring that this was not perceived as a job recruitment.

**Site and Sample Selection:** Given safety concerns, the experiment was not conducted at traffic lights. Additionally, only those vendors who were actively working were invited to partner for the study to avoid any inducement to work. We therefore only included those locations (four in total) where we found at least one adult and child vendor selling (or agreeing to sell) the selected goods.<sup>18</sup> There is no statistical difference in the average earnings for child and adult vendors across the locations included in the field experiment and those not.<sup>19</sup>

<sup>18</sup>The Ethics Appendix describes the the recruitment procedure in greater detail.

<sup>19</sup>Since there was a time lapse between the observational study and the field experiment, and each had a separate

**Unobtrusive and Inconspicuous Experimentation:** Given that the markets and transit stations are busy, crowded places, the fact that the surveyor stood next to the vendor and monitored every interaction did not stand out to passersby. Further, all surveys were collected via a mobile phone rather than pen and paper (which would have made the research team stand out), and all surveyors were local, which made it very easy for them to blend in with the local public. The experiment also seemed very natural to the vendors since they are used to making an approach and pricing decisions themselves. The exercise was very easily comprehensible to them and the surveyor clarified all aspects of the exercise before partnering.

**Balance:** All observations were conducted between 12 p.m. – 6 p.m., which is a busy time in markets and transit stations. Balance across the number of child and adult surveys was monitored and maintained carefully for each good while surveyors rotated across locations daily. At each location, we conducted roughly 80 hours of experimentation with each good, split evenly across children and adults. The exact spots were kept the same across child and adult vendors to ensure they faced similar working environments. Appendix Tables B.5 and B.6 show balance in observations across child and adult vendors, and passerby groups, respectively. Table B.3 in the Supplemental Appendix presents the summary statistics for participating vendors.

### 3.3 Lab-in-the-field Pricing Experiment

The purpose of this experiment was to identify and isolate the pricing strategy of vendors for different buyer groups. Vendors were given information about the unit cost of five commonly sold items (balloons, pens, masks, tissues, and roses), and were asked to report what price they would quote to the randomly selected buyer category (Single Male, Males Together, Single Female, Females Together, and Couple) shown. The order of the goods and buyer category shown was randomized within individuals and pre-programmed. The passerby category was shown via a stick figure cartoon (Supplemental Appendix Figures A.1 and A.2). The design removes endogeneity concerns present in the observational data, where prices may be influenced by—and thus endogenous to—seller targeting decisions.

Vendors were informed that their quoted price for randomly selected five choices would be compared with the passerby's willingness to pay. If their price was lower, then they would make the trade and receive their quoted price less the cost of the good for those five choices. Lastly, vendors were also asked a few questions about their daily earnings and their beliefs about which passerby groups were kinder and found it harder to say no. Appendix Table B.7 shows the summary statistics for the 336 participating vendors. The refusal rate was 3.2%, and therefore the sample is representative of vendors selling homogeneous goods.

### 3.4 Willingness to Pay and Dictator Game with Passersby

**Eliciting Willingness to Pay:** The survey began with a standard incentivized willingness to pay (Becker-DeGroot-Marshak) exercise using the same four goods in the field experiment – pens, balloons, masks, and roses. The framing of the exercise was kept neutral; passersby were told: “*We will show you 4 commonly sold items on the streets and ask you whether you would like to purchase them at given prices.*” Surveyors also carried the goods with them for the passersby to see. This survey was conducted at the same locations as the field experiment, ensuring that the context matched the environment in which the goods were sold by street vendors.

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consent process, it is not possible to compare the earnings at the vendor level.

**Incentivized Dictator Game:** The second component of the survey involved an incentivized dictator game. Participants could win Rs. 100 via a lottery. Before they learned whether they won, they were shown a profile of a child and an adult, vendor, and panhandler (i.e., 4 profiles in total, in randomized order) and asked to decide whether they would like to give any money to the individuals shown.<sup>20</sup> Participants were informed that this money would be deducted from their payment and given to the person shown if they won. To mimic the actual decision-making scenario that a passerby commonly encounters on the street, all the profiles contained a standardized photo, name, age, and what the recipient sold (if vending).<sup>21</sup>

**Beliefs and Perceived Social Norms:** The third component of the survey involved a few questions related to the perceived social norms and beliefs related to street vendors and panhandlers. Supplemental Appendix Figure A.3 summarizes the structure of the passerby survey.

**Sampling:** The randomization of the order of the goods for the willingness to pay exercise, along with the randomization of the profiles involved in the dictator game, was pre-programmed. These passersby surveys were conducted in the same locations as the field experiment, and the sampling procedure for passersby was the same as in the field experiment. 687 passersby were invited to participate, out of which 76% accepted. Appendix Table B.8 gives the summary statistics for the participant demographics and shows balance across passerby type.

## 4 Main Findings: Demand and Supply-Side Behavior

The findings are organized as follows. I first present evidence from the field experiment showing differential purchasing patterns across child and adult vendors and buyer groups. I then show that these differences are not driven by variation in product valuation. Finally, I examine supply-side behavior: seller targeting and pricing. As pre-registered, I pool *single female* with *females together* and *single male* with *males together*.<sup>22</sup>

### 4.1 Purchasing Differentials Across Child and Adult Vendors and Passersby

Recording over 40,000 passersby-vendor encounters, as Figure 2 shows, we see differential purchasing patterns across child and adult vendors. This is despite ensuring that they are selling identical goods at the same spot in the market and are using a standardized script. On average, the purchasing probability is almost twice as high (2.32% compared to 1.18%) for child vendors compared to adult vendors. Furthermore, Figure 3 shows that the likelihood of purchase is greater by nearly 90% for couples compared to men. On average, women are also around 28% more likely to purchase than men (statistically significant at the 10% level). Purchase rates, however, do not differ by the gender of the seller.<sup>23</sup> These patterns are robust across products, time of the day, location type, and whether we consider a weekend or a weekday (Appendix Table D.1).<sup>24</sup>

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<sup>20</sup>The survey included profiles of panhandlers, as passersby were later asked about their views on street vending and begging (discussed in Section 8). I control for an occupation fixed effect when presenting these results.

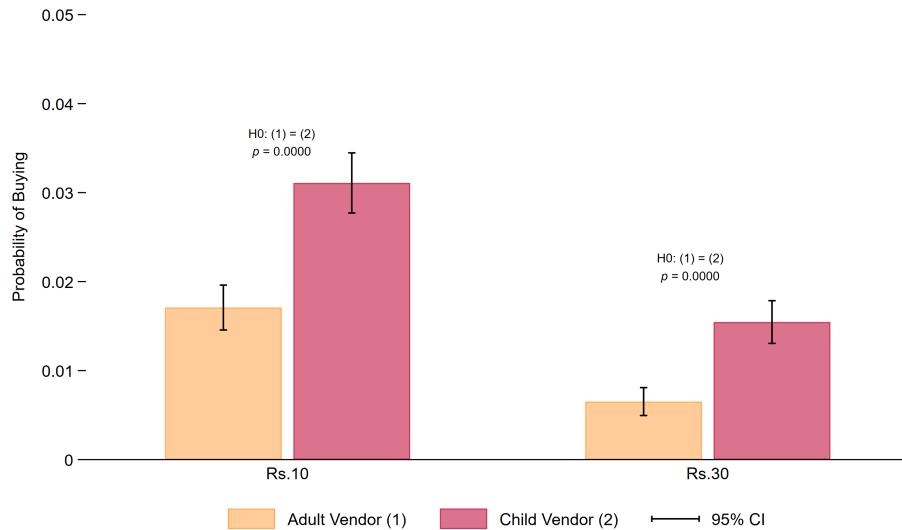
<sup>21</sup>All photos were standardized, passport-sized images, collected with full informed consent. All participants were randomized to see either male or female profiles which allows us to detect within-participant discrimination.

<sup>22</sup>Results without pooling are shown in the Supplemental Appendix (Tables A.3 and A.4); differences between these pooled categories are not statistically significant.

<sup>23</sup>Results are available upon request.

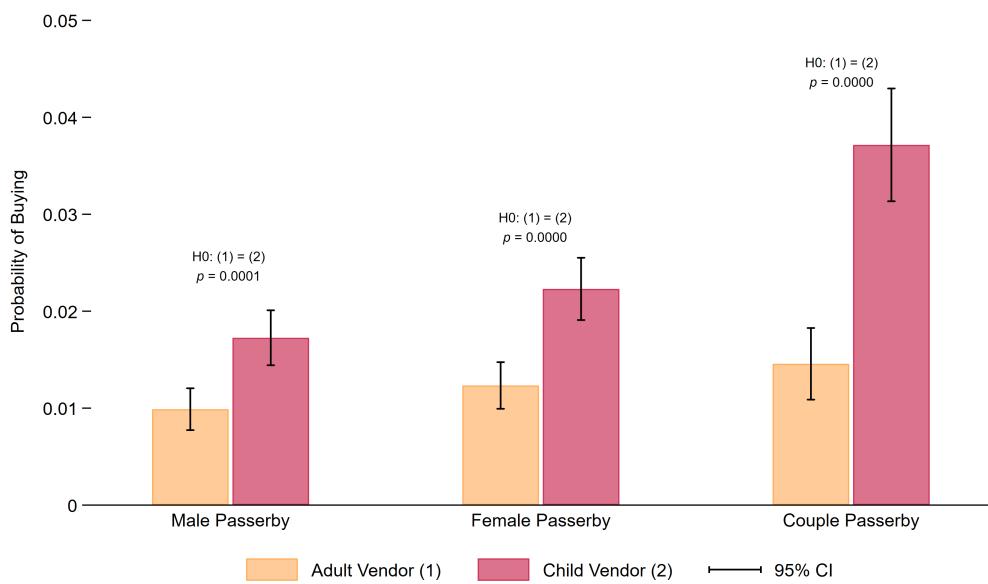
<sup>24</sup>Observational data show similar buyer-seller purchase differentials (Figure C.11 and Table D.4 in the main Appendix). The field experiment yields lower purchasing rates because it holds constant two forces: seller targeting (Section 4.3), which tends to widen buyer differentials, and price discrimination (Section 4.4), which tends to narrow child-adult differentials.

Figure 2: Buying Probabilities by Type of Seller and Price Quoted - Field Experiment



**Note:** The figure plots purchase probabilities by vendor type at the two randomized prices used in the field experiment ( $N = 40,539$ ). The goods offered, sales script, and location were held constant across child and adult vendors. 95% confidence intervals are shown.

Figure 3: Buying Probabilities by Type of Buyer and Seller - Field Experiment



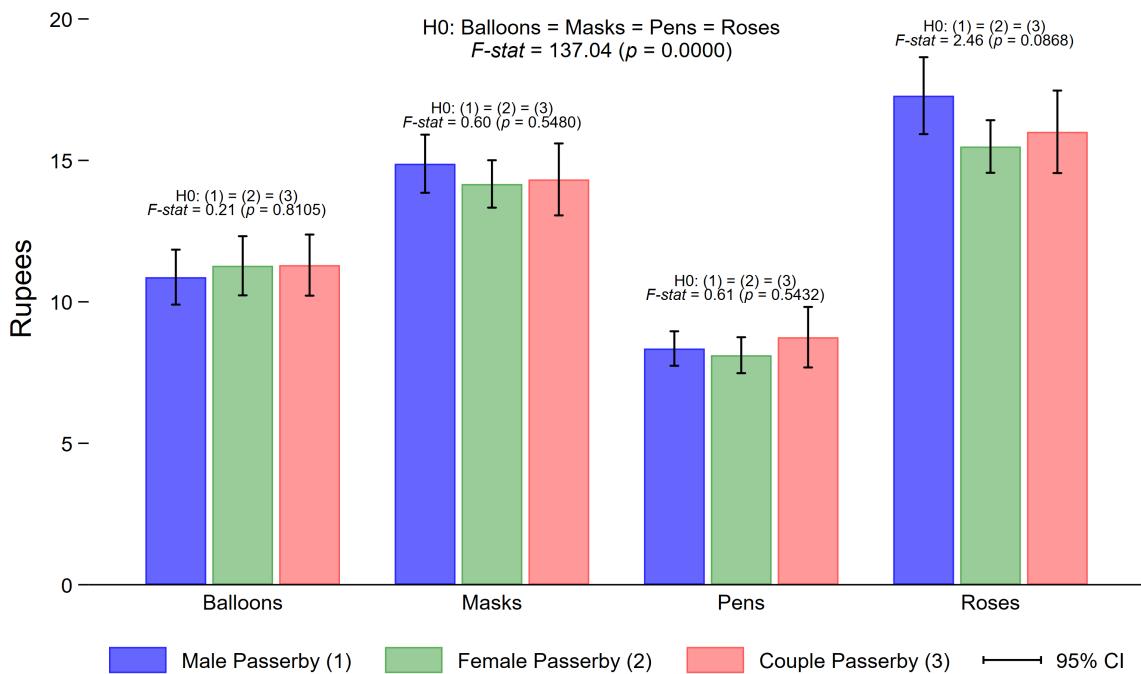
**Note:** The figure plots purchase probabilities by the type of vendor and passersby category in the field experiment ( $N = 40,539$ ). The goods offered, sales script, and location were held constant across child and adult vendors. Passerby categories *single female* and *females together*, and *single male* and *males together* are pooled together (as pre-registered). 95% confidence intervals are shown.

The field experiment shows that, holding everything else constant, children gain a market advantage over adult vendors. This also translates into higher hourly earnings for children (Appendix Table D.6). It is important to note that these estimates capture a partial-equilibrium market advantage—buyers’ greater responsiveness to children holding products, location, and prices fixed. In equilibrium, adult vendors can respond along other margins (e.g., working longer hours, carrying larger inventories, and charging lower prices), which can sustain adult participation even when buyers are more responsive to child vendors.

## 4.2 Valuation of the Goods Does Not Differ Across Passersby

Figure 4 shows that differences in purchasing behavior across buyer groups cannot be attributed to differences in willingness to pay. While willingness to pay varies across goods—roses and masks being more in demand than balloons and pens—there are no statistically significant differences across passerby groups. Kruskal-Wallis non-parametric equality-of-populations rank tests further confirm no differences in the distributions of willingness to pay across couples, male, and female customers ( $p$  – values: 0.54, 0.90, 0.42, and 0.59 for pens, masks, balloons, and roses, respectively). These results are robust to product, location, time, and weekend fixed effects, as well as passerby income and education (Appendix Table D.5). Surveyors were of similar age, and the findings are robust to controlling for surveyor gender and fixed effects.<sup>25</sup>

Figure 4: Willingness to Pay - Passerby Survey



**Note:** The figure plots the average willingness to pay for each good by passerby category (N=520). The figure pools passerby categories *single female* and *females together*, and *single male* and *males together* (as pre-registered). 95% confidence intervals are shown.

Because the field experiment and the willingness-to-pay exercise involve different samples of passersby by design, we cannot directly decompose individual purchasing decisions into economic valuation versus prosocial motives. We can, however, compare averages across the two components. In the field experiment, the average quoted price is Rs. 20 by design (randomized between Rs. 10 and Rs. 30), and the average price paid is Rs. 14—about 12% higher than the average willingness to pay of Rs. 12.5. This suggests that individuals pay even more when interacting with sellers in person than their maximum economic valuation for the goods, giving us a ballpark estimate of a lower bound for the socio-emotional markups.

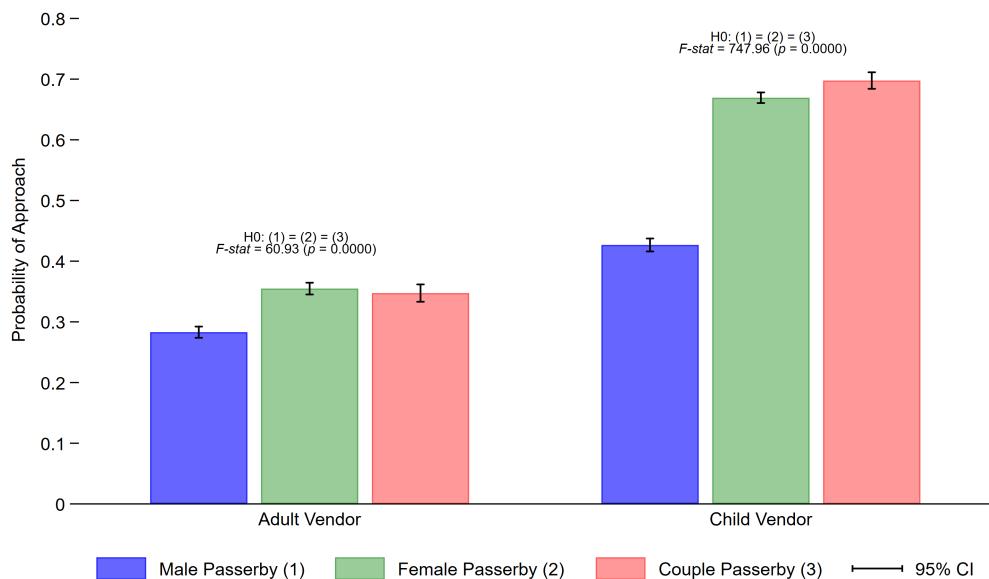
<sup>25</sup>A joint significance test of surveyor fixed effects in Column 7 of Appendix Table D.5 yields an F-statistic of 2.49 ( $p = 0.084$ ), and a test of equality of coefficients yields an F-statistic of 0.27 ( $p = 0.603$ ).

### 4.3 Strategic Seller Targeting

Vendors approach about 43% of passersby on average, with child vendors approaching roughly 20 percentage points more than adults (Figure 5). Child vendors also display more discrimination in targeting: they are 20 percentage points more likely than adults to approach women and couples. These patterns remain robust to controlling for product type, location, weekday/weekend, and surveyor fixed effects (Appendix Table D.2).

To assess whether these patterns are driven by a few outliers or are common across vendors, I compute each vendor's approach rate by buyer category. For 45% of vendors, couples are the most frequently approached group; for 30%, women; and for only 10%, men. The remaining 5% of vendors did not exhibit a difference in approach rates across passerby groups. Child vendors are especially likely to target couples: they approach 56% of the couples walking by compared 33% for adult vendors. This mirrors the field experiment results (Figure 3), where couples and women are especially more likely to purchase from children.

Figure 5: Seller Approach Rate by Type of Seller - Observational Study



**Note:** The figure plots seller approach probability by passerby category and type of vendor in the observational study ( $N=46,541$ ). “Approach” includes making eye contact/gesture or verbal requests as outlined in the Supplemental Appendix Figure A.5. The figure pools passerby categories *single female* and *females together*, and *single male* and *males together* (as pre-registered). 95% confidence intervals are shown.

