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Embedded livelihoods: The structure of street vending markets in India

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Abstract

Street vending provides livelihoods for millions of workers across the developing world, yet the sector remains poorly understood and subject to repeated policy interventions that have largely failed. This paper provides a comprehensive microeconomic profile of street vending markets in Patna, Bihar, using original survey data from 2,922 stationary vendors across 206 marketplaces. We document that vendors are deeply embedded in overlapping social, spatial, and economic structures that make their livelihoods far more organized and far harder to administratively reshape than standard policy frameworks assume. Entry into vending and product choice are mediated by family networks; labour is almost entirely household-based; procurement is organized through stable relational ties with suppliers; and vendors cluster in spatially differentiated markets from which they derive substantial agglomeration economies. Pricing is implicitly coordinated through shared wholesale cost anchors, and 99 percent of vendors have never changed their marketplace despite operating without legal tenure and facing regular eviction pressure. The regulatory environment compounds this vulnerability: fewer than 2 percent of vendors are aware of the Street Vendors Act of 2014, which was designed to protect them, and over 40 percent report moderate to high psychological distress. We argue that the concept of embeddedness offers a more accurate framework for understanding this sector than the atomistic agent model implicit in most policy interventions, and that formalization efforts, particularly spatial relocation mandates, will continue to fail until they account for the social, spatial, and economic complementarities that sustain vendor livelihoods.

1 Introduction

Street vending is among the most visible features of urban economic life in the developing world, constituting anywhere from 2% to 6.8% of employment in low- and middle-income countries (Ramírez Reynoso and Vanek, 2024), yet it remains among the least understood. In cities across South Asia, Sub-Saharan Africa, and Latin America, vendors selling food, produce, and goods from carts and temporary stalls occupy pavements, roadsides, and market corridors in ways that are simultaneously indispensable to urban food systems and a persistent source of policy anxiety. Governments have responded with a mix of tolerance, harassment, and periodic formalization drives, most of which have failed to durably improve vendor welfare or resolve the underlying tensions between street vending and urban governance (Roever and Skinner, 2016; Bhowmik, 2005).

We argue that a central reason these interventions fail is that they misread the structure of the sector. The dominant policy approach, exemplified in India by the Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act of 2014, treats vendors as atomistic, mobile agents who can be assigned to designated zones, issued licenses, and integrated into formal regulatory frameworks with manageable disruption to their livelihoods. The evidence assembled in this paper suggests this picture is wrong in ways that matter. Street vendors in Patna are

not atomistic, they are deeply embedded in overlapping social, spatial, and economic structures that make their livelihoods far more organized, and far harder to administratively reshape, than standard policy frameworks assume.

By embeddedness we mean something specific, empirically grounded, and distinct from two simpler alternatives. The under-socialized account implicit in the Street Vendors Act treats vendors as atomistic agents whose location is incidental and whose livelihoods can be administratively reassigned. An over-socialized alternative might acknowledge that caste and family tradition shape vendor behaviour, but would treat these as internalized background conditions rather than ongoing relational structures, and would similarly conclude that once the background is accounted for, vendors can be treated as interchangeable. The embeddedness argument rejects both. Vendors are not atomistic, but neither are they simply executing inherited scripts. Their behaviour is embedded in concrete, ongoing systems of social relations, with specific suppliers, specific neighbouring vendors, specific customers, that have been built up over years of operating in the same location and that generate real economic value. It is the specificity and ongoing nature of these relations, not just their existence as a background social fact, that makes vendor livelihoods resistant to administrative reshaping.

Each dimension of embeddedness we document has a counterpart in standard economic analysis. Social embeddedness maps onto occupational inheritance, network-based information transmission, and barriers to inter-sectoral mobility. Spatial embeddedness maps onto location-specific capital, agglomeration economies, and switching costs. Economic embeddedness maps onto relational contracting, supplier credit, and implicit insurance arrangements. We use the embeddedness framework not to displace these concepts but to foreground a feature they individually obscure: the three dimensions are mutually reinforcing. A vendor's location is valuable partly because their supplier relationships were built around it; those supplier relationships are stable partly because family labour reduces the need to renegotiate terms with outside workers; and the social network that sustains family labour is itself reproduced through the intergenerational transmission of location access. Disrupting any one dimension therefore risks unravelling the others, a systemic cost that analyses focusing on a single margin will understate.