### 4.4 Systematic Price Discrimination

Table 2 (Column 2) shows that children charge nearly 45% higher prices than adults, controlling for product and surveyor fixed effects. Looking across buyer categories, Column 4 shows that couples and women are charged differently than men ( $p$ -value = 0.00). In particular, vendors charge couples 38% more compared to men. The constant captures the price charged to men (base category). Women are also charged 4.45% more, although this difference is not statistically significant. The standard deviation of average prices across buyer groups—a proxy for price discrimination—is twice as large among child vendors as among adults, indicating greater within-vendor price differentiation among children.

Table 2: Price Quoted - Lab-in-the-Field Pricing Experiment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Child Vendor	4.015*** (0.888)	3.413*** (0.907)				3.560*** (0.831)	2.909*** (0.844)	
Female Passerby			0.366 (0.240)	0.350 (0.237)	0.356 (0.242)	0.165 (0.256)	0.098 (0.253)	0.091 (0.258)
Couple Passerby			3.005*** (0.518)	2.957*** (0.512)	2.933*** (0.505)	2.220*** (0.417)	2.147*** (0.417)	2.169*** (0.424)
Female Passerby $\times$ Child Vendor						0.385 (0.470)	0.482 (0.466)	0.510 (0.475)
Couple Passerby $\times$ Child Vendor						1.500 (1.004)	1.550 (0.992)	1.465 (0.982)
Constant	26.451*** (0.474)	7.574*** (1.017)	27.794*** (0.433)	7.858*** (1.067)	2.780*** (0.430)	25.941*** (0.459)	7.106*** (1.038)	2.975*** (0.413)
Product FE		✓		✓	✓		✓	✓
Surveyor FE		✓		✓			✓	
Seller FE					✓		✓	
Adjusted $R^2$	0.003	0.780	0.001	0.779	0.829	0.004	0.781	0.829
Mean of Dep. Var	28.542	28.542	28.542	28.542	28.542	28.542	28.542	28.542
Male = Female = Couple ( $p$ -value)			0.000	0.000	0.000	0.000	0.000	0.000
Observations	8,330	8,330	8,330	8,330	8,330	8,330	8,330	8,330

**Note:** The outcome is price quoted in the Lab-in-the-Field Pricing Experiment. Columns 1-2 compare the price quoted by child vendors to that of adult vendors. Since the randomization was within-vendor, it is not possible to control for a seller fixed effect in this comparison. Columns 3-5 compare the price quoted for females and couples compared to males. The table pools the categories *single female* and *females together*, and *single male* and *males together* (as pre-registered). Columns 6-8 separate price quoted by passerby and seller type. Since the randomization was within-vendor, the regression omits the inclusion of a Child/Adult Vendor dummy in Column 8 when controlling for a seller fixed effect. Standard errors are clustered at the vendor level. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 3: Average Price and Markup By Item

	(1) Balloons	(2) Rose	(3) Mask	(4) Pen	(5) Tissue	(6) Overall
Price	10.86 (0.21)	19.05 (0.36)	14.88 (0.22)	9.01 (0.22)	89.17 (0.74)	28.54 (0.38)
Markup	8.86 (0.21)	14.05 (0.36)	9.88 (0.22)	7.01 (0.22)	39.17 (0.74)	15.77 (0.22)
Markup/Cost	4.43 (0.10)	2.81 (0.07)	1.98 (0.04)	3.51 (0.11)	0.78 (0.01)	2.70 (0.04)
N	1680	1680	1680	1680	1680	8400

**Note:** The table reports the average price, markup, and the ratio of markup over cost charged by vendors in the lab-in-the-field pricing experiment. The unit cost of each good (gathered based on actual costs vendors selling these had reported) was Rs. 2 for a Pen and Balloon, Rs. 5 for a rose and mask, and Rs 50 for a tissue box. Standard errors are in parentheses.

Prices and markups also vary systematically across goods (Table 3), and in line with the willingness to pay (Figure 4), typically ranging from one to four times the cost price. The systematic variation in prices suggests that vendors respond to perceived demand. At the same time, vendors also discriminate systematically across buyers: over half of vendors (53%) charge the highest average price to couples, compared to 24% for women and 23% for men. Similar patterns of higher markups for women and couples, and higher prices quoted by child vendors, also appear in the observational study (Table B.4 in the Supplemental Appendix), which includes a broader range of products and goods priced up to Rs. 200.<sup>26</sup>

<sup>26</sup>I use quoted prices rather than paid prices because realized transaction prices are endogenous to buyer behavior. Patterns of price discrimination are qualitatively similar in both samples, but prices measured in the observational study are noisier due to bundled sales.

## 5 Model

To rationalize the patterns observed in this market, I now formalize the buyer–seller interaction in a simple framework that nests the standard consumer utility model and allows for altruism and refusal costs.

### 5.1 Setup

Street vendors (sellers henceforth) and passersby (buyers henceforth) interact as follows. The interaction is one-shot, and a buyer interacts with one seller at a time, as is typical of these transactions. The sequence of events is as follows. After observing the buyer’s identity, the seller decides whether to make a request ( $r \in \{0, 1\}$ ), incurring an effort cost  $e$ , and sets a price  $p$  to maximize expected profits. Finally, the buyer decides whether to purchase the good ( $d \in \{0, 1\}$ ).

### 5.2 Buyers

As in the standard consumer theory model, the purchase decision depends on the consumption utility of the good  $g$ , denoted by  $v_g$ , and the price of the good,  $p_g$ . The marginal utility of the good does not vary by buyer identity (empirically supported in Section 4). Additionally, I allow buyers to have social preferences—altruism,  $a \in [0, 1]$ , and a cost of refusal,  $s$ , when a request is made—which can vary by buyer and seller identity (denoted by subscripts  $b$  and  $s$  respectively).<sup>27</sup> The utility of a buyer can therefore be written as:

$$U = \begin{cases} v_g - p_g + a_{bs}p_g & \text{if } d = 1 \\ -s_{bs} & \text{if } d = 0 \& r = 1 \\ 0 & \text{if } d = 0 \& r = 0 \end{cases} \quad (1)$$

A buyer’s valuation  $v \in [0, \bar{v}]$  is drawn from a continuous distribution:  $v \sim F(v)$ . Note that setting the social preference parameters to zero allows comparison with the standard consumer demand model and setting consumption utility to zero yields a pure charitable giving model.

### 5.3 Sellers

A seller makes a profit of  $p_g - c_g$  if there is a sale (where  $c$  is the unit cost of the good). Additionally, the seller pays an effort cost of requesting,  $e \sim E(e)$ , if they request the buyer to purchase. Sellers take buyer preferences as given and seek to maximize utility by choosing whether to make a request to a buyer and what price to charge. In doing so, they use inferences about the buyer’s purchase probability based on their gender and who they are traveling with.

### 5.4 Equilibrium and Testable Predictions

I use Perfect Bayesian Nash Equilibrium to solve the model; the strategies of each buyer and seller are sequentially rational given the player’s beliefs.<sup>28</sup> All formal statements and proofs are in the Supplemental Appendix Section C. The following proposition yields testable implications for the probability of purchase.

<sup>27</sup>I adapt the model in [DellaVigna et al. \(2012\)](#) allowing prosocial motives to vary by buyer and seller identity and extend their model to this market setting with prices and sellers.

<sup>28</sup>As the uninformed party (seller) moves first, there are no restrictions on the beliefs of vendors due to Bayes Rule. Sequential rationality, however, means that the seller’s strategy should be consistent with their prior beliefs.

**Proposition 1.** *Testable implications of the model on purchasing behavior are:*

1. **(Test for Pure Charitable Giving Model)** If goods have no consumption utility, purchase rates should not vary across goods (holding price constant). By reverse implication, if purchase rates vary across goods (holding price constant), consumption utility is non-zero and varies across goods.
2. **(Test for Pure Consumption Utility Model)** If social preferences (altruism and refusal costs) do not matter, purchase rates should not differ by seller or buyer identity. By reverse implication, if purchase rates differ across buyer groups and seller identity, social preferences affect decisions.
3. **(Test for Refusal Cost)** If consumers do not face a cost of refusal, purchase rates should not differ depending on whether the buyer was requested to buy, and vice versa.
4. **(Test for Altruism)** If altruism does not matter, purchase rates should not vary across buyer or seller identity when the seller does not request. By reverse implication, if purchase rates differ across buyer groups and seller identity without seller request, altruism affects decision-making.

**Comparing the predictions with data:** The proposition yields intuitive empirical tests for economic and prosocial motives affecting consumer behavior. Part (1) of the proposition gives an empirical test for a pure charitable giving model. Specifically, if goods had zero consumption value and purchases were pure acts of charity, we should not see purchasing rates vary across goods. However, as purchasing rates vary systematically—with roses and masks purchased twice more than pens—we can reject a pure charitable giving model. Part (2) of the proposition allows us to test for the role of social preferences in purchasing behavior by examining whether purchase rates vary by buyer or seller identity. As we see systematic purchasing probability differentials across buyer and seller identity, we can therefore also reject a pure consumption utility model. Thus, comparing predictions (1) and (2) with the results of the field experiment establishes that both economic and prosocial motives affect consumer behavior in this market.

Parts (3) and (4) of the proposition allow us to empirically test for the influence of altruism and refusal costs in the buyer's decision-making (which I discuss in the next section). Examining whether purchase rates vary by a seller's approach yields a simple test for whether refusal costs affect consumer behavior. Examining whether purchase rates differ across buyer or seller identity (without a seller's approach) yields a test for altruism affecting a buyer's decision-making.

The following proposition characterizes the testable implications of this model on seller strategy: pricing and approach.

**Proposition 2.** *Testable implications of the model on seller strategy are:*

1. **(Test for Pure Charitable Giving Model)** If goods have no consumption utility, prices should not vary across goods. By reverse implication, if prices vary across goods, consumption utility is nonzero and varies across goods.
2. **(Test for Pure Consumption Utility Model)** If social preferences (altruism and refusal costs) do not affect buyer decision-making, prices should not differ by buyer or seller identity. By reverse implication, if prices differ by buyer or seller identity, then social preferences affect decision-making.
3. **(Test for Refusal Cost)** If refusal costs do not affect buyer decision-making, then sellers will not find it optimal to request buyers (as this involves effort). By reverse implication, if the sellers do make requests, then this implies that refusal costs affect decision-making.

**Comparing predictions with data:** Part (1) of the proposition gives a simple prediction to test whether behavior in this market can be characterized by a pure charitable giving model. Specifically, if goods do not have any consumption utility and purchases are driven solely by prosocial motives, we should not see heterogeneity in prices across goods. Intuitively, in the absence of any consumption utility of the good, profit-maximizing sellers would charge the maximum amount that passersby are willing to pay (given altruism and refusal costs), and this should not depend on which good they sell. However, we see that prices vary systematically across goods in the lab-in-the-field pricing experiment even more than can be accounted for by their unit cost differences. For instance, sellers price roses at Rs. 19 on average and pens at Rs. 9. Therefore, by examining seller pricing behavior, we can reject a pure charitable giving model.

Parts (2) and (3) of the proposition yield empirical tests for the role of social preferences in purchasing behavior. The intuition behind the tests is straightforward; if social preferences did not play a role in buyer decision-making, there would be no reason to price discriminate between buyer groups or expect prices to vary across child or adult sellers. Similarly, profit-maximizing sellers would not find it optimal to request buyers if refusal costs do not matter, as this is costly in terms of effort. However, we see that sellers frequently approach buyers in the observational data, and we see systematic price discrimination across buyers in the lab-in-the-field experiment. Therefore, comparing the predictions of the model with the observed seller behavior further strengthens the case for both consumption and prosocial motives affecting consumer behavior in this market. The model therefore helps reconcile the findings on seller targeting and price discrimination with homogeneous valuations.

## 6 Mechanisms

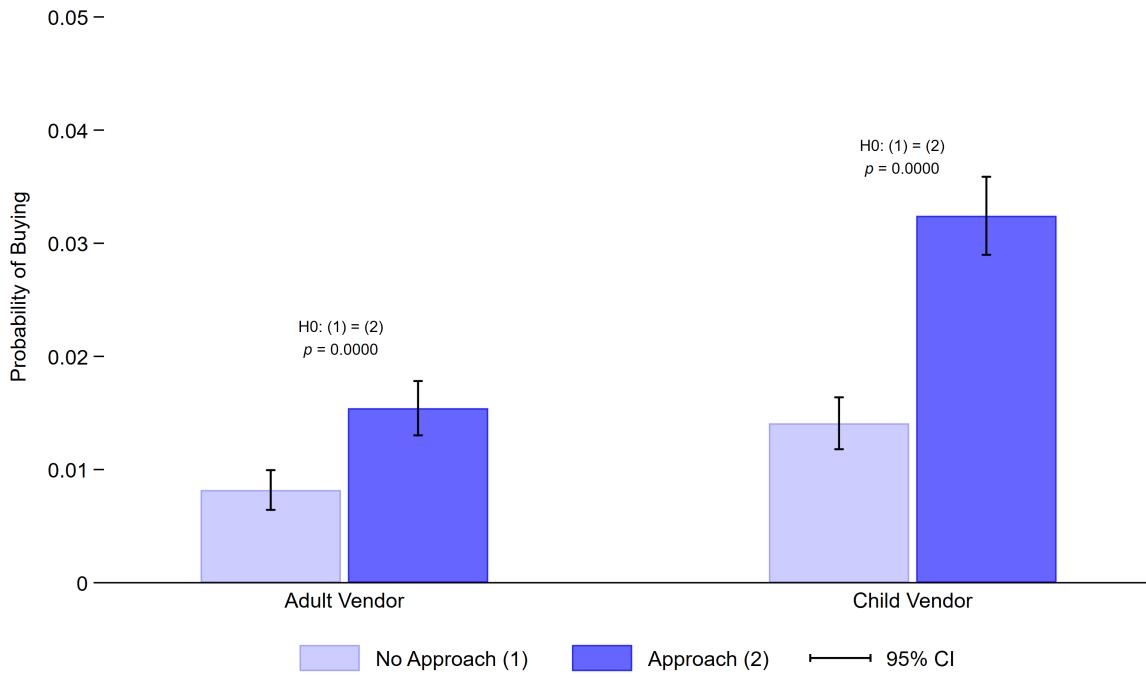
I now empirically test for the influence of altruism and refusal costs on buyer decisions following Proposition 1 predictions (3) and (4). I discuss alternative explanations in the next section.

### 6.1 Evidence for Differential Refusal Cost

To test for the existence of a refusal cost, I examine the purchase rates in the field experiment with and without the (randomized) seller's request. Importantly, Figure 6 shows that a seller's verbal request substantially increases purchase probabilities for both adult and child vendors. On average, being approached more than doubles the likelihood of purchase (2.39% versus 1.11%). Passersby are also differentially responsive to seller identity: the increase in purchasing probability following a child vendor's approach (1.83 percentage points) is roughly twice that following an adult's (0.72 percentage points). This is robust to controls for product, location, weekend/weekday, and time of the day (Appendix Table D.3).

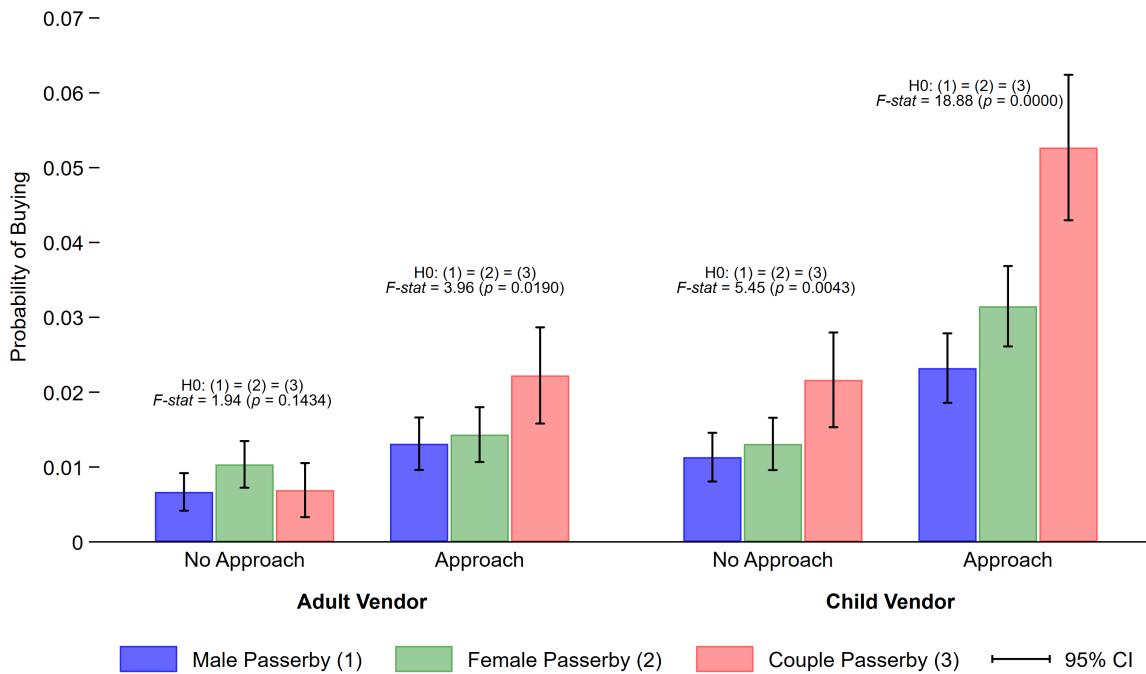
Figure 7 shows that responsiveness to requests also varies across buyers. For instance, women and couples are more responsive to a child seller's request than men. Couples' purchasing rates rise by 1.37 and 3.10 percentage points for adult and child vendors, respectively, compared to 0.64 and 1.19 percentage points for men. These patterns are robust to product, location, weekend/weekday, and time of the day (Appendix Table D.3). In the next section, I also discuss how alternative explanations—such as search costs, perceptions of seller effort, or limited attention—cannot fully account for these patterns. Buyers remain more likely to purchase from child vendors even in the absence of a request (Figure 6), indicating that refusal costs alone cannot explain these differences. I therefore next examine differential altruism toward children.

Figure 6: Buying Probabilities by Type of Seller and Approach - Field Experiment



**Note:** The figure plots purchase probabilities by the type of vendor and (randomized) approach condition in the field experiment ( $N = 40,539$ ). “Approach” involves a verbal request using the standardized script outlined in the text (holding seller visibility constant). 95% confidence intervals are shown.

Figure 7: Buying Probabilities by Type of Seller, Buyer Category and Approach - Field Experiment



**Note:** The figure shows purchase probabilities by (randomized) seller approach, the type of vendor, and the passerby category in the field experiment ( $N = 40,539$ ). “Approach” involves a verbal request using the standardized script outlined in the text (holding seller visibility constant). The figure pools *single female* and *females together*, and *single male* and *males together* categories together (as pre-registered). 95% confidence intervals are shown.