This embeddedness is both a source of resilience and a source of vulnerability. It sustains livelihoods by providing vendors with stable supplier relationships, location-specific customer bases, and family labour that lowers operating costs. But it also locks vendors into spatial and occupational positions that are difficult to exit, concentrates the sector among the most socially disadvantaged (87 percent of vendors belong to Backward Castes and an additional 10 percent to Scheduled Castes or Tribes), and leaves vendors exposed to regulatory harassment and eviction without the legal protections or social insurance that would allow them to absorb shocks. The result is a sector that is stable in its structure but precarious in its welfare outcomes.

We document these patterns using original survey data collected from 2,922 stationary street vendors in Patna, the capital of Bihar, one of India's most populous and least developed states, and a setting where the failures of the 2014 Act's implementation are particularly visible. Patna offers a useful empirical window precisely because it combines a large and well-established street vending sector with an active policy environment that has attempted, with limited success, to formalize and spatially reorganize vendors. The survey covers vendor demographics, entry pathways, location choices and spatial organization, procurement and supply chain arrangements, pricing strategies, labour use, earnings, health, and regulatory exposure, providing what we believe is one of the most comprehensive microeconomic profiles of an urban street vending sector available for an Indian city.

The paper makes two contributions. The first is empirical: we provide a systematic descriptive account of the street vending sector in Patna that establishes a set of stylized facts about vendor behaviour, market organization, and the constraints vendors face. The second is conceptual: we show that the concept of embeddedness, drawn from the sociology of economic life (Granovetter, 1985) but grounded here in concrete, measurable patterns, offers a more accurate and more useful framework for understanding this sector than the atomistic agent model implicit in most policy interventions. Getting the model right matters: policies designed around mobile, atomistic vendors are unlikely to help embedded ones, and may actively harm them by disrupting the social and spatial structures on which their livelihoods depend, though establishing the magnitude of this harm requires causal identification strategies beyond the scope of this paper.

The remainder of the paper is structured as follows. Section 2 provides background on the street vending sector in India, the 2014 Act, and the Patna context. Section 3 describes the survey data. Section 4 profiles the vendors in the sample, who they are, where they come from, and why they entered the sector. Section 5 examines the spatial organization of vending in Patna, including location choices, clustering patterns, and agglomeration benefits. Section 6 documents how vending markets function internally, product choice, procurement, pricing, labour, and digital adoption. Section 7 examines the economic dimensions of vending, including earnings, costs, and vendor wellbeing. Section 8 turns to the regulatory environment, evictions, and harassment. Section 9 concludes with implications for policy and directions for future research.

2 Street Vending in Context

Street vending is a widespread and economically significant form of informal employment across the developing world. The International Labour Organization (ILO) defines street vendors broadly as own-account workers who offer goods and services for sale in public spaces, outside of any fixed commercial establishment ILO, 2018. This definition captures the one feature that distinguish street vending from other forms of informal work: its reliance on public space as the site of production and exchange, and its operation outside any fixed commercial structure. These features shape both the opportunities street vending affords: low barriers to entry, flexibility, proximity to customers, and the vulnerabilities it generates, including insecure tenure, exposure to regulatory harassment, and absence of the infrastructure that fixed commercial premises provide. The following subsections situate street vending within India's policy and legal framework and describe the specific context of Patna, Bihar.

2.1 Street Vending in India: Policy and Legal Framework

The Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014 (SVA henceforth) is the principal legislation governing street vending in India. The Act mandates state governments to survey all street vendors, issue certificates of vending, and designate formal vending zones to which vendors are to be allocated. Vendors accommodated in these zones receive legal recognition and protection from eviction, rights that are absent in their current informal locations. Recognition under the SVA also makes vendors eligible for complementary government schemes, most notably the Pradhan Mantri Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi) scheme, which provides subsidized collateral-free loans.

The Act's core mechanism is spatial: it seeks to move vendors from unregulated public spaces into designated vending zones managed by urban local bodies. Implementation is overseen by Town Vending Committees (TVCs) at the municipal level, with state governments retaining flexibility over licensing terms, fee structures, and renewal conditions. This decentralized ap-

proach has produced substantial variation in implementation across cities. Understanding how the Act operates in practice and why it has failed to reach the vendors it was designed to protect requires a detailed study of a specific urban context where the institutional setting, vendor population, and implementation record can be observed at a close range.

2.2 Patna and Bihar: Urban and Economic Context

Patna, the capital of Bihar, was selected as the study site for three reasons. First, its entire urban area, spanning 75 wards, is governed by a single statutory authority, the Patna Municipal Corporation (PMC). All street vendor regulation, including licensing, enforcement, and policy implementation, is handled through one set of rules. This unified jurisdiction eliminates the confounding effects of inter-agency variation present in cities like Delhi, where multiple municipal corporations operated with potentially different enforcement practices, and simplifies both data collection and the interpretation of vendor behaviour.

Second, Patna's street vending landscape is shaped by commuter-led demand rather than tourism. Vendors serve a stable, local customer base of office workers, daily-wage earners, and households, selling necessities (predominantly produce and food for immediate consumption) priced for the city's purchasing power. Stalls are long-established and embedded within kin-based social networks. This low-churn setting is well suited to studying the coordination challenges and social ties that shape relocation decisions, without the confounding variation introduced by seasonal tourist demand or transient vendor populations.

Third, Patna is a setting where the SVA's implementation failures are particularly visible. Bihar is among India's most populous and least developed states, and the street vending sector in Patna is large (approximately 30,000 vendors according to PMC records) yet awareness of the Act among vendors is near-zero, as documented in Section 8. The combination of an active policy environment, a significant vendor population, and limited policy uptake makes Patna an informative site for understanding why formalization efforts have struggled and what a more effective approach might require.

3 Data and Methodology

We operationalize embeddedness along three dimensions, each grounded in directly observable survey responses rather than inferred from outcomes. Social embeddedness is measured through entry pathways, product choice channels, and labour composition, specifically, the share of vendors entering through family networks, choosing products through family tradition, and relying exclusively on household labour. Spatial embeddedness is measured through location persistence, commuting patterns, and vendors' stated valuations of proximity to other vendors. Economic embeddedness is measured through supplier relationship stability, pricing coordination, and the relational features of procurement arrangements. This operationalisation allows embeddedness to function as an empirical description of market structure rather than a theoretical prior, and makes the concept directly testable in future work that introduces variation in the conditions we document here.

The analysis draws on both secondary and primary data. We use two secondary sources on street vendors: the Patna Municipal Corporation's vendor registry from its 2020 survey conducted under the SVA, and the World Bank's Enterprise Surveys of the Informal Sector (ESIS) covering nine Indian cities. Together, these allow us to characterize the vendor population in Patna and benchmark it against a broader multi-city sample of informal enterprises. We supplement these with commercial amenity data collected via the Google Places API to situate vendors' locational

choices within Patna's urban economic environment. Our primary data source is an original survey of 2,922 stationary street vendors across 206 marketplaces in Patna, conducted between June and September 2025. We describe each in turn.

3.1 Secondary data

Enterprise Surveys of the Informal Sector (ESIS). The World Bank Group's Enterprise Analysis Unit conducted surveys of informal businesses across nine Indian cities between September 2021 and April 2022.[1] To identify street vendors within this broader dataset, we apply the definition from the SVA (2014), which characterizes street vendors by two distinguishing features: they are engaged in retail selling of goods or services, and they operate in public spaces from temporary structures without formal property rights. Sub-setting the data to businesses satisfying both criteria yields 2,971 observations classifiable as street vendors, of whom 88.5 percent are male vendors or male-owned businesses. We draw on this dataset to benchmark the characteristics of Patna's vendors against a broader multi-city sample of informal enterprises.