## 6.2 Evidence for Differential Altruism

Table 4 shows that, in an incentivized dictator game, passersby donate on average Rs. 5 more to children than to adults—about 16% higher than the average donation to adults. Controlling for passerby characteristics, generosity, however, does not differ significantly across passerby groups (Columns 5 and 7). These patterns are robust to controlling for recipient gender, work type (vendor or panhandler), passerby education, income, and passerby fixed effects. The results remain unchanged when restricting the sample to vendor recipients or when excluding panhandlers, and donations do not vary by the recipient’s gender. These findings confirm the presence of differential altruism toward child versus adult vendors, but not across buyer types. This is consistent with the field experiment results, which shows that child vendors face a higher probability of purchase even without making a request, whereas purchasing differences across buyer groups are muted in the absence of a request (Figure 7).

Table 4: Donations in Dictator Game - Passerby Survey

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Child Vendor	5.108*** (0.920)	5.237*** (0.963)	5.108*** (1.056)			6.812*** (1.559)	6.970*** (1.630)	6.812*** (1.789)
Female Passerby				-5.881** (2.832)	-4.903* (2.971)	-4.701 (2.891)	-3.736 (3.033)	
Couple Passerby				-5.747* (3.464)	-5.595 (3.555)	-3.812 (3.544)	-3.543 (3.618)	
Female Passerby × Child Vendor						-2.359 (2.072)	-2.334 (2.169)	
Male Passerby × Child Vendor						-3.870 (2.508)	-4.105 (2.619)	
Vendor/Panhandler FE	✓	✓	✓	✓	✓	✓	✓	✓
Recipient Gender	✓	✓	✓	✓	✓	✓	✓	✓
Order FE	✓	✓	✓	✓	✓	✓	✓	✓
Passerby Characteristics		✓			✓		✓	
Passerby FE			✓				✓	
Adjusted R <sup>2</sup>	0.013	0.055	0.646	0.014	0.054	0.019	0.059	0.646
Mean of Dep. Var	33.044	33.184	33.044	33.044	33.184	33.044	33.184	33.044
Male = Female = Couple ( <i>p</i> -value)				0.081	0.169	0.043	0.089	
Observations	2,040	1,944	2,040	2,040	1,944	2,040	1,944	2,040

Note: The outcome is amount donated (out of Rs. 100) in the Dictator Game. Columns 1-3 compare the donations made to a child recipient compared to an adult recipient (controlling for whether they are a panhandler or vendor). Columns 4-5 compare donations made by females and couples to those of males. The table pools the categories *single female* and *females together*, and *single male* and *males together* (as pre-registered). As the randomization is within-passerby, we cannot control for a passerby FE when comparing donations across passerby groups. Columns 6-8 compare donations by passerby category and whether the recipient is a child or an adult. Standard errors are clustered at the passerby level.

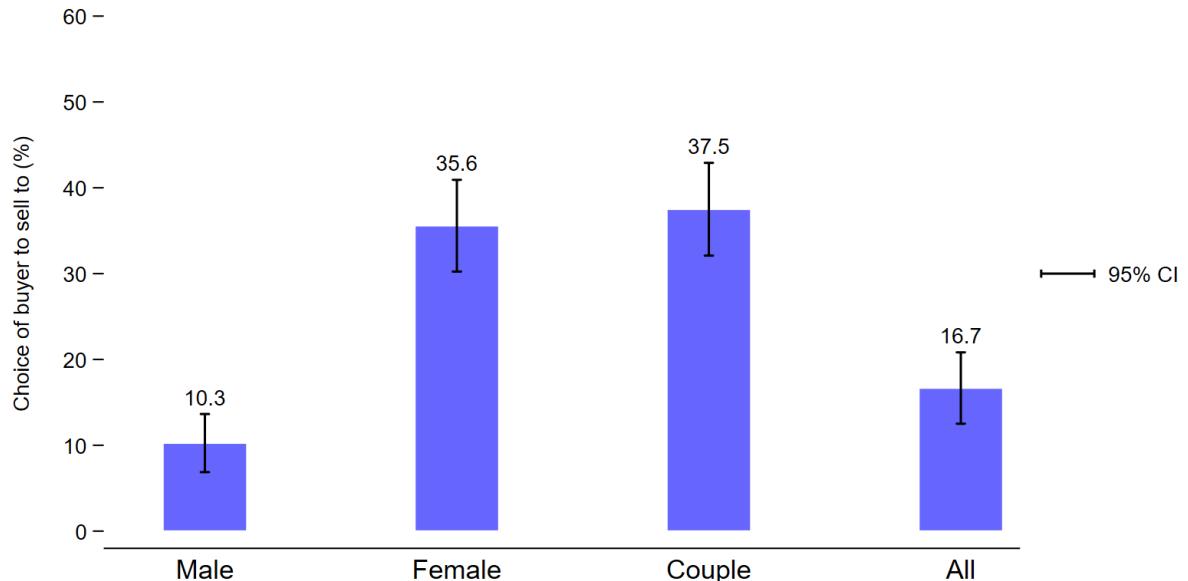
\* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

## 6.3 Vendors’ Inferences about Buyers’ Social Preferences and Strategy

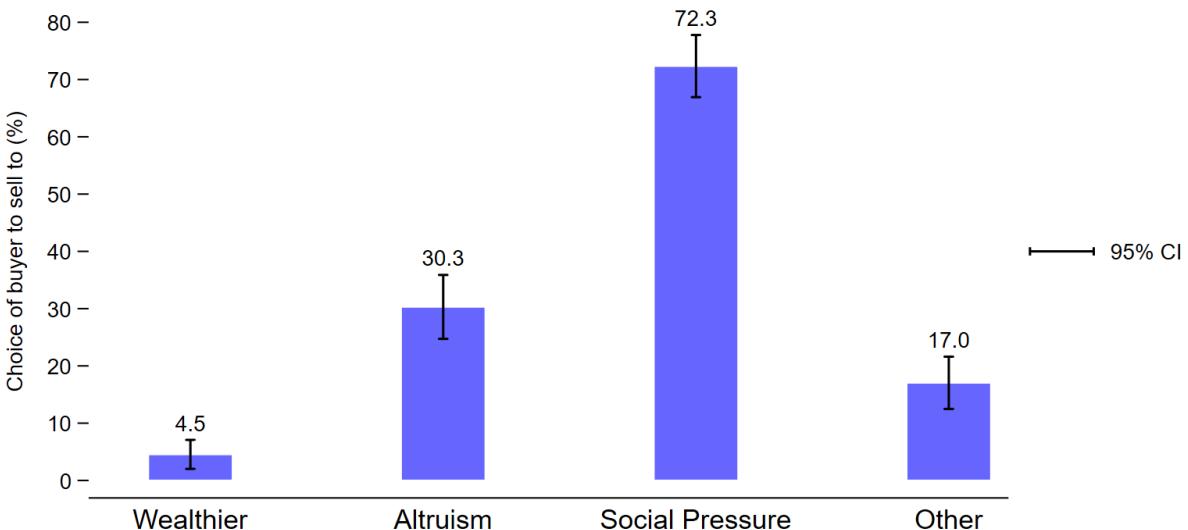
An implicit assumption of the model is that profit-maximizing sellers incorporate inferences about buyers’ social preferences into their targeting and pricing strategies. Figure 8 supports this assumption: vendors consciously target women and couples far more often (73%) than men (10%).<sup>29</sup> When asked open-endedly why, over 70% report considering which passerby groups are “kinder” or would find it harder to say “no.” Vendors’ stated beliefs align with this reasoning: the majority believe women are more altruistic than men and more likely to comply with a request, while less than a quarter believe women earn more than men (Appendix Figure C.1).

<sup>29</sup>This is despite the fact that men are the primary buyers and decision-makers in markets (Delecourt and Ng, 2021).

Figure 8: Reported Seller Approach Strategy and Reasons



(a) Top choice of passersby to approach.



(b) Reported reasons for approach choice.

**Note:** Panel (a) plots the response to the question: ‘Who would you choose to approach to sell if you had the choice?’. The figure pools across categories *single female* and *females together*, and *single male* and *males together* (as pre-registered). The option ‘All’ was selected if the vendor said they would approach everyone. Panel (b) plots the percentage of vendors mentioning their reason for choosing a particular passerby as their top choice. The question was asked open-ended without any prompts; surveyors recorded and coded all the reasons mentioned, such as income or social preference considerations, like altruism and social pressure.

Similarly, when asked about the factors considered in setting prices, vendors frequently cite buyer gender—especially among children—as one of the important determinants (Appendix Figure C.2). These perceptions of gendered prosocial motives are consistent with recent evidence from experimental settings ([Babcock et al., 2017](#); [Exley et al., 2024](#)).

## 7 Alternative Mechanisms

While the experimental evidence strongly supports the role of altruism and refusal costs, I also examine several other plausible alternatives—such as attention, perceptions of effort or need, and social norms—and assess the extent to which they are consistent with the data.

### 7.1 Alternative Explanations for Purchasing Differentials Across Buyers and Sellers

#### 7.1.1 Beliefs and Perceived Norms

Could the observed purchasing patterns be driven by social norms—either buyers' own normative beliefs (“what one should do”) or their perceptions of what others do? If norms were the main driver, higher purchases from child vendors should reflect stronger normative support for buying from children, or a belief that others buy from children.

The survey evidence points in the opposite direction. Passersby express greater normative support for buying from adults (91%) than from children (76%) (Appendix Figure C.4), which runs counter to the higher sales observed for child vendors. These normative beliefs also do not vary across passerby groups in a way that matches the purchasing heterogeneity in the field experiment. Perceived norms show a similar pattern: most respondents believe others are more likely to buy from adults than from children (Appendix Figure C.5). If buyers were primarily conforming to these norms, we would expect fewer purchases from children, not more.

Another relevant belief is whether buyers believe that purchasing from children impacts child labor. Consistent with this, nearly 90% of respondents believe that buying from or giving money to children encourages child labor, with little variation across buyer types (Appendix Figure C.6). If anything, this belief should further reduce purchases from children.

Taken together, these patterns suggest that stated normative beliefs and perceived norms are unlikely to explain the observed sales advantage for child vendors or the differences in purchasing patterns across buyers. Instead, they point to a wedge between what buyers say is appropriate in principle and how they behave when facing a child or confronted with a child's request—precisely the tension captured by altruism and refusal costs.

#### 7.1.2 Differences in Comfort or Annoyance in Interactions

A second possibility is that child vendors' requests elicit more comfortable or less threatening interactions, particularly for women buyers, or that buyers make purchases to end an interaction they would prefer to avoid. While plausible, this interpretation is not well supported by the data, and the experiment design mitigated this possibility. During the observational study, when seller script or actions were not controlled, expressions of irritation—such as shouting, teasing, or verbal abuse—occurred in fewer than 0.5 percent of observed around 50,000 encounters. In fact, passersby overwhelmingly express normative support for buying from vendors and even more from adult vendors than children (Appendix Figure C.4).

The experimental protocol also standardized the vendor's script and capped the number of times a request could be repeated, limiting the scope for variation in approach style or any other remarks. All vendors were instructed to avoid further engagement if the buyer declined, minimizing any discomfort or coercion. Additionally, these channels cannot explain differential purchase rates when the seller did not approach.

### 7.1.3 Trust and Quality Concerns

Another possibility is that the differences in purchasing rates between adult and child vendors could reflect differences in trustworthiness or perceived product quality. However, this is unlikely to be true given the study design. All goods used in the field experiment—pens, masks, roses, and balloons—were identical across both child and adult sellers in the field experiment. Products were centrally procured to ensure standardization.<sup>30</sup>

These goods are homogeneous, and their quality can be easily inspected and tested at the point of sale, allowing consumers to verify quality before purchase. Open-ended responses from passersby further support this interpretation: respondents frequently cite lower prices and value-for-money as reasons to support buying from vendors, but do not mention any perceived quality differences between adults and children (Appendix Figure C.7). While general perceptions of trustworthiness could vary across child and adult vendors, such variation cannot explain the systematic differences in purchasing patterns across buyer groups observed in the experiment.

### 7.1.4 Social Image Concerns Within Pairs

It is indeed plausible that couples' higher responsiveness to requests partly reflects social-image or signaling motives: purchasers may value appearing generous in front of a companion ([Raihani and Smith, 2015](#)), particularly given that many passersby are young adults. Such signaling would complement rather than contradict the refusal-cost mechanism, since both operate through the social discomfort of declining a request in a socially salient moment. While the experiment did not randomize which member of a pair was addressed, recording whether the woman or the man in a couple engaged with the enumerator during the passerby survey indicates similar response rates for both, consistent with reciprocal (rather than purely male-to-female) signaling.

## 7.2 Alternative Explanations for Purchasing Differentials by Seller Approach

### 7.2.1 Perceptions of Effort, Need, or Deservingness

One possible interpretation of the higher purchase rates following a seller's request is that buyers perceive approaching vendors as more hardworking or deserving and reward effort rather than experiencing a refusal cost. However, several aspects of the experimental design make this unlikely. All vendors were mobile, standing with goods in hand, and therefore visibly engaged in their work. The script and number of requests were fully standardized across vendors, eliminating variation in perceived industriousness or "smartness." Moreover, street vendors as a group are generally viewed as hardworking individuals (Appendix Figure C.9).

One might also worry that a seller's request may shift perceptions of neediness and thereby raise purchase rates. While this is very plausible, the risks of this differentially affecting purchase rates across children and adults were mitigated by experiment design. The standardized script prevented vendors from emphasizing hardship or personal circumstances. All vendors were interacting with passersby every few minutes, making it quite implausible that those who did not request were seen as less needy. Even if a request heightened perceived need, such an effect would operate through the same psychological channel—buyers may find it harder to refuse someone they perceive as more needy—rather than being inconsistent with it.

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<sup>30</sup>Except for roses purchased directly from existing rose sellers, which were verified to be fresh to ensure standardization of quality.

### 7.2.2 Attention and Search Costs

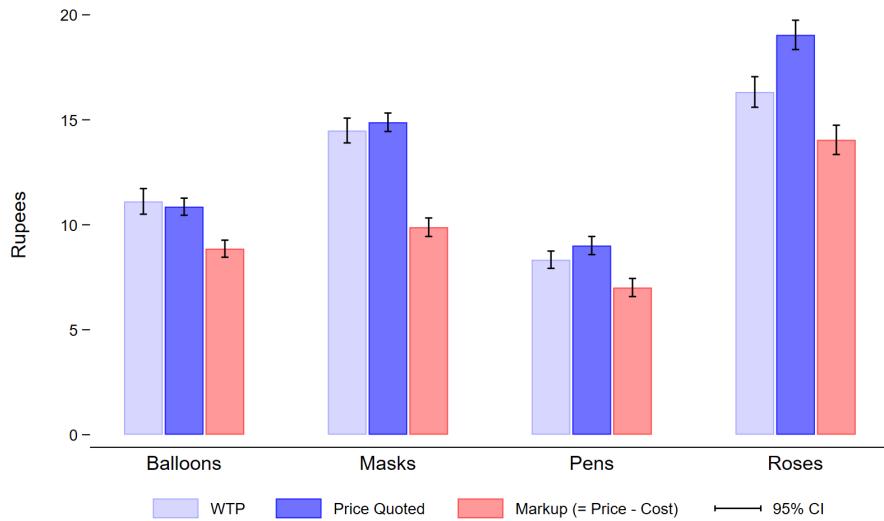
A second set of explanations centers on informational mechanisms: the idea that a seller's approach either draws attention to the product or reduces search costs. Both, however, are unlikely to explain the patterns in the data. Firstly, the experimental protocol focused on passersby who walked directly in front of vendors, ensuring comparable visibility of vendors across treatment cells, randomizing whether they made a verbal request or not. Moreover, if attention were the primary driver, we would expect less visible goods, such as pens or masks, to exhibit larger sales increases following a seller's request. Instead, the opposite is true—more visible goods like balloons and roses see the greatest gains (Appendix Figure C.10). Similarly, if reduced search costs were driving results, theory would predict that buyers who themselves approach vendors first—thereby incurring search effort—should face higher prices, yet this is not observed (Supplemental Appendix Table B.5). Finally, neither attention nor search costs can explain why purchase rates differ across seller and buyer identities following a seller's request.

## 8 Discussion

### 8.1 Street Vending as Market Exchange Rather than Pure Charity

*Market Behavior:* I begin by clarifying why these transactions should be interpreted as market exchange with prosocial motives rather than pure charity. Purchasing and pricing patterns in this market are inconsistent with a pure charitable-giving interpretation. As Proposition 1 shows, the specific goods traded should have little relevance for purchasing decisions if these purchases reflect purely charitable transfers. However, as Figure 9 shows, both the demand, prices, and markups vary systematically across goods. Roses, for instance, are valued at Rs. 16 and priced at Rs. 19, while pens are valued at Rs. 7 and priced at Rs. 9. Correspondingly, purchasing rates in the field experiment—where prices are held constant—are twice as high for roses and masks as for pens and balloons (significant at the 5% level) (Appendix Figure C.10).<sup>31</sup>

Figure 9: Heterogeneity in Willingness to Pay, Price Quoted, and Markups Across Goods



**Note:** The figure reports the average willingness to pay for different goods from the incentivised willingness to pay exercise, along with the average price quoted and implied markups from the Lab-in-the-Field Pricing Experiment. 95% confidence intervals are shown.

<sup>31</sup>Differential purchases across all pairs of goods are statistically significant at 5% (except for pens and balloons).

Vendors also frequently adjust what they sell in response to demand. During the study period, masks became a common product due to pandemic restrictions,<sup>32</sup> and many vendors switched to selling flags around Independence Day or festive items during Holi and Diwali. These adaptive behaviors, along with systematic variation in pricing, markups, and sales, are characteristic of a functioning market. Prices for these goods are also non-trivial: equivalent to the cost of an auto-rickshaw ride or a street-side meal.

***Perceptions on both sides of the market:*** Buyers overwhelmingly distinguish vending from begging. On average, over 80% support buying from vendors, compared with less than a quarter who support giving money to panhandlers (Appendix Figure C.3).<sup>33</sup> When explaining their reasons, buyers most often cite cost-effectiveness relative to retail shops along with the desire to support vendors' families (Appendix Figure C.7).

Respondents also almost universally view street vendors as more hardworking than panhandlers (Appendix Figure C.9).<sup>34</sup> Vendors also express pride in earning through effort rather than relying on charity, emphasizing the physical demands of carrying and preserving goods under difficult weather conditions like extreme heat. Consistent with this, instances of passersby offering food or money without purchase are extremely rare—0.27% in the observational data and 0.30% in the field experiment—further suggesting that buyers view vending as economic exchange rather than pure charity. This is consistent with emerging evidence on the psychosocial value of work (Hussam et al., 2022; Macchi and Stalder, 2023; Sharma and Malik, 2024).

***Summary and Generalizability:*** Taken together, the evidence shows that street vending operates as a genuine market shaped by both economic and prosocial motives. While this study focuses on street vending in a developing-country context, the underlying mechanisms are not unique to this market setting. Similar dynamics arise in many settings where social preferences and economic exchange intersect—whether in consumer support for local farmers, fair-trade products, or preferences for supporting small neighborhood shops over large firms and supermarkets. In all these cases, buyers' prosocial motives coexist with market incentives, helping sustain sellers who might struggle to sustain in competitive markets.

## 8.2 Welfare Considerations

While this paper does not take a normative stance on whether prosocial motives improve or worsen welfare, it is clear that drawing welfare inferences in this context is complex. On one hand, prosocial motives allow vendors to survive in competitive environments by enabling them to charge “socio-emotional markups”—price differentials rooted in inferences about buyers' prosocial preferences rather than product quality or cost. Given the difficulty of surviving in this competitive environment, such motives sustain a modest but vital livelihood, even for the most vulnerable sellers—children. On the other hand, the same advantage that benefits child vendors in the short run may, in the longer term, create perverse incentives for sustaining child labor.<sup>35</sup>

<sup>32</sup>For instance, there were mandates to wear masks in public markets: [The Week](#), [Indian Express](#), [NDTV News](#).

<sup>33</sup>These questions were asked following the willingness-to-pay exercise using the same goods and locations as the field experiment.

<sup>34</sup>The hard work involved is also widely documented (e.g., [Hong and Ley, 2023](#); [Kanigel, 2017](#)).

<sup>35</sup>Strategic targeting and price discrimination also imply that the incidence of these markups falls unevenly across passersby, though this comparatively not a first-order concern in this setting.

Assessing welfare impacts is further complicated by the hazardous set of alternatives like begging and rag-picking that children may be driven to in the absence of a social safety net (Edmonds, 2007).<sup>36</sup> Children’s own accounts also add nuance to this picture. Most feel safe working on the streets, nearly 90% express pride in earning income, and three-quarters report attending school. These findings should not be read as justification for child labor, but rather as evidence that children’s experiences and choices are shaped by constrained opportunity sets. Effective policy, therefore, requires balancing protection with livelihood realities, expanding social safety nets for families while ensuring that interventions do not inadvertently eliminate safer earning options in the absence of alternatives (Basu and Van, 1998; Edmonds and Theoharides, 2020).

## 9 Conclusion

This paper advances our understanding of how prosocial motives can shape market exchange. While prior work has examined altruism and social image in charitable contexts, I show that prosocial motives can also affect core market outcomes—purchases, prices, and earnings—in informal markets. In many naturally occurring markets, isolating these forces is difficult due to product differentiation, repeated interactions, and reputation concerns. I focus on street vending markets, which provide a setting in which these challenges are attenuated, allowing a clean separation of social preferences from these other economic forces.

Combining rich observational data with multiple experiments, I show how prosocial and economic motives jointly determine buyer and seller behavior. Buyers are substantially more likely to purchase from child vendors than from adults selling identical goods, and women and couples purchase more than men despite similar valuations. Vendors, in turn, anticipate these responses, engaging in systematic targeting and price discrimination based on perceived prosociality. A simple model incorporating consumption utility, altruism, and refusal costs rationalizes these behaviors and clarifies how prosocial motives can be strategically leveraged in markets.

Substantively, the results highlight that prosocial and economic motives can jointly shape demand and pricing. In particular, social preferences can support ‘socio-emotional markups’, generating behavioral rents and endowing socioeconomically vulnerable sellers with a form of market power in competitive environments. Similar dynamics may extend to other informal markets where exchange is personal—such as shopping at local farmers’ markets or hiring daily-wage labor in spot markets—as well as to settings where consumers’ prosocial concerns shape product choice, such as fair-trade purchases.

While these dynamics can sustain livelihoods for socioeconomically vulnerable sellers, they also raise important policy questions in this particular setting. The same prosocial motives that sustain vendors in this competitive environment may also unintentionally strengthen incentives for children’s continued participation in street markets. Without taking a normative stance, the results highlight that evaluating child labor policy in informal urban settings requires accounting for demand-side responses and how they interact with household constraints and social protection. Clarifying the long-run welfare implications—and how they affect entry and exit across child and adult vendors—remains an important direction for future research.

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<sup>36</sup>Interviews with NGOs and local authorities suggest economic need of families rather than coercion affecting child engagement in work. In a background survey of 217 street-connected children in Delhi, I found around 80% engaged in vending, compared to 17% in begging and 4% in rag-picking, with much lower earnings and harsher conditions in the latter two.

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# Appendix

## A List of Locations

Table A.1: List of Locations

No.	Area Name	Sub-Locations (Type)	NGOs	Reports	Scouted
1	Adarsh Nagar	Market, Metro Station			✓
2	Azadpur (Crossover Bridge, Lal Bagh Mosque area, New Sabzi Mandi)	Market, Metro Station, Traffic Lights		✓	✓
3	Barakhamba Road	Market, Metro Station			✓
4	Bhajanpura	Market			✓
5	Bhikaji Cama Place	Traffic Lights			✓
6	Chandni Chowk	Market, Metro Station	✓	✓	✓
7	Chawri Bazar	Market		✓	✓
8	Connaught Place (Inner Blocks, Outer Blocks, Hanuman Mandir)	Market, Religious Place	✓	✓	✓
9	Dashrath Puri	Market, Metro Station			✓
10	Delhi Gate	Market, Metro Station			✓
11	Durgabai Deshmukh South Campus (Satya Niketan)	Market, Metro Station			✓
12	Dwarka (Sector 6, Sector 7, Sector 10, Sector 12, Dabri Village)	Market, Traffic Lights		✓	✓
13	Green Park	Market, Metro Station			✓
14	Guru Tegh Bahadur Nagar (Hudson Lane, GTB Nagar Red Lights, GTB Nagar Metro Station)	Metro Station, Traffic Lights, Market	✓		✓
15	Hauz Khas (Hauz Khas Village)	Traffic Lights			✓
16	IIT Delhi	Traffic Lights			✓
17	INA Market	Market, Metro Station			✓
18	Income Tax Office	Metro Station, Traffic Lights		✓	✓
19	Jama Masjid – Meena Bazaar	Market, Metro Station, Historical Monument		✓	✓
20	Janakpuri (Dabri Mod-Janakpuri South, Sitapuri)	Market, Metro Station			✓
21	Jangpura	Metro Station			✓
22	Janpath (Metro Station and Traffic Lights, Janpath Market)	Metro Station, Traffic Lights, Market	✓		✓
23	Jasola Apollo Metro Station	Metro Station			✓
24	Jhandewalan Mandir	Religious Place			✓
25	Kalkaji Mandir	Religious Place	✓		✓
26	Kamla Nagar Market	Market	✓	✓	✓
27	Karkardooma Metro Station, Karkardooma Court Metro Station, Jagatpuri Traffic Lights	Metro Station, Traffic Lights	✓		✓
28	Karol Bagh	Main Market			✓

No.	Area Name	Sub-Locations (Type)	NGOs	Reports	Scouted
29	Kashmere Gate (Inter State Bus Terminal, Metro Station, Monastery Market)	Market, Metro Station			✓
30	Khan Market	Market, Metro Station			✓
31	Lajpat Nagar Central Market (Moolchand Flyover, Shri Laxmi Narayan Sanatan Dharma Mandir)	Market, Traffic Lights	✓	✓	✓
32	Laxmi Nagar	Market, Metro Station			✓
33	Mahavir Enclave	Market, Metro Station			✓
34	Mandi House	Market, Metro Station			✓
35	Moti Bagh	Market, Metro Station			✓
36	Munirka	Market, Metro Station			✓
37	Nehru Place	Market, Metro Station			✓
38	Netaji Subhash Place Metro Station	Market, Metro Station			✓
39	New Delhi Railway Station	Railway Station	✓	✓	✓
40	Nirman Vihar Metro Station	Metro Station, Traffic Lights		✓	✓

**Note:** The table lists all the regions/areas and the types of separate sub-locations included in each area (marketplaces, traffic lights, train stations). The list of areas and sub-regions to scout was compiled based on conversations with the local organizations working with street vendors and street-connected children including Salaam Baalak Trust, Save the Children, Butterfly, Chintan, and Railway Children, and the Office of Delhi Commission for Protection of Child Rights, Ministry of Housing and Urban Affairs. These locations are indicated in the column marked 'NGOs'. In addition, we also consulted the [Delhi Tourism Website](#) for the list of marketplaces mentioned as 'Street Bazaars and Markets', the local news articles (for example, [Times of India](#)), a secondary report ([Bhaskaran and Mehta, 2011](#)) and [Trip Advisor](#) for compiling the full list of places to scout. In total, the scouting exercise covered 44 marketplaces, 41 train stations, 16 traffic lights, and 8 religious places as sub-locations. Figure A.1 additionally shows these regions and those selected for inclusion in the study using a Delhi Metro Station Map.

Figure A.1: Map of Locations (Scouted and Selected)



**Note:** Locations are marked on the Delhi Metro Map accessible at <https://www.delhimetrorail.com/map>. Table A.1 categorizes these locations into marketplaces, train stations, and traffic lights. A more detailed description of each location is intended for inclusion in an online appendix and is available from the author upon request.

## B Sample Descriptives

### B.1 Observational Study

Table B.1: Summary Statistics for Observational Study Sample

	<u>Adult</u>	<u>Child</u>	<u>Overall</u>
<i>Demographics</i>			
Age	34.02	11.24	22.77
Female	0.35	0.52	0.44
<i>Experience</i>			
Less than 1 year	0.17	0.18	0.18
1-2 years	0.11	0.24	0.17
2-5 years	0.19	0.43	0.31
5-10 years	0.15	0.14	0.14
10+ years	0.37	0.01	0.19
<i>Type of Location</i>			
Market	0.81	0.68	0.75
Metro Station	0.11	0.25	0.18
Red Light	0.08	0.07	0.07
Observations	204	199	403

Table B.2: Distribution of Hours of Observation

	(1) Adult	(2) Child	(3) Overall
Market	0.828	0.691	0.760
Metro Station	0.104	0.252	0.177
Red Light	0.068	0.057	0.062
N	250	246	496

Note: The table shows the total number of hours of observation conducted at various types of locations for children and adults separately.

Table B.3: Items Sold By Vendors in the Observational Study Sample  
**Percent**

Balloons	6.95
Bamboo Plants	0.25
Books	1.24
Car Accessories	0.25
Decor	0.25
Ornaments	13.65
Envelopes	1.74
Festive Items	0.25
Hair accessories	13.90
Lace	6.95
Masks	17.12
Pens	12.90
Roses	8.44
Shoe Polish	1.99
Showpiece	5.46
Socks	0.50
Tissue/Foil	1.99
Toys	3.97
Weight Checker	2.23
Total No. of Vendors	403

## B.2 Field Experiment

Table B.4: Summary Statistics for Field Experiment Hours

	<u>Adult</u>	<u>Child</u>
<i>Type of Location</i>		
Market	0.54	0.53
Metro Station	0.46	0.47
<i>Day</i>		
Weekend	0.36	0.36
<i>Time of the Day</i>		
Afternoon	0.60	0.59
Evening	0.40	0.41
<i>Item</i>		
Balloons	0.24	0.24
Masks	0.26	0.26
Pens	0.25	0.26
Roses	0.25	0.25
<i>Gender of the Vendor</i>		
Female	0.80	0.71
Observations	510	518

Table B.5: Balance Table Across Child/Adult Vendor- Field Experiment

	(1) Adult	(2) Child	(3) (1) vs. (2), p-value
<b>Group</b>			
Couple	0.200	0.200	0.992
Woman	0.200	0.200	0.870
Women	0.200	0.200	0.953
Man	0.199	0.200	0.903
Men	0.200	0.200	0.978
<b>Price</b>			
Rs.10	0.500	0.499	0.890
Rs.30	0.500	0.501	0.890
<b>Action</b>			
Approach	0.500	0.501	0.901
No Approach	0.500	0.499	0.901
<b>Place</b>			
Market	0.536	0.532	0.360
Metro Station	0.464	0.468	0.360
<b>Item</b>			
Balloons	0.242	0.241	0.838
Masks	0.257	0.258	0.740
Pens	0.253	0.253	0.996
Roses	0.249	0.248	0.898
<b>Day</b>			
Weekend	0.355	0.358	0.634
<b>Time</b>			
Afternoon	0.595	0.591	0.400
Evening	0.405	0.409	0.400
<i>N</i>	20266	20339	

Note: The table shows balance across child and adult vendors in the types of passersby, vendor action and price quoted (randomized within vendor), and the time of the day, whether it was a weekend and the item sold.

Table B.6: Balance Table Across Passerby Type- Field Experiment

	(1) Couple	(2) Woman	(3) Women	(4) Man	(5) Men	(6) (1) vs. (2), p-value	(7) (1) vs. (3), p-value	(8) (1) vs. (4), p-value	(9) (1) vs. (5), p-value	(10) (2) vs. (3), p-value	(11) (2) vs. (4), p-value	(12) (2) vs. (5), p-value	(13) (3) vs. (4), p-value	(14) (3) vs. (5), p-value	(15) (4) vs. (5), p-value
<b>Vendor</b>															
Child	0.501	0.500	0.501	0.502	0.501	0.913	0.975	0.943	0.981	0.888	0.857	0.931	0.968	0.956	0.925
<b>Price</b>															
Rs.10	0.499	0.500	0.499	0.501	0.500	0.913	0.944	0.736	0.888	0.969	0.820	0.975	0.790	0.944	0.844
Rs.30	0.501	0.500	0.501	0.499	0.500	0.913	0.944	0.736	0.888	0.969	0.820	0.975	0.790	0.944	0.844
<b>Action</b>															
Approach	0.500	0.501	0.501	0.501	0.499	0.913	0.950	0.919	0.881	0.962	0.994	0.796	0.969	0.832	0.802
No Approach	0.500	0.499	0.499	0.499	0.501	0.913	0.950	0.919	0.881	0.962	0.994	0.796	0.969	0.832	0.802
<b>Place</b>															
Market	0.534	0.534	0.533	0.535	0.534	0.924	0.885	0.976	0.970	0.961	0.900	0.954	0.861	0.915	0.946
Metro Station	0.466	0.466	0.467	0.465	0.466	0.924	0.885	0.976	0.970	0.961	0.900	0.954	0.861	0.915	0.946
<b>Item</b>															
Balloons	0.242	0.241	0.241	0.242	0.241	0.905	0.935	0.983	0.923	0.970	0.889	0.982	0.918	0.988	0.906
Masks	0.257	0.258	0.257	0.257	0.258	0.907	0.978	0.995	0.946	0.885	0.912	0.961	0.973	0.924	0.951
Pens	0.253	0.252	0.253	0.253	0.252	0.906	0.979	0.975	0.939	0.885	0.931	0.967	0.954	0.918	0.964
Roses	0.248	0.249	0.249	0.248	0.249	0.906	0.935	0.997	0.917	0.971	0.909	0.989	0.938	0.982	0.920
<b>Day</b>															
Weekend	0.357	0.356	0.356	0.357	0.357	0.861	0.894	0.995	0.988	0.966	0.865	0.873	0.899	0.906	0.993
<b>Time</b>															
Afternoon	0.594	0.594	0.594	0.593	0.593	0.951	0.993	0.958	0.921	0.944	0.910	0.873	0.965	0.928	0.963
Evening	0.406	0.406	0.406	0.407	0.407	0.951	0.993	0.958	0.921	0.944	0.910	0.873	0.965	0.928	0.963
<i>N</i>	8122	8124	8128	8109	8119										

Note: The table shows balance across passersby categories in vendor's action and price quoted (randomized), and time of the day, location, item sold and the type of vendor.