Patna Municipal Corporation (PMC) Records. Under the SVA, urban local bodies are required to survey all street vendors in their jurisdiction at least once every five years. The first such survey in Patna was conducted in 2020. We obtained the resulting vendor registry from the PMC, which contains vendor names, types (stationary or mobile), product information, demographic details, and geo-coded stall addresses.

Google Places Amenities. We collected data on all commercial amenities in the selected wards of Patna as of March 2025 using the Google Places API. These data are used to characterize the demand environment surrounding vending locations, as presented in Section 5.

3.2 Surveys

Our study is set in Patna, the capital city of Bihar. Patna is administratively divided into 75 wards, of which we selected 40 as the focus of our project. Ward selection was based on vendor concentration using PMC records. We geocoded potential vending locations and constructed vending zones obtained through government websites and news articles, which we then overlaid with ward boundaries to identify the 40 wards with the highest concentration of street vendor activity. The listing exercise subsequently identified approximately 17,000 static street vendors in these 40 wards, suggesting they capture the substantial majority of Patna's stationary vendor population.

For the purposes of this paper, we adopt a narrower operational definition of vendors: we include only vendors operating from fixed, stationary locations in public spaces. Mobile vendors, those who move through residential streets or travel between locations, are excluded. This restriction ensures comparability across observations and focuses the analysis on vendors whose relationship with a specific public space is stable enough to be meaningfully characterized. According to the PMC vendor registry, which covers 23,447 vendors across all 75 wards, 72.52 percent of Patna's vendors are stationary, meaning our restriction captures the majority segment of the broader vendor population. While this excludes an important segment of the vending population, stationary (or static) vendors represent the group most directly implicated in contests over public space, licensing, and eviction, and are therefore of particular policy relevance.

Data collection for this study proceeded in three stages: marketplace listing, recruitment, and the final survey. This multi-stage approach enabled us to construct a comprehensive sampling

[1] The cities included Hyderabad, Telangana; Jaipur, Rajasthan; Kochi, Kerala; Ludhiana, Punjab; Mumbai, Maharashtra; Sehore, Madhya Pradesh; Surat, Gujarat; Tezpur, Assam; and Varanasi, Uttar Pradesh.

frame of street vendors in Patna and systematically recruit participants while maintaining high response quality.

Marketplace Listing We conducted a comprehensive listing exercise of marketplaces in the selected 40 wards in August 2024. During the listing exercise, we recorded the geolocation of each marketplace, characteristics of the surrounding area, and an approximate count of vendors operating in each market. For our purposes, we define a marketplace as any public space or location where more than 10 vendors are clustered selling goods or services. We define a street vendor as a person, typically self-employed, selling goods or services and operating their business from a temporary built-up structure at a fixed location in public spaces such as streets, lanes, sidewalks, footpaths, pavements, public parks, or any other public place. Our project specifically targets produce and street food vendors, who together comprise about two-thirds of the street vending sector according to ESIS. This share is closely matched by the PMC registry, in which vegetables, fruits, and food for immediate consumption together account for approximately 64 percent of all vendors. Vendors selling durable goods, clothing, and non-food items operate under meaningfully different demand conditions, procurement arrangements, and perishability constraints that would require separate analysis. The listing exercise identified 375 marketplaces across the 40 wards and counted approximately 17,000 static street vendors.