### B.3 Lab-in-the-Field Pricing Experiment

Table B.7: Summary Statistics for Pricing Game Sample

	<u>Adult</u>	<u>Child</u>
<i>Demographics</i>		
Age	34.75	11.40
Female	0.36	0.50
<i>Schooling</i>		
None	0.50	0.25
Primary (up to grade 5)	0.12	0.57
Secondary (up to grade 10)	0.24	0.17
Higher Secondary (up to grade 12)	0.11	0.01
College	0.02	0.00
<i>Experience</i>		
Less than 1 year	0.14	0.22
1-2 years	0.10	0.23
2-5 years	0.21	0.39
5-10 years	0.15	0.15
10+ years	0.40	0.01
<i>Type of Location</i>		
Market	0.75	0.71
Metro Station	0.12	0.20
Red Light	0.13	0.09
<i>Financial</i>		
Hours Worked Daily	8.41	6.96
Daily Earnings (Rs)	556.29	326.71
Earnings on a good day (Rs)	1334.20	713.81
Earnings on a bad day (Rs)	236.51	150.56
Observations	162	174

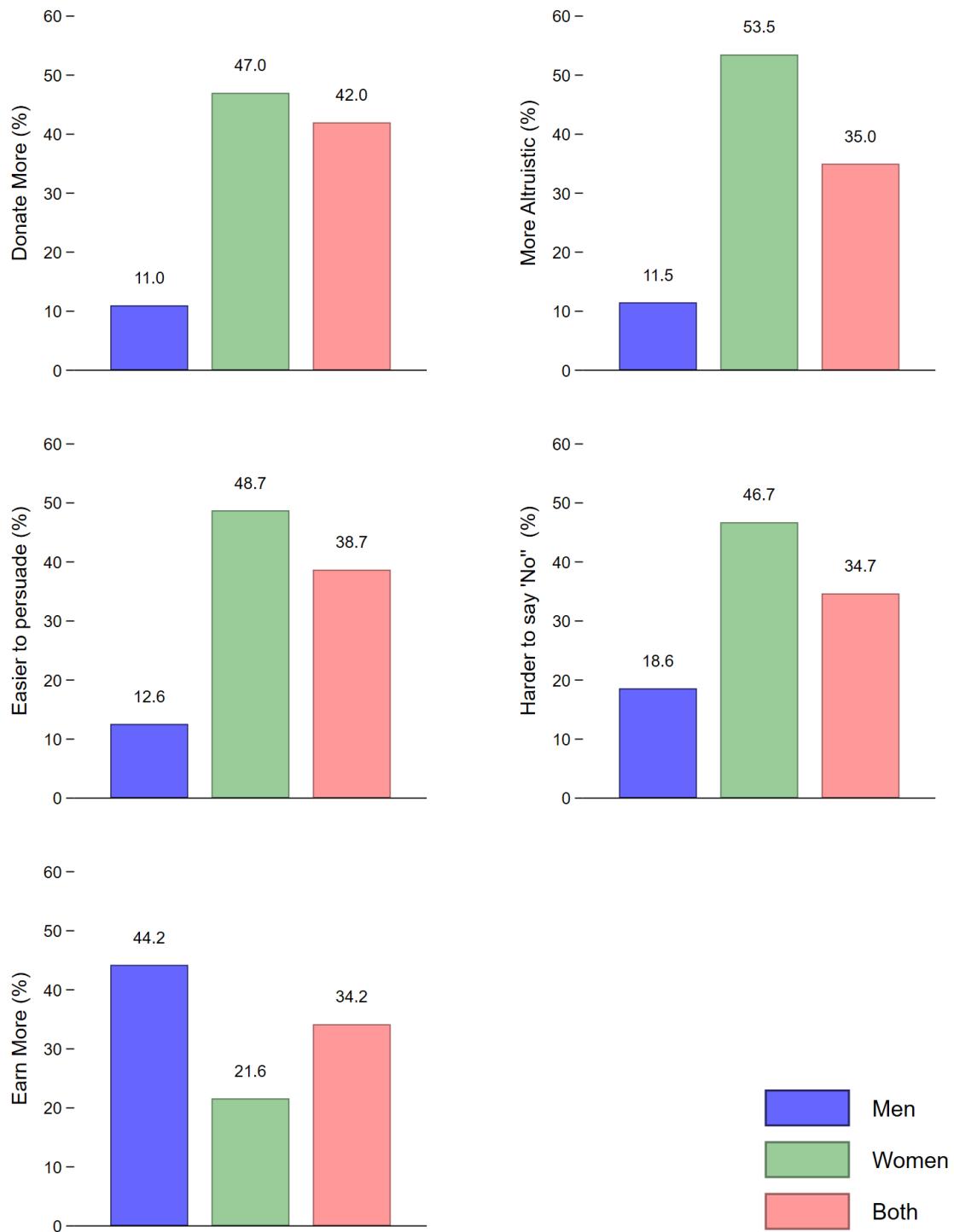
## B.4 Passerby Survey

Table B.8: Summary Statistics for Passerby Survey Sample  
Percent

<i>Age</i>	
18-24	0.68
25-30	0.25
31-40	0.05
41-50	0.01
50+	0.00
<i>Schooling</i>	
No schooling	0.00
Secondary (up to grade 10)	0.02
Higher Secondary (up to grade 12)	0.02
College	0.25
Undergraduate	0.51
Postgraduate	0.20
<i>Monthly Income (Rs)</i>	
0-10k	0.60
10-20k	0.13
20-30k	0.13
30-40k	0.06
40-50k	0.04
50-60k	0.04
<i>Type of Location</i>	
Market	0.26
Metro Station	0.74
<i>Passerby Group</i>	
Male	0.21
Males together	0.20
Female	0.20
Females together	0.19
Couple	0.20
Observations	520

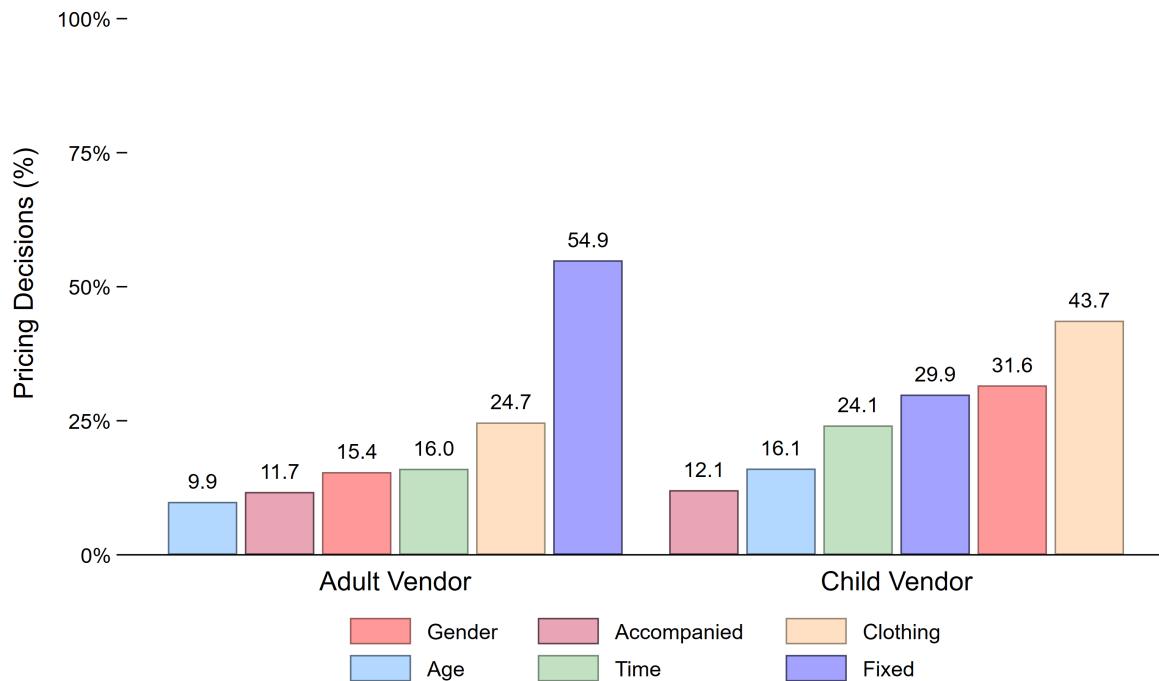
## C Figures

Figure C.1: Seller Inferences about Passerby Social Preferences and Income



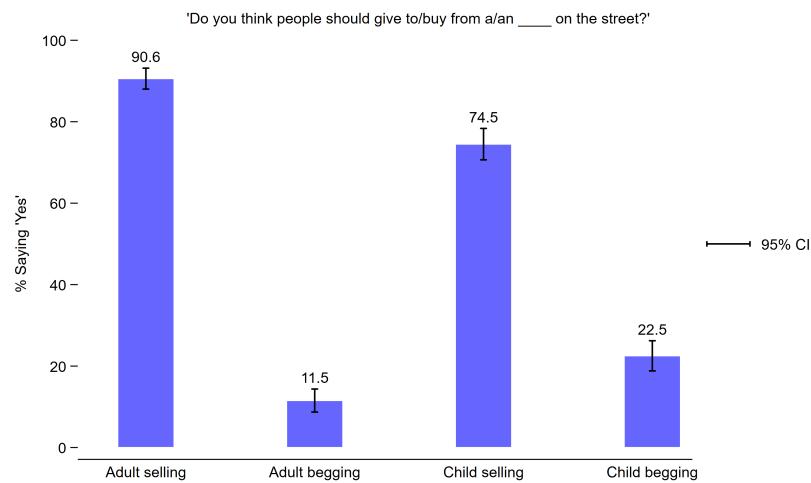
**Note:** The figure plots the percentage of vendors mentioning (from left to right, top to bottom) whether men or women donate more, are more altruistic, are easier to persuade, find it harder to say 'no', and earn more. If the vendors reported that both men and women were equally likely to have these traits, the option 'Both (are equally likely)' was selected.

Figure C.2: Factors Affecting Pricing Strategy by Type of Seller



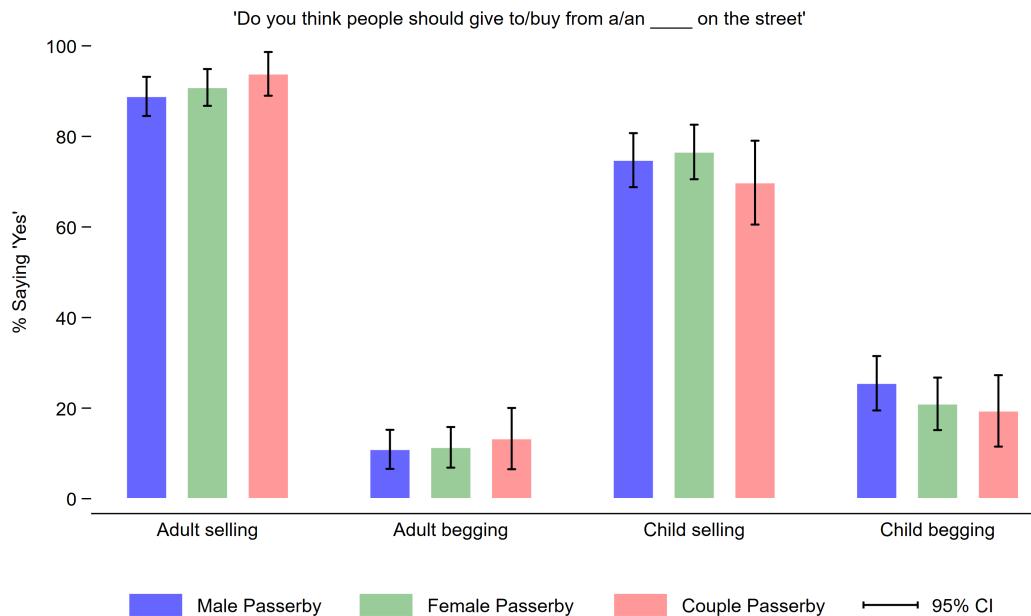
**Note:** The figure plots the percentage of vendors mentioning what factors they consider when determining pricing. The question was open-ended and was asked without any nudges. Surveyors listened to the participant's response and ticked one or more of the multiple choices among observable characteristics of the buyer. The category 'Fixed' was marked if the vendor reported they charge a fixed price to everyone.

Figure C.3: Stated Norms - Passerby Survey



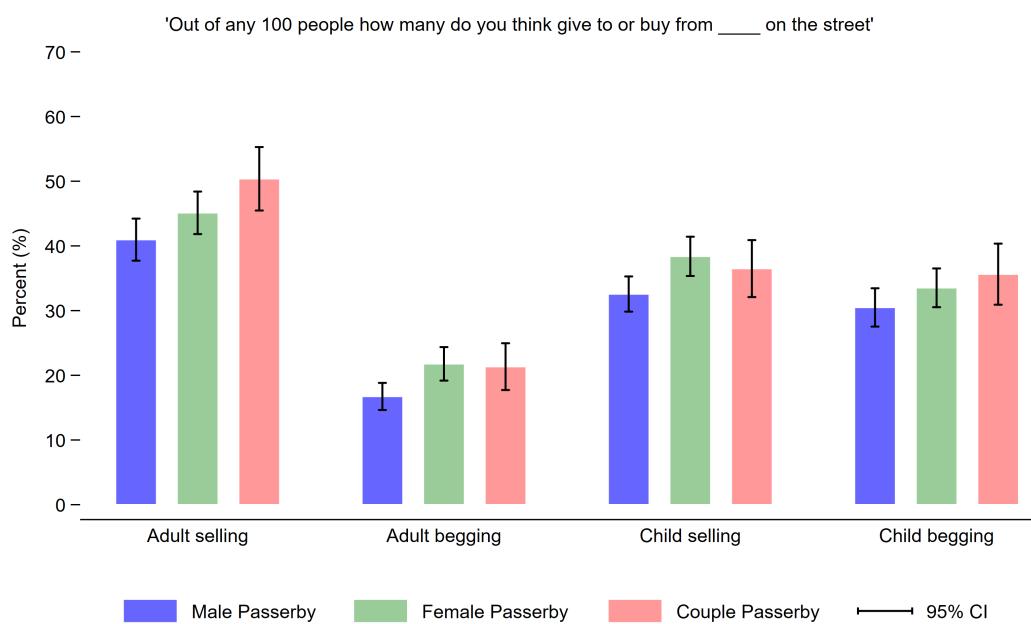
**Note:** The figure reports the percentage of people who agree with the statement that "People should buy from (or give money to) a {child/adult} {vendor/panhandler} on the street." The order of these four questions was randomized within-passerby. 95% confidence intervals are shown.

Figure C.4: Stated Norms - Passerby Survey



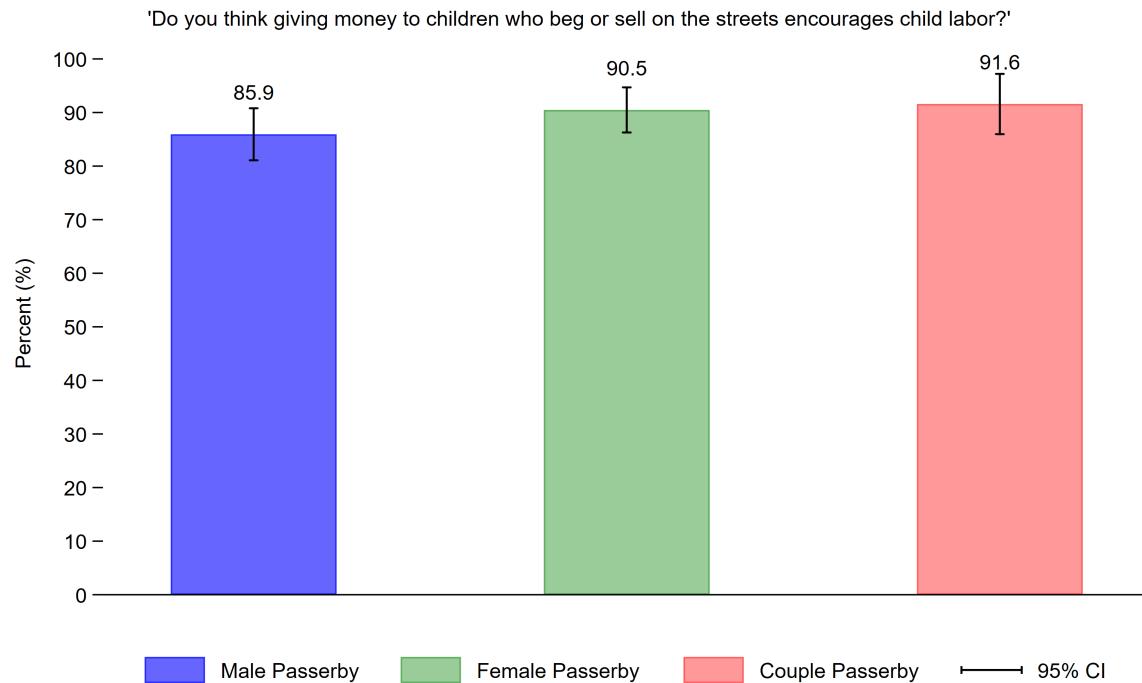
**Note:** The figure reports the percentage of people who agree with the statement that "People should give to or buy from a {child/adult} {vendor/panhandler} across passersby". The figure pools over the categories *single female* and *females together*, and *single male* and *males together* respectively.

Figure C.5: Perceived Norms - Passerby Survey



**Note:** The figure reports a passerby's perception about how many out of 100 people give to or buy from a child/adult vendor/panhandler by passerby category. The figure pools over the categories *single female* and *females together*, and *single male* and *males together* respectively.

Figure C.6: Passerby Beliefs about Child Labor - Passerby Survey



**Note:** The figure reports the percentage of passersby who report they think that buying from or giving money to street children encourages child labor. The figure pools over the categories *single female* and *females together*, and *single male* and *males together* respectively.

Figure C.7: Passerby Comments Regarding Buying from an Adult or a Child Vendor



Panel A: Buying from an Adult Vendor



Panel B: Buying from a Child Vendor

**Note:** These word clouds summarize passersby's open-ended reasons for whether one should buy from an adult vendor (Panel A) or a child vendor (Panel B). Word size reflects relative frequency: the largest words are mentioned most often. (Words may appear multiple times solely to fill the layout.) 'Quality Product' summarizes statements when passersby compared the quality of products to retail shops and commented on the relative cost-effectiveness of buying from vendors. There was not a single mention of any differential concerns about quality when buying from a child or an adult vendor. 'Looks Needy', 'Supports Family', and 'Empathy', capture passerby sentiment that buying from vendors supports them and their families financially. 'Compromises Education' and 'Child Labor' capture statements that were made by passersby that street vending hurts the education of children while 'Supports Education' refers to statements that vending may allow children to be educated by having financial support from part-time work. 'Forced' captures statements where passersby believed that children were being forced to work either by parents/guardians or someone else while 'Compelled' captures the sentiment that vendors have no other means of earning. 'Bad Habit' refers to statements where passersby believe that working on the street has become a habit and way of life for them.