Recruitment and Survey Administration We returned to the identified marketplaces between June and October 2025 to conduct surveys. Of the 375 marketplaces identified, we shortlisted 332 markets for the final survey. We excluded markets in which the main product sold was not produce or street food, were declared commercial zones on first come first serve basis for street vendors (N=1) or whose locations could not be confirmed before the final survey. These 332 markets were further merged for the purpose of interviews to mitigate spillover concerns across nearby markets resulting in 206 markets. The survey process proceeded in two stages. First, we conducted recruitment visits during peak marketplace hours to identify eligible vendors and schedule survey appointments at times when vendors were relatively free to participate. We employed a systematic random walk recruitment strategy, approaching every third vendor in each marketplace who fit our project focus (produce or street food vendors operating from fixed locations). We recruited 3,492 vendors.

Second, we administered the main survey to recruited vendors within a few days of the recruitment. Surveys were conducted in-person and typically lasted 45 minutes. The survey instrument was structured in several modules, collecting information on vendor demographics, business practices, location choices, and physical and mental health. Out of 3,492 recruited vendors who agreed to participate, 2,935 participated in the main survey yielding an initial response rate of 84%.

Sample Selection and Representativeness Our final analytical sample consists of 2,922 vendors from 206 marketplaces across the 40 study wards. We excluded 13 observations due to incomplete or incorrect/illogical survey responses, and reclassified them as non-participants.

To assess the representativeness of our sample, we compare characteristics of survey respondents to vendors who were recruited but did not complete the survey. Appendix Table A1 presents this comparison. Survey respondents differ from non-respondents on three observable characteristics. Participants are more likely to sell vegetables (31.0% vs 26.7%) and fruits (26.9% vs 23.2%), and less likely to sell cooked food and drinks (42.2% vs 50.2%). Participants are also more likely to operate along main roads (84.3% vs 77.7%) and less likely to operate along narrow streets (5.5% vs 11.1%), and are slightly less likely to be male (88.3% vs 90.7%). Age and the possession of stalls or carts are balanced across the two groups. These patterns are consistent with two

features of the data collection process. First, street food vendors require more continuous attention to preparation and service than produce vendors, leaving them with less downtime to participate in a 45-minute survey, plausibly explaining their lower participation rate. Second, in husband-and-wife operations, recruited husbands frequently delegated the main survey to their wives, which likely accounts for the lower share of male respondents among participants relative to recruits. Taken together, the differences in sample composition reflect operational and household constraints on survey participation rather than systematic selection on the economic or locational characteristics that are central to this paper's analysis.

3.3 External Validity

The findings in this paper are based on a single city, and their generalizability requires explicit discussion. We argue that the central claim: that street vendors are deeply embedded in overlapping social, spatial, and economic structures that make their livelihoods resistant to administrative reshaping, is likely to travel beyond Patna, while specific magnitudes and institutional details will vary.

The generalizability of the embeddedness argument rests on the background conditions that generate it rather than on features specific to Patna. Family-mediated entry, household-based labour, relational procurement, spatial persistence, and agglomeration economies are not Patna-specific phenomena. They are the predictable organizational response to operating an informal perishable goods business without formal property rights, enforceable contracts, or social protection, in a context where family networks are the primary source of market access, supplier credit, and insurance against shocks. These background conditions characterize informal street vending broadly across South Asia, Sub-Saharan Africa, and urban Latin America (Roever, 2014), and the structural logic of embeddedness should operate wherever they hold. The specific finding that vendors are spatially persistent and derive substantial benefits from clustering, for example, has direct analogues in the literature on informal markets in West Africa (Fafchamps, 2003) and Latin American cities (Donovan, 2008), suggesting the patterns documented here are not idiosyncratic to Bihar.

However, three dimensions of the Patna context may limit direct comparability with other settings and should be borne in mind when extrapolating. First, Patna's demand profile is driven by commuters and local households rather than tourists or transient populations, which may strengthen spatial persistence and customer embeddedness relative to cities with higher demand volatility. Second, Bihar's exceptionally weak institutional capacity means the SVA implementation failure documented in Section 8, near-zero vendor awareness of a decade-old law, may represent an extreme case; states with stronger administrative capacity may show higher awareness and licensing rates, though the broader pattern of formalization falling short of its protective mandate appears to hold across Indian cities (Unni and Sinha, 2024). Third, the caste composition of the sample, 97 percent from backward or scheduled categories, reflects Bihar's specific social structure and occupational inheritance patterns; the concentration may be less extreme in states with different caste geographies, though the broader pattern of street vending drawing disproportionately from socially disadvantaged groups is well documented across India and beyond.