Figure C.8: Passerby Comments Regarding Giving Money to an Adult or a Child Beggar



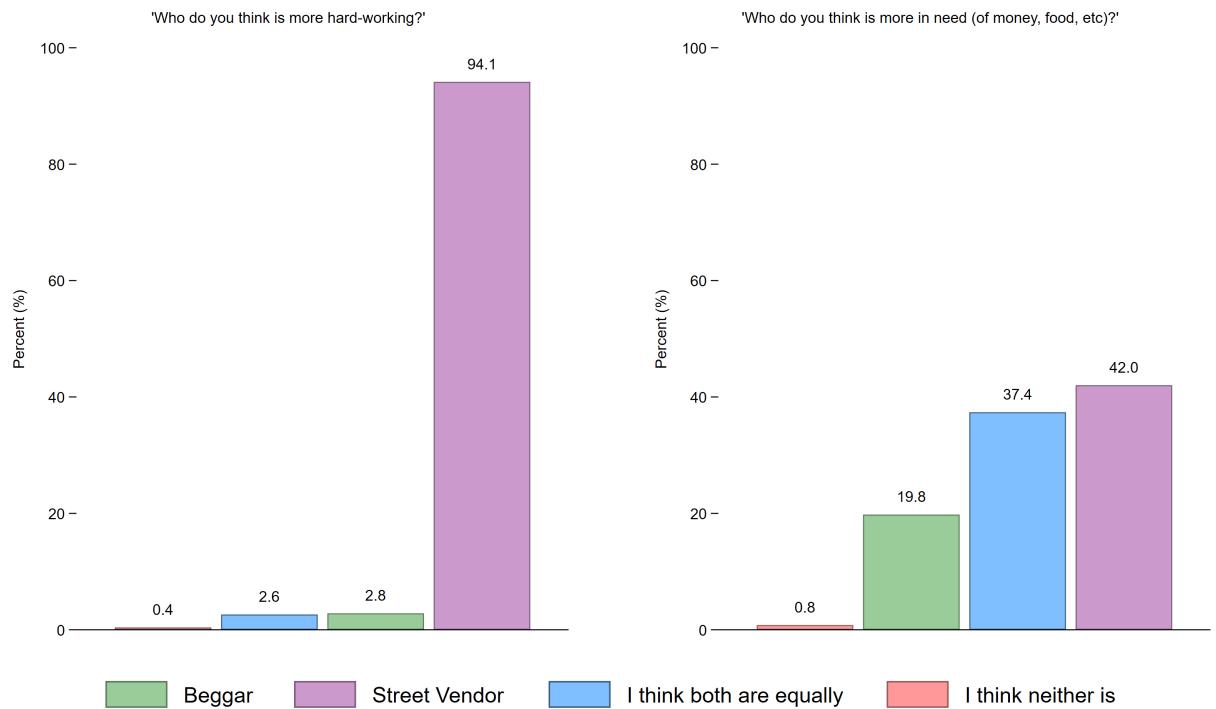
Panel A: Giving money to an Adult Beggar



Panel B: Giving money to a Child Beggar

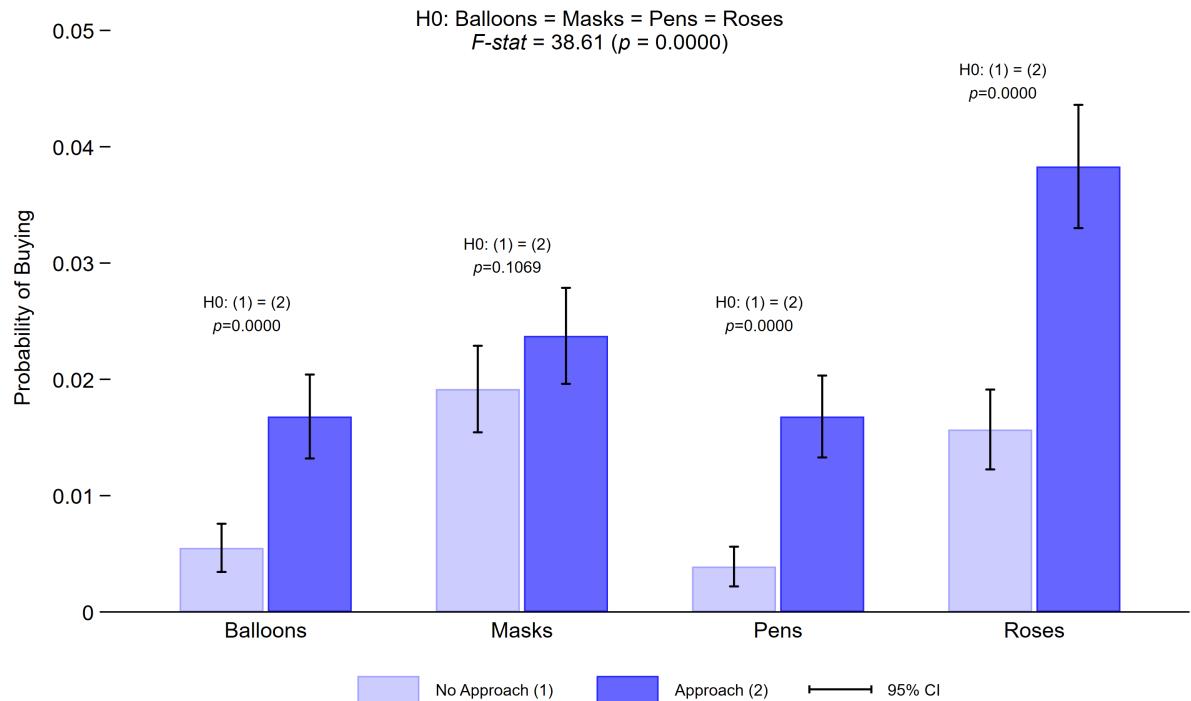
**Note:** These word clouds summarize passersby's open-ended reasons for whether one should buy from an adult beggar (Panel A) or a child beggar (Panel B). Word size reflects relative frequency: the largest words are mentioned most often. (Words may appear multiple times solely to fill the layout.) 'Begging Wrong', 'Bad habit', and 'Lazy' capture statements such as 'living off one's charity is wrong' or 'beggars are lazy'. 'In-kind (food)' captures instances when passersby mentioned that one should not give money but only food to beggars. 'Empathy' and 'Looks needy' capture passerby sentiment that beggars are needy and one must show empathy towards them. 'Compromises Education' and 'Child Labor' capture statements where passersby reported that supporting a child beggar might compromise their education and encourage child labor. 'Forced' captures statements where passersby believed that children were being forced to beg either by parents/guardians or someone else while 'Compelled' captures the sentiment that vendors have no other means of earning.

Figure C.9: Passerby Beliefs about Vendor and Beggars - Passerby Survey



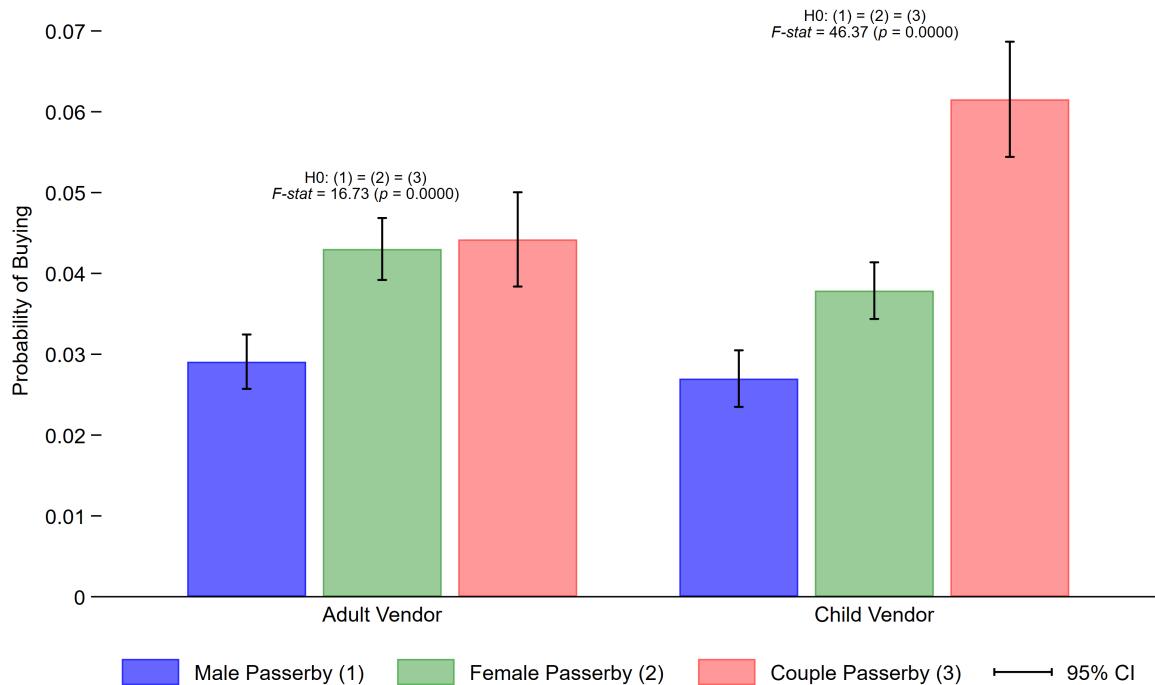
**Note:** The figure reports the beliefs of passersby about vendors and beggars. The left panel reports beliefs about who is more hardworking, and the right panel reports beliefs about who is more needy.

Figure C.10: Buying Probabilities by Products and Approach (Field Experiment)



**Note:** The figure plots purchase probabilities for different goods by seller approach. “Approach” involves a verbal request using the script outlined in the text.

Figure C.11: Buying Probabilities by Type of Buyer and Seller (Observational Study)



**Note:** The figure plots the buying probabilities (i.e., the fractions of passersby that made a purchase) by passersby category and the type of vendor, showing 95% confidence intervals. The figure pools passerby categories *single female and females together*, and *single male and males together*.

## D Tables

Table D.1: Purchase Rate (%) by Seller and Buyer Type - Field Experiment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Child Vendor	1.145*** (0.301)	1.144*** (0.259)	1.150*** (0.224)				0.737** (0.326)	0.736** (0.287)	0.741*** (0.261)
Female Passerby				0.374* (0.194)	0.374* (0.194)	0.374* (0.194)	0.245 (0.170)	0.245 (0.170)	0.245 (0.170)
Couple Passerby				1.231*** (0.244)	1.231*** (0.244)	1.231*** (0.244)	0.468** (0.206)	0.469** (0.206)	0.469** (0.206)
Female Passerby $\times$ Child Vendor							0.259 (0.396)	0.258 (0.396)	0.259 (0.396)
Couple Passerby $\times$ Child Vendor							1.522*** (0.420)	1.522*** (0.421)	1.522*** (0.421)
Constant	1.181*** (0.203)	0.543** (0.248)	0.669** (0.306)	1.358*** (0.192)	0.718** (0.347)	0.847* (0.441)	0.989*** (0.232)	0.351 (0.256)	0.477 (0.310)
Product FE		✓	✓		✓	✓		✓	✓
Location Type FE			✓			✓			✓
Time of the Day				✓		✓			✓
Weekday/Weekend				✓		✓			✓
Adjusted $R^2$	0.002	0.005	0.006	0.001	0.004	0.005	0.003	0.006	0.007
Mean of Dep. Var	1.754	1.754	1.754	1.754	1.754	1.754	1.754	1.754	1.754
Male = Female = Couple ( <i>p-value</i> )				0.000	0.000	0.000	0.000	0.000	0.000
Observations	40,539	40,539	40,539	40,536	40,536	40,536	40,536	40,536	40,536

**Note:** The outcome is purchase rate (%). Columns 1-3 compare the purchase rates from child vendors to that of adult vendors. Columns 4-6 compare purchase rates by females and couples compared to males. The table pools the categories *single female* and *females together*, and *single male* and *males together*. Columns 7-9 separate purchase rates by passerby and seller type. Standard errors are clustered at the vendor level.

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

Table D.2: Seller Targeting / Approach Probability - Observational Study

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Child Vendor	0.266*** (0.029)	0.225*** (0.034)	0.206*** (0.030)				0.144*** (0.032)	0.079** (0.034)	0.069** (0.030)
Female Passerby				0.175*** (0.020)	0.192*** (0.017)	0.181*** (0.016)	0.072*** (0.025)	0.086*** (0.020)	0.081*** (0.017)
Couple Passerby				0.173*** (0.018)	0.189*** (0.015)	0.183*** (0.013)	0.064*** (0.021)	0.073*** (0.018)	0.077*** (0.016)
Female Passerby $\times$ Child Vendor							0.171*** (0.036)	0.188*** (0.034)	0.182*** (0.031)
Couple Passerby $\times$ Child Vendor							0.207*** (0.031)	0.224*** (0.028)	0.212*** (0.026)
Constant	0.325*** (0.024)	0.393*** (0.055)	0.425*** (0.058)	0.351*** (0.017)	0.428*** (0.047)	0.441*** (0.051)	0.283*** (0.025)	0.348*** (0.057)	0.398*** (0.057)
Product FE		✓	✓		✓	✓		✓	✓
Location Type FE			✓			✓			✓
Weekend FE				✓		✓			✓
Time of the Day FE				✓		✓			✓
Surveyor FE				✓		✓			✓
Adjusted $R^2$	0.071	0.141	0.202	0.029	0.138	0.202	0.103	0.178	0.235
Mean of Dep. Var	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
Male = Female = Couple ( $p$ -value)				0.000	0.000	0.000	0.000	0.000	0.000
Observations	46,541	46,541	46,541	46,541	46,541	46,541	46,541	46,541	46,541

**Note:** The outcome is seller approach, which includes making eye contact/gesture and/or verbal request as outlined in Figure A.5. Columns 1-3 compare the approach rates of child vendors to that of adult vendors. Columns 4-6 compare approach rates for females and couples compared to males. The table pools the categories *single female* and *females together*, and *single male* and *males together*. Columns 7-9 separate approach rates by passerby and seller type. Standard errors are clustered at the vendor level.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table D.3: Purchase Rate (%) by Approach - Field Experiment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Approach	1.279*** (0.283)	1.278*** (0.283)	1.278*** (0.283)	0.723*** (0.220)	0.722*** (0.221)	0.722*** (0.220)	0.644** (0.267)	0.644** (0.267)	0.645** (0.267)
Child Vendor				0.590** (0.251)	0.589** (0.235)	0.595** (0.273)	0.465 (0.303)	0.466 (0.288)	0.471 (0.331)
Child Vendor×Approach				1.111** (0.495)	1.110** (0.495)	1.110** (0.495)	0.546 (0.636)	0.542 (0.636)	0.542 (0.636)
Female Passerby							0.368** (0.164)	0.369** (0.164)	0.369** (0.164)
Couple Passerby							0.024 (0.163)	0.026 (0.163)	0.026 (0.163)
Female Passerby×Child Vendor							-0.191 (0.362)	-0.195 (0.362)	-0.194 (0.362)
Couple Passerby×Child Vendor							1.008*** (0.379)	1.005*** (0.380)	1.005*** (0.380)
Female Passerby×Approach							-0.246 (0.379)	-0.248 (0.379)	-0.248 (0.379)
Couple Passerby×Approach							0.888* (0.475)	0.886* (0.476)	0.885* (0.476)
Female Passerby×Child Vendor×Approach							0.896 (0.611)	0.900 (0.611)	0.900 (0.611)
Couple Passerby×Child Vendor×Approach							1.026 (0.762)	1.033 (0.762)	1.033 (0.762)
Constant	1.115*** (0.137)	0.477** (0.234)	0.605* (0.351)	0.819*** (0.185)	0.183 (0.247)	0.309 (0.329)	0.667*** (0.206)	0.030 (0.264)	0.155 (0.334)
Product FE	✓	✓		✓	✓	✓	✓	✓	✓
Location Type FE			✓			✓			✓
Time of the Day			✓			✓			✓
Weekday/Weekend			✓			✓			✓
Adjusted $R^2$	0.002	0.005	0.006	0.005	0.007	0.008	0.007	0.009	0.010
Mean of Dep. Var	1.754	1.754	1.754	1.754	1.754	1.754	1.754	1.754	1.754
Male = Female = Couple ( $p$ -value)							0.000	0.000	0.000
Observations	40,539	40,539	40,539	40,539	40,539	40,539	40,536	40,536	40,536

Note: The outcome is purchase rate (%). Columns 1-3 compare the purchase rates when the seller approached compared to doing nothing, involves a verbal request using the script outlined in text. Columns 4-5 allow for differences across child and adult vendors. Columns 7-9 compare differences among females and couples compared to males. The table pools the categories *single female* and *females together*, and *single male* and *males together*. Standard errors are clustered at the vendor level.

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

Table D.4: Buying Probability (Overall) - Observational Study

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Child Vendor	0.001 (0.004)	0.002 (0.005)	-0.001 (0.005)				-0.002 (0.005)	-0.003 (0.006)	-0.006 (0.006)
Female Passerby				0.012*** (0.003)	0.016*** (0.003)	0.014*** (0.003)	0.014*** (0.004)	0.016*** (0.004)	0.013*** (0.004)
Couple Passerby				0.024*** (0.004)	0.026*** (0.004)	0.024*** (0.004)	0.015*** (0.005)	0.016*** (0.005)	0.014*** (0.005)
Female Passerby×Child Vendor							-0.003 (0.006)	0.000 (0.005)	0.001 (0.006)
Couple Passerby×Child Vendor							0.019*** (0.007)	0.021*** (0.007)	0.022*** (0.007)
Constant	0.038*** (0.003)	0.046*** (0.009)	0.035*** (0.009)	0.028*** (0.003)	0.035*** (0.008)	0.026*** (0.008)	0.029*** (0.004)	0.035*** (0.009)	0.029*** (0.009)
Product FE		✓	✓		✓	✓		✓	✓
Location Type FE			✓			✓			✓
Weekend FE			✓			✓			✓
Time of the Day FE			✓			✓			✓
Surveyor FE			✓			✓			✓
Adjusted $R^2$	-0.000	0.006	0.011	0.002	0.008	0.013	0.002	0.008	0.013
Mean of Dep. Var	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Male = Female = Couple ( $p$ -value)				0.000	0.000	0.000	0.000	0.000	0.000
Observations	49,159	49,159	49,159	49,159	49,159	49,159	49,159	49,159	49,159

**Note:** The outcome is buying probability. Columns 1-3 compare the approach rates of child vendors to that of adult vendors. Columns 4-6 compare approach rates for females and couples compared to males. The table pools the categories *single female* and *females together*, and *single male* and *males together*. Columns 7-9 separate approach rates by passerby and seller type. Standard errors are clustered at the vendor level.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table D.5: Willingness to Pay - Passerby Survey

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female Passerby	-0.587 (0.433)	-0.587 (0.433)	-0.586 (0.432)	-0.549 (0.428)	-0.540 (0.429)	-0.532 (0.430)	-0.711 (0.450)
Couple Passerby	-0.252 (0.516)	-0.252 (0.516)	-0.264 (0.526)	-0.325 (0.524)	-0.317 (0.527)	-0.331 (0.524)	-0.354 (0.557)
Product FE		✓	✓	✓	✓	✓	✓
Surveyor Gender			✓				
Surveyor FE				✓	✓	✓	✓
Location Type FE					✓	✓	✓
Time of the Day FE						✓	✓
Weekend/Weekday FE							✓
Passerby Characteristics							✓
Adjusted $R^2$	0.000	0.164	0.164	0.168	0.167	0.167	0.176
Mean of Dep. Var	12.567	12.567	12.567	12.567	12.567	12.567	12.590
Male = Female = Couple ( <i>p-value</i> )	0.389	0.389	0.391	0.441	0.453	0.465	0.282
Observations	2,080	2,080	2,080	2,080	2,080	2,080	1,944

**Note:** The outcome is willingness to pay for each item shown. The table pools the categories *single female* and *females together*, and *single male* and *males together*. As the randomization is within-passerby, we cannot control for a passerby fixed effect when comparing across passerby groups. Standard errors are clustered at the passerby level.

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

Table D.6: Hourly Earnings by Vendor Type - Field Experiment

	(1)	(2)	(3)	(4)	(5)
Child Vendor	8.606*** (2.078)	8.642*** (1.701)	8.665*** (1.614)	8.694*** (1.657)	8.694*** (1.658)
Constant	7.122*** (1.144)	1.573 (1.527)	3.041* (1.658)	1.078 (2.069)	1.176 (2.199)
Product FE		✓	✓	✓	✓
Location Type FE			✓	✓	✓
Time of the Day FE				✓	✓
Weekend FE					✓
Adjusted $R^2$	0.045	0.159	0.168	0.174	0.173
Mean of Dep. Var	11.458	11.458	11.458	11.458	11.458
Observations	1,028	1,028	1,028	1,028	1,028

**Note:** The table compares hourly earnings (in Rupees) across child and adult vendors. Standard errors are clustered at the vendor level.

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

# Supplemental (Online) Appendix

## A Empirical Design

Figure A.1: Lab-in-the-Field Experiment Design

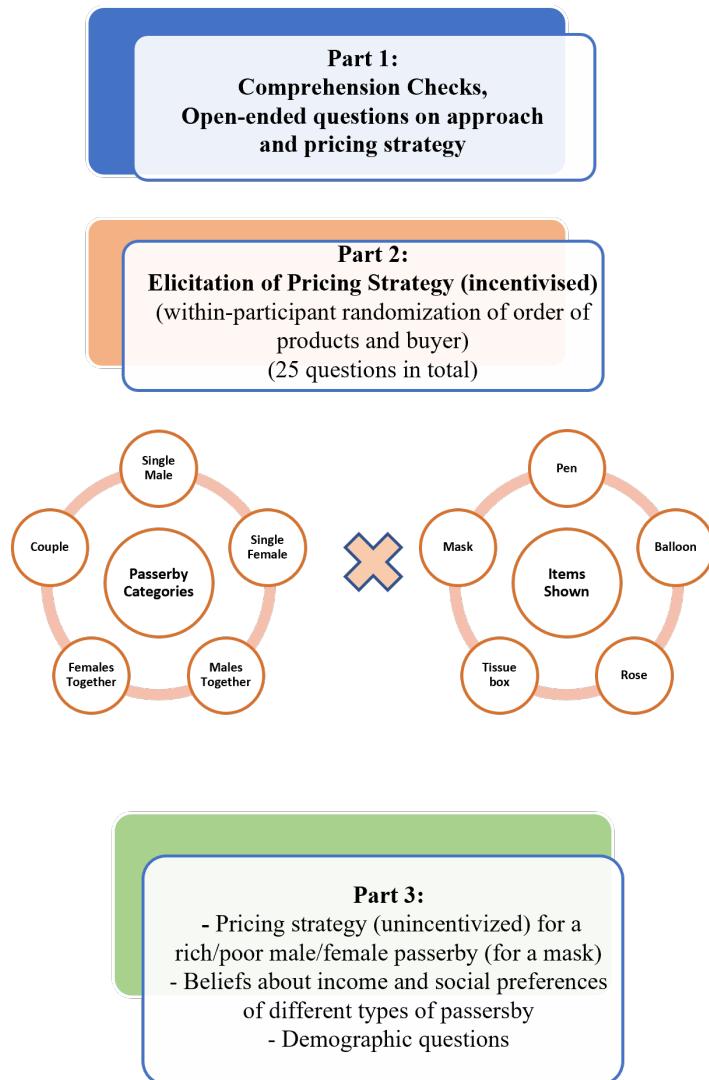
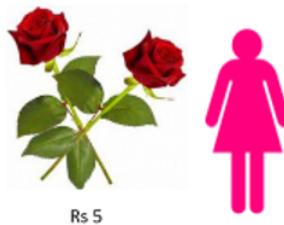


Figure A.2: Lab-in-the-Field Experiment: Illustration

*How much will you charge a woman for this flower which costs you Rs. 5 per piece?*



**Note:** This figure illustrates a sample question from the lab-in-the-field experiment.

Figure A.3: Passerby Survey Design

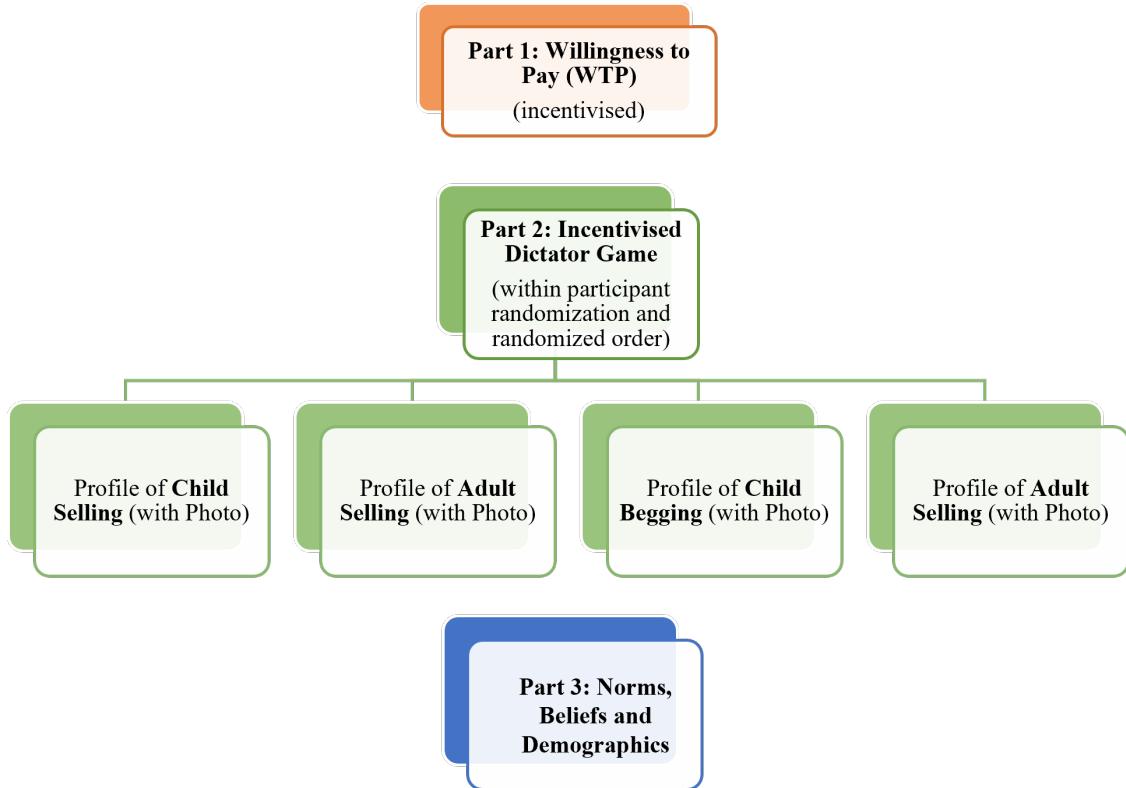
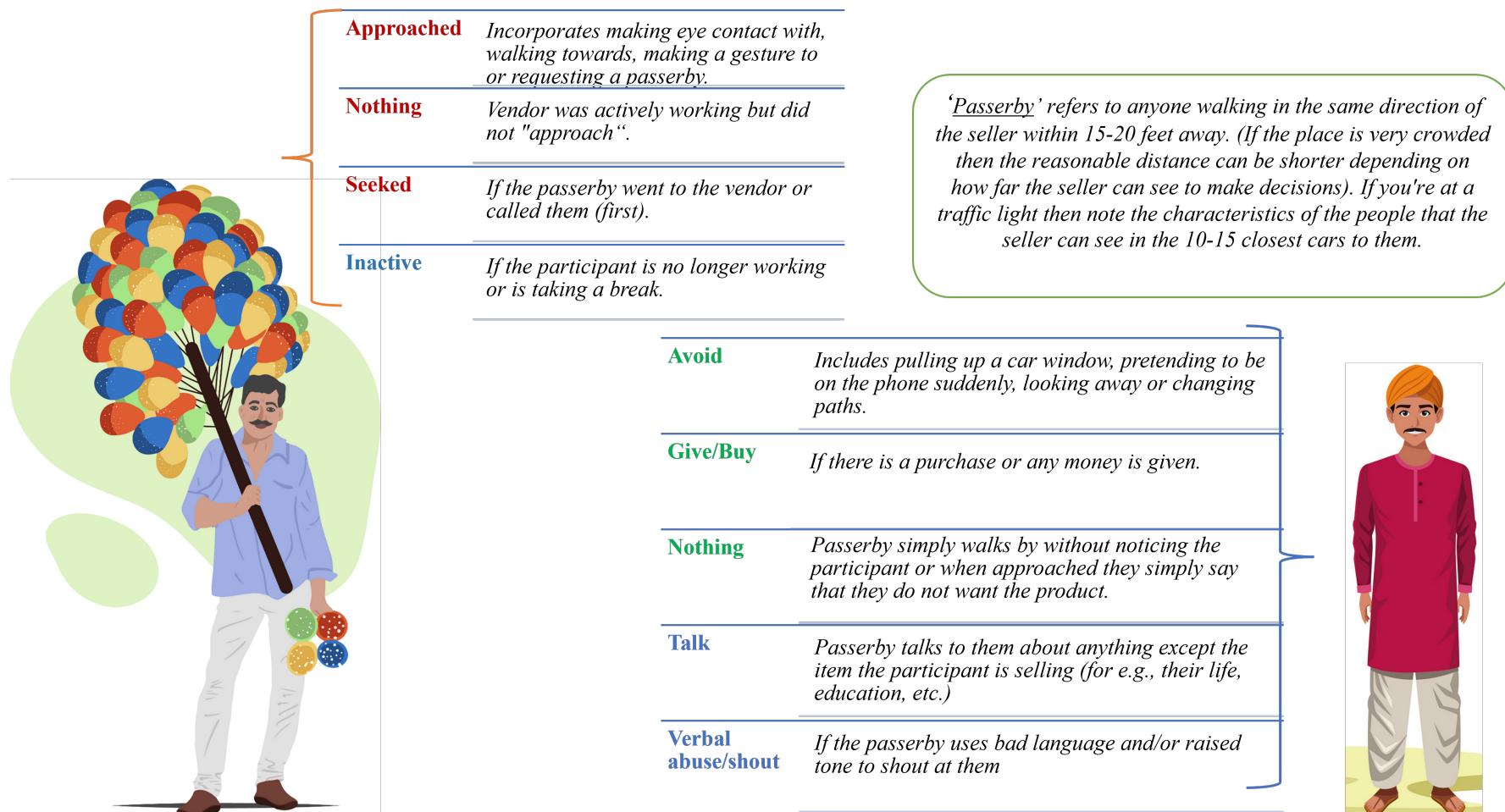


Figure A.4: Products Used in the Field Experiment



**Note:** The figure shows products used in the Field Experiment—pens, balloons, masks, and roses (from left to right).

Figure A.5: Observational Study Coding



Illustrations taken from [The IconScout](#).

Table A.1: Summary of Empirical Exercises

Brief Description of the Empirical Exercise	Objective	Key Outcome(s)
<b>Observational Study:</b> Conducting real-time, structured observations of street vendors across public spaces. This involved coding data on vendor behavior (e.g., approach strategy, quoted prices, goods sold) and passerby characteristics (e.g., gender, whether accompanied), as well as whether a transaction occurred.	Documenting naturally occurring buyer-seller interactions, capturing behavior that is difficult to elicit reliably through self-reports.	Seller targeting strategy
<b>Field experiment:</b> Partnering with both child and adult vendors and randomized whether and which passerby a vendor approached, and the price quoted.	By holding seller strategy constant, the experiment isolates the role of buyer-side determinants in transaction outcomes. This allows for clean identification of purchasing differentials driven by buyer behavior.	Purchasing differentials by buyer and seller identity Effect of seller approach on purchase likelihood
<b>Lab-in-field Experiment:</b> Vendors were asked to price different goods (with known costs) for different buyer categories (shown in a randomized order). They also answered questions on typical prices, earnings, targeting strategies, and beliefs about buyer social preferences and relative income.	To isolate and identify price discrimination by buyer identity by holding the strategy space of goods and their cost constant. This eliminates endogeneity concerns in the observational data, where prices may be influenced by—and thus endogenous to—seller targeting decisions. Survey responses further reveal the strategic reasoning and beliefs vendors hold about buyer characteristics.	Price discrimination Seller inferences about buyers
<b>Passerby Survey:</b> The survey involved a standard incentivized willingness to pay exercise. Participants also played an incentivized dictator game where they were shown real profiles of children and adults working on the streets as possible recipients. The survey also included questions on perceived norms and attitudes toward street vending and pan-handling.	To measure buyers' valuations for goods and altruism towards individuals working on the street, and to assess whether differences in purchasing behavior stem from underlying beliefs or perceived social norms.	Willingness to pay Donations Perceived social norms and beliefs

Table A.2: Buying Probability - All Passerby Categories Expanded - Observational Study

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Child Vendor	0.001 (0.004)	0.002 (0.005)	-0.001 (0.005)				-0.005 (0.007)	-0.006 (0.007)	-0.010 (0.008)
Passerby:Couple				0.022*** (0.004)	0.024*** (0.004)	0.022*** (0.004)	0.011** (0.005)	0.013** (0.005)	0.010* (0.005)
Passerby:Woman				0.006* (0.003)	0.011*** (0.003)	0.009*** (0.004)	0.007 (0.005)	0.010* (0.005)	0.008 (0.005)
Passerby:Women				0.013*** (0.004)	0.016*** (0.004)	0.013*** (0.004)	0.012** (0.006)	0.014*** (0.005)	0.010* (0.005)
Passerby:Men				-0.006** (0.003)	-0.005 (0.003)	-0.005 (0.003)	-0.009** (0.004)	-0.008** (0.004)	-0.009** (0.004)
Passerby:Couple × Child Vendor							0.022*** (0.008)	0.024*** (0.007)	0.026*** (0.008)
Passerby:Woman × Child Vendor							-0.002 (0.007)	0.002 (0.007)	0.003 (0.007)
Passerby:Women × Child Vendor							0.001 (0.008)	0.004 (0.008)	0.006 (0.008)
Passerby:Men × Child Vendor							0.005 (0.006)	0.006 (0.006)	0.008 (0.006)
Constant	0.038*** (0.003)	0.046*** (0.009)	0.035*** (0.009)	0.030*** (0.003)	0.036*** (0.009)	0.028*** (0.008)	0.033*** (0.005)	0.039*** (0.010)	0.033*** (0.010)
Product FE	✓	✓		✓	✓	✓	✓	✓	✓
Location Type FE		✓			✓				✓
Weekend FE			✓			✓			✓
Time of the Day FE			✓			✓			✓
Surveyor FE			✓			✓			✓
Adjusted R <sup>2</sup>	-0.000	0.006	0.011	0.002	0.008	0.013	0.003	0.008	0.013
Mean of Dep. Var	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Woman = Women ( <i>p</i> -value)				0.034	0.066	0.225	0.063	0.128	0.216
Man = Men ( <i>p</i> -value)				0.033	0.116	0.101	0.470	0.730	0.794
Observations	49,159	49,159	49,159	49,159	49,159	49,159	49,159	49,159	49,159

**Note:** The outcome is overall buying probability. Columns 1-3 compare the approach rates of child vendors to that of adult vendors. Columns 4-6 compare approach rates for females and couples compared to males. Columns 7-9 separate approach rates by passerby and seller type. Standard errors are clustered at the vendor level.

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

Table A.3: Seller Approach Probability - All Passerby Categories Expanded - Observational Study

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Child Vendor	0.266*** (0.029)	0.225*** (0.034)	0.206*** (0.030)				0.140*** (0.034)	0.079** (0.036)	0.066** (0.032)
Passerby:Couple				0.170*** (0.020)	0.200*** (0.017)	0.197*** (0.016)	0.066*** (0.023)	0.083*** (0.022)	0.087*** (0.020)
Passerby:Woman				0.183*** (0.020)	0.194*** (0.018)	0.182*** (0.017)	0.088*** (0.025)	0.099*** (0.021)	0.087*** (0.020)
Passerby:Women				0.163*** (0.024)	0.210*** (0.020)	0.204*** (0.018)	0.063* (0.032)	0.094*** (0.027)	0.095*** (0.022)
Passerby:Men				-0.007 (0.014)	0.026** (0.013)	0.031** (0.013)	0.003 (0.018)	0.023 (0.017)	0.021 (0.018)
Passerby:Couple × Child Vendor							0.210*** (0.035)	0.223*** (0.032)	0.214*** (0.030)
Passerby:Woman × Child Vendor							0.154*** (0.037)	0.164*** (0.036)	0.162*** (0.035)
Passerby:Women × Child Vendor							0.189*** (0.044)	0.207*** (0.040)	0.203*** (0.036)
Passerby:Men × Child Vendor							0.011 (0.027)	0.001 (0.026)	0.009 (0.026)
Constant	0.325*** (0.024)	0.393*** (0.055)	0.425*** (0.058)	0.354*** (0.017)	0.416*** (0.047)	0.429*** (0.051)	0.282*** (0.026)	0.337*** (0.058)	0.390*** (0.059)
Product FE	✓	✓		✓	✓		✓	✓	✓
Location Type FE		✓			✓			✓	
Weekend FE		✓			✓			✓	
Time of the Day FE		✓			✓			✓	
Surveyor FE		✓			✓			✓	
Adjusted R <sup>2</sup>	0.071	0.141	0.202	0.029	0.138	0.202	0.103	0.178	0.236
Mean of Dep. Var	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
Woman = Women ( <i>p</i> -value)				0.143	0.178	0.022	0.554	0.010	0.001
Man = Men ( <i>p</i> -value)				0.594	0.046	0.015	0.501	0.213	0.106
Observations	46,541	46,541	46,541	46,541	46,541	46,541	46,541	46,541	46,541

**Note:** The outcome is seller approach, which includes making eye contact/gesture and/or verbal request as outlined in Figure A.5. Columns 1-3 compare the approach rates of child vendors to that of adult vendors. Columns 4-6 compare approach rates for females and couples compared to males. Columns 7-9 separate approach rates by passerby and seller type. Standard errors are clustered at the vendor level.

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

Table A.4: Purchase Rate (%) - All Passerby Categories Expanded - Field Experiment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Child Vendor	1.145*** (0.301)	1.144*** (0.259)	1.150*** (0.224)				0.613 (0.371)	0.611* (0.331)	0.616* (0.342)
Passerby:Couple				1.118*** (0.316)	1.118*** (0.316)	1.118*** (0.316)	0.294 (0.261)	0.293 (0.261)	0.293 (0.261)
Passerby:Woman				0.208 (0.241)	0.206 (0.241)	0.206 (0.241)	0.119 (0.247)	0.117 (0.246)	0.117 (0.246)
Passerby:Women				0.316 (0.249)	0.315 (0.249)	0.316 (0.249)	0.022 (0.223)	0.021 (0.223)	0.021 (0.223)
Passerby:Men				-0.225 (0.231)	-0.226 (0.231)	-0.226 (0.231)	-0.348* (0.193)	-0.352* (0.193)	-0.351* (0.193)
Passerby:Couple×Child Vendor							1.646*** (0.557)	1.647*** (0.557)	1.648*** (0.557)
Passerby:Woman×Child Vendor							0.179 (0.486)	0.179 (0.486)	0.179 (0.486)
Passerby:Women×Child Vendor							0.587 (0.493)	0.588 (0.493)	0.589 (0.492)
Passerby:Men×Child Vendor							0.248 (0.454)	0.251 (0.454)	0.251 (0.453)
Constant	1.181*** (0.203)	0.543** (0.248)	0.669** (0.306)	1.470*** (0.202)	0.831*** (0.304)	0.960** (0.388)	1.163*** (0.271)	0.527* (0.274)	0.652* (0.339)
Product FE		✓	✓		✓	✓		✓	✓
Location Type FE			✓			✓			✓
Time of the Day			✓			✓			✓
Weekday/Weekend			✓			✓			✓
Adjusted $R^2$	0.002	0.005	0.006	0.001	0.004	0.005	0.003	0.006	0.007
Mean of Dep. Var	1.754	1.754	1.754	1.754	1.754	1.754	1.754	1.754	1.754
Woman = Women ( <i>p</i> -value)				0.647	0.643	0.640	0.405	0.402	0.400
Man = Men ( <i>p</i> -value)				0.333	0.329	0.330	0.807	0.806	0.807
Observations	40,539	40,539	40,539	40,536	40,536	40,536	40,536	40,536	40,536

Note: The outcome is purchase rate (%). Columns 1-3 compare the purchase rates from child vendors to that of adult vendors. Columns 4-6 compare purchase rates by females and couples compared to males. Columns 7-9 separate purchase rates by passerby and seller type. Standard errors are clustered at the vendor level.

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

Table A.5: Price Quoted - All Passerby Categories Expanded - Lab-in-the-Field Pricing Experiment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Child Vendor	4.015*** (0.888)	3.413*** (0.907)				2.637*** (0.824)	1.918** (0.840)	
Passerby:Couple			3.603*** (0.544)	3.563*** (0.547)	3.555*** (0.549)	2.339*** (0.424)	2.239*** (0.423)	2.268*** (0.430)
Passerby:Men			1.196*** (0.310)	1.213*** (0.303)	1.244*** (0.307)	0.237 (0.206)	0.183 (0.208)	0.197 (0.210)
Passerby:Woman			0.226 (0.308)	0.217 (0.301)	0.240 (0.306)	-0.046 (0.288)	-0.147 (0.286)	-0.147 (0.291)
Passerby:Women			1.703*** (0.344)	1.695*** (0.339)	1.717*** (0.345)	0.614 (0.377)	0.526 (0.374)	0.526 (0.381)
Passerby:Couple×Child Vendor						2.423** (1.049)	2.540** (1.056)	2.470** (1.060)
Passerby:Men×Child Vendor						1.848*** (0.592)	1.983*** (0.580)	2.011*** (0.587)
Passerby:Woman×Child Vendor						0.524 (0.601)	0.700 (0.588)	0.742 (0.597)
Passerby:Women×Child Vendor						2.093*** (0.667)	2.245*** (0.657)	2.287*** (0.668)
Constant	26.451*** (0.474)	7.574*** (1.017)	27.196*** (0.423)	7.252*** (1.094)	2.080*** (0.479)	25.822*** (0.481)	7.014*** (1.045)	2.864*** (0.427)
Product FE		✓		✓	✓		✓	✓
Surveyor FE		✓		✓			✓	
Seller FE					✓			✓
Adjusted $R^2$	0.003	0.780	0.001	0.779	0.830	0.004	0.782	0.830
Mean of Dep. Var	28.542	28.542	28.542	28.542	28.542	28.542	28.542	28.542
Woman = Women ( $p$ -value)		0.000	0.000	0.000	0.000	0.000	0.000	0.000
Man = Men ( $p$ -value)		0.000	0.000	0.000	0.000	0.000	0.000	0.000
Observations	8,330	8,330	8,330	8,330	8,330	8,330	8,330	8,330

**Note:** The outcome is price quoted in the Lab-in-the-Field Pricing Experiment. Columns 1-2 compare the price quoted by child vendors to that of adult vendors. Since the randomization was within-vendor, it is not possible to control for a seller fixed effect in this comparison. Columns 3-5 compare price quoted for females and couples compared to males. Columns 6-8 separate price quoted by passerby and seller type. Since the randomization was within-vendor, the regression omits the inclusion of a Child/Adult Vendor dummy in Column 8 when controlling for a seller fixed effect. Standard errors are clustered at the vendor level.

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

## B Additional Tables

Table B.1: Rounds of Observations and Characteristics of Adult Vendors

	(1) 1 Obs.	(2) > 1 Obs.	(3) (1) vs. (2), p-value
Age	33.318	37.000	0.123
Female	0.339	0.410	0.407
Less than 1 year	0.167	0.154	0.847
1-2 years	0.130	0.051	0.169
2-5 years	0.210	0.179	0.674
5-10 years	0.160	0.128	0.618
10+ years	0.333	0.487	0.074
Market	0.800	0.872	0.303
Metro Station	0.109	0.103	0.906
Red Light	0.091	0.026	0.174
N	165	39	

Note: The table compares the demographic variables of the adult vendors whom the research team was able to complete a single and multiple (two or three) observational study rounds with.

Table B.2: Rounds of Observations and Characteristics of Child Vendors

	(1) 1 Obs.	(2) > 1 Obs.	(3) (1) vs. (2), p-value
Age	11.145	11.600	0.311
Female	0.528	0.500	0.750
Less than 1 year	0.205	0.125	0.250
1-2 years	0.218	0.275	0.447
2-5 years	0.436	0.375	0.489
5-10 years	0.135	0.175	0.517
10+ years	0.006	0.050	0.045
Market	0.673	0.700	0.745
Metro Station	0.239	0.300	0.429
Red Light	0.088	0.000	0.052
N	159	40	

Note: The table compares the demographic variables of the child vendors whom the research team was able to complete a single and multiple (two or three) observational study rounds with.

Table B.3: Summary Statistics for Partnering Vendors in the Field Experiment

	<u>Adult</u>	<u>Child</u>
<i>Demographics</i>		
Age	28.35	11.34
Female	0.88	0.59
<i>Experience</i>		
Less than 1 year	0.20	0.16
1-2 years	0.05	0.14
2-5 years	0.36	0.50
5-10 years	0.18	0.19
10+ years	0.21	0.01
<i>Type of Location</i>		
Market	0.55	0.59
Metro Station	0.45	0.41
Observations	66	80

Table B.4: Price Quoted - Observational Study

	(1)	(2)	(3)	(4)	(5)	(6)
Child Vendor	7.202*	7.732*			7.895**	7.755**
	(3.979)	(4.152)			(3.595)	(3.678)
Female Passerby			8.987***	7.901***	9.532**	8.036**
			(2.701)	(2.556)	(3.882)	(3.620)
Couple Passerby			3.882	2.913	2.798	1.658
			(2.579)	(2.487)	(4.031)	(3.775)
Female Passerby×Child Vendor					-2.302	-1.267
					(4.667)	(4.329)
Couple Passerby×Child Vendor					0.920	1.530
					(4.505)	(4.319)
Constant	6.509**	6.337	5.538***	4.695	1.961	2.811
	(2.650)	(5.041)	(1.862)	(5.222)	(3.493)	(5.927)
Product FE	✓	✓	✓	✓	✓	✓
Location Type FE		✓		✓		✓
Weekend FE		✓		✓		✓
Time of the Day FE		✓		✓		✓
Surveyor FE		✓		✓		✓
Adjusted $R^2$	0.553	0.563	0.555	0.563	0.559	0.567
Mean of Dep. Var	35.438	35.438	35.438	35.438	35.438	35.438
Male = Female = Couple ( <i>p-value</i> )			0.003	0.006	0.035	0.045
Observations	1,452	1,452	1,452	1,452	1,452	1,452

**Note:** The outcome is price quoted (in Rupees). Columns 1-2 compare the price quoted by child vendors to that of adult vendors. Columns 3-4 compare price quoted for females and couples compared to males. The table pools the categories *single female* and *females together*, and *single male* and *males together*. Columns 5-6 separate price quoted by passerby and seller type. Standard errors are clustered at the vendor level.

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

Table B.5: Price Quoted when Seller Approaches or Passerby Seeks - Observational Study

	(1)	(2)	(3)	(4)	(5)	(6)
Passerby Seeks	0.073 (3.474)	1.434 (3.276)	-1.250 (4.583)	-0.549 (4.433)	-1.360 (4.079)	-0.177 (3.858)
Child Vendor			2.884 (4.673)	2.870 (4.865)		
Passerby Seeks×Child Vendor			7.519 (6.194)	9.726 (6.475)		
Female Passerby					4.909* (2.853)	4.004 (2.841)
Couple Passerby					6.469** (2.967)	5.487* (3.003)
Passerby Seeks×Female Passerby					6.052 (4.480)	6.038 (4.242)
Passerby Seeks×Couple Passerby					-6.198 (4.793)	-5.682 (4.552)
Constant	10.366*** (1.500)	8.611* (4.947)	7.749** (3.189)	8.800 (5.750)	6.452*** (2.420)	5.437 (5.131)
Product FE	✓	✓	✓	✓	✓	✓
Location Type FE		✓		✓		✓
Weekend FE		✓		✓		✓
Time of the Day FE		✓		✓		✓
Surveyor FE		✓		✓		✓
Adjusted $R^2$	0.553	0.561	0.558	0.568	0.561	0.568
Mean of Dep. Var	35.337	35.337	35.337	35.337	35.337	35.337
Male = Female = Couple ( <i>p-value</i> )					0.004	0.006
Observations	1,414	1,414	1,414	1,414	1,414	1,414

**Note:** The outcome is price quoted (in Rupees). Columns 1-2 compare the price quoted when the passerby seeks the vendor to the case when the seller approaches the passerby. Columns 3-4 allow for differences by vendor type as well. Columns 5-6 allow for differences by passerby type. The table pools the categories *single female* and *females together*, and *single male* and *males together*. Standard errors are clustered at the vendor level.

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

Table B.6: Revenue/Earnings of Vendors - Observational Study

	(1)	(2)	(3)	(4)	(5)	(6)
Child Vendor	-0.660** (0.327)	-0.804*** (0.292)	-0.702** (0.328)	-0.827*** (0.292)	0.037 (0.118)	-0.003 (0.119)
Constant	1.100*** (0.261)	0.397 (0.399)	0.931*** (0.244)	0.303 (0.398)	0.290** (0.140)	0.158 (0.158)
Product FE	✓	✓	✓	✓	✓	✓
Location Type FE		✓		✓		✓
Weekend FE		✓		✓		✓
Time of the Day FE		✓		✓		✓
Surveyor FE		✓		✓		✓
Adjusted $R^2$	0.004	0.007	0.005	0.007	0.003	0.003
Mean of Dep. Var	1.804	1.804	1.770	1.770	0.672	0.672
Observations	34,869	34,869	34,776	34,776	34,293	34,293

**Note:** The table compares revenue/earnings (in Rupees) across child and adult vendors. Revenue is coded as zero for instances where there was no transaction. Columns 1-2 report the overall results, including instances where money was given but no sale was made. Columns 3-4 report earnings from sales, including those of multiple goods. Columns 3-4 restrict to those cases where only one good was sold. Standard errors are clustered at the vendor level.

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01.

## C Theoretical Appendix

### Proofs

**Lemma 1** (Properties of Demand). Denote the probability of buying as  $B$ . We have (i)  $\frac{\partial B}{\partial p} \leq 0$ , (ii)  $\frac{\partial B}{\partial a} \geq 0$ , (iii)  $\frac{\partial B}{\partial s} \geq 0$ , (iv)  $\frac{\partial B}{\partial r} \geq 0$ .

**Proof** (Lemma 1: Probability of Purchase). For simplicity, subscripts for goods ( $g$ ) and buyer and seller identity ( $b$  and  $s$ ) are suppressed in this proof. A buyer's strategy will be given by:

$$\text{If } r = 0 : d = 1 \text{ if } v \geq (1 - a)p$$

$$\text{If } r = 1 : d = 1 \text{ if } v \geq (1 - a)p - s$$

By backward induction:

$$Pr(Buy) = Pr(v \geq (1 - a)p) \text{ if } r = 0$$

$$Pr(Buy) = Pr(v \geq (1 - a)p - s) \text{ if } r = 1$$

Using  $v \sim F(v)$  we have:

$$Pr(Buy) = 1 - F((1 - a)p) \text{ if } r = 0$$

$$Pr(Buy) = 1 - F((1 - a)p - s) \text{ if } r = 1$$

The result follows by taking partial derivatives and comparing them across cases.

**Proof** (Proposition 1: Testable Implications of the Model on Purchasing Behavior). Denote the probability of buying as  $B_{gbs}$  where  $g$  indexes goods,  $b$  denotes the buyer identity and  $s$  denotes the seller identity. Then:

1. If consumption utility is set to zero for all goods, i.e.  $v_g = 0 \forall g$ , and prices are held constant, i.e.  $p_g = p'_g = p$ , this implies  $B_{gbs} = B_{g'b's} = Pr(s_{bs} * r \geq (1 - a_{bs})p) \forall (g, g')$ , that is, the probability of purchase (conditional on seller's request  $r \in \{0,1\}$ ) should not vary across goods. By reverse implication, if  $B_{gbs} \neq B_{g'b's}$ , holding prices fixed, then  $v_g \neq v'_g$  and  $(v_g, v'_g) \neq \mathbf{0}$ .
2. If prosocial motives do not affect behavior, i.e.,  $a_{bs} = 0 \& s_{bs} = 0 \forall$  buyer and seller pairs  $(b, s)$ , then  $B_{gbs} = B_{gb's'} = Pr(v_g \geq p_g) \forall (b, s), (b', s')$ . By reverse implication, if  $B_{gbs} \neq B_{gb's'}$  then  $(s_{bs}, s_{b's'}, a_{bs}, a_{b's'}) \neq \mathbf{0}$ .
3. If refusal costs do not exist, i.e.,  $s_{bs} = 0 \forall$  buyer and seller pairs  $(b, s)$ , then  $B_{gbs}(r = 1) = B_{gbs}(r = 0) = Pr(v_g \geq (1 - a_{bs})p_g) \forall (b, s)$ , that is, the probability of purchase should not vary depending on whether the seller made a request (and vice versa).
4. If altruism does not affect behavior, i.e.  $a_{bs} = 0 \forall$  buyer and seller pairs  $(b, s)$ , then  $B_{gbs}(r = 0) = B_{gb's'}(r = 0) = Pr(v_g \geq p_g)$ , that is, the probability of purchase should not vary depending on buyer or seller identity (without seller's request). By reverse implication,  $B_{gbs}(r = 0) \neq B_{gb's'}(r = 0) \implies (a_{bs}, a_{b's'}) \neq \mathbf{0}$ .

**Proof** (Proposition 2: Testable Implications of the Model on Seller Strategy). We have:

1. With goods having no consumption utility, i.e.,  $v_g = 0 \forall g$ , maximizing the seller's utility gives  $p_g^*(r = 1) = \text{argmax}_{p_g} (p_g - c_g)$  subject to  $s_{bs} \geq (1 - a_{bs})p_g \forall g$ , i.e., the buyer making the purchase. Therefore, it will be optimal for the seller to charge the maximum price possible that makes the buyer indifferent between buying and not, i.e.,  $p_g^*(r = 1) = s_{bs}/(1 - a_{bs}) \forall g$ . Note that this does not vary across goods. In the case with no seller request, as the net utility from purchasing,  $-(1 - a_{bs})p_g$ , is negative for the consumer with any positive price,  $p_g^*(r = 0) = 0$ . Thus, if the goods have no consumption utility and purchases are solely driven by pure charitable giving prosocial motives, prices will not vary across goods. By reverse implication, if  $p_g^* \neq p_g'^*$ , then  $v_g \neq v_g'$  and  $(v_g, v_g') \neq \mathbf{0}$ .

2. Maximizing the seller's utility yields:

$$p_g^*(r = 0) = \text{argmax}_{p_g} \Pr(v_g \geq (1 - a_{bs})p_g)(p_g - c_g)$$

$$p_g^*(r = 1) = \text{argmax}_{p_g} \Pr(v_g \geq (1 - a_{bs})p_g - s_{bs})(p_g - c_g)$$

Now, if prosocial motives do not affect behavior, i.e.,  $a_{bs} = 0 \& s_{bs} = 0 \forall$  buyer and seller pairs  $(b, s)$ , then  $p_g^* = \text{argmax}_{p_g} \Pr(v_g \geq p_g)(p_g - c_g) \forall$  buyer and seller pairs  $(b, s)$ . That is, the price charged for a good should not vary across buyer or seller identity. By reverse implication, if  $p_{gbs}^*(r = 1) \neq p_{gb's'}^*(r = 1)$ , then  $(s_{bs}, s_{b's'}, a_{bs}, a_{b's'}) \neq \mathbf{0}$  for any two buyer and seller pairs  $(b, s), (b', s')$  and similarly, if  $p_{gbs}^*(r = 0) \neq p_{gb's'}^*(r = 0)$ , then  $(a_{bs}, a_{b's'}) \neq \mathbf{0}$  for any two buyer and seller pairs  $(b, s), (b', s')$ .

3. A seller's expected utility conditional on the request strategy and optimal pricing is:<sup>37</sup>

$$[V] = \begin{cases} \Pr(v \geq (1 - a)p_{r=1}^* - s)(p_{r=1}^* - c) - e & \text{if } r = 1 \\ \Pr(v \geq (1 - a)p_{r=0}^*)(p_{r=0}^* - c) & \text{if } r = 0 \end{cases}$$

Here  $\Pr(v \geq (1 - a)p_{r=1}^* - s)$  is the expected probability of purchase conditional on approach (using backward induction incorporating beliefs about the buyer's best response function); similarly,  $\Pr(v \geq (1 - a)p_{r=0}^*)$  is the expected probability of purchase when the seller does not make a request.

Therefore, the seller's optimal request strategy is:

$$r = \begin{cases} 1 & \text{if } \Pr(v \geq (1 - a)p_{r=1}^* - s)(p_{r=1}^* - c) - \Pr(v \geq (1 - a)p_{r=0}^*)(p_{r=0}^* - c) \geq e \\ 0 & \text{Otherwise} \end{cases}$$

Now, if refusal costs do not exist, i.e.,  $s_{bs} = 0 \forall$  buyer and seller pairs  $(b, s)$ , then  $p_{r=1}^* = p_{r=0}^*$  and the probability of purchase  $B_{gbs}(r = 1) = B_{gbs}(r = 0) = \Pr(v_g \geq (1 - a_{bs})p_g^*) \forall (b, s)$ . That is, the optimal price and probability of purchase will not vary depending on the seller's request. The result that the optimal request rate is zero follows immediately, as the seller has no net gain from making a request, which is costly in terms of effort. That is, the condition for approaching and making a request  $r = 1$  will never be satisfied if  $s_{bs} = 0 \forall (b, s)$ . By revealed preference, the reverse implication also holds; that is, if the request rate is nonzero,  $r^* \neq 0$ , then  $s_{bs} \neq 0 \forall (b, s)$ .

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<sup>37</sup>For ease of notation, subscripts for goods ( $g$ ) and buyer and seller identity ( $b$  and  $s$ ) are suppressed.