Importantly, none of these dimensions undermines the central embeddedness argument. Commuter-led demand, weak institutions, and concentrated social disadvantage are, if anything, conditions that intensify rather than create embeddedness. A vendor in a more institutionally capable city may have higher policy awareness, but the social and spatial ties that make relocation costly operate independently of institutional context. The findings here are therefore best understood as establishing the structural logic of embeddedness with particular clarity in a setting where

it operates strongly and as providing a baseline against which future comparative work across cities and countries can assess how background conditions modulate its intensity.

4 Who are Street Vendors?

The profile of street vendors in Patna reveals a sector that is socially concentrated, family-rooted, and entered largely out of necessity rather than entrepreneurial choice. These features are not incidental, they are the foundations of the social embeddedness that shapes vendor behaviour throughout the paper. This section documents four dimensions of that profile: demographics, caste and religious identity, education, and entry pathways.

4.1 Demographics

Street vending in Patna is predominantly a male occupation: 88 percent of vendors in the sample are male and 12 percent female (Table 1). This gender composition reflects broader patterns in Indian urban informal markets, where women's participation in street vending is constrained by mobility norms, access to public space, and competing household responsibilities (Jayachandran, 2020). Gender is not evenly distributed across product categories: women are most represented among vegetable vendors, accounting for 18 percent of that category, compared to approximately 9 percent among both street food and fruit vendors (Figure 1). The reasons for this concentration are not immediately apparent from the data and warrant further investigation.

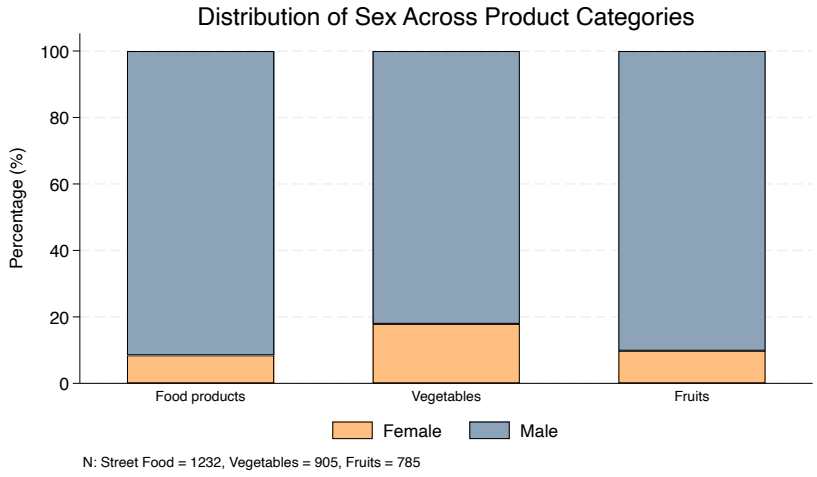


Figure 1: Distribution of Sex Across Product Categories

The age profile of vendors is concentrated in middle adulthood. The average vendor is 39 years old, with the distribution peaking in the 30–40 age bracket and a long right tail extending to vendors in their 70s and 80s (Figure 2). Notably absent is a spike among young entrants, and age is broadly similar across product categories, 38 years for street food vendors, 39 for fruit vendors, and 40 for vegetable vendors, pointing to common lifecycle patterns of entry and persistence across the sector.

The age profile is consistent with the long tenure of vendors in the sector. Over half of vendors (52 percent) report having been in the vending business for more than ten years (Figure 3). Vendors do not cycle through street vending on their way to other occupations, they stay.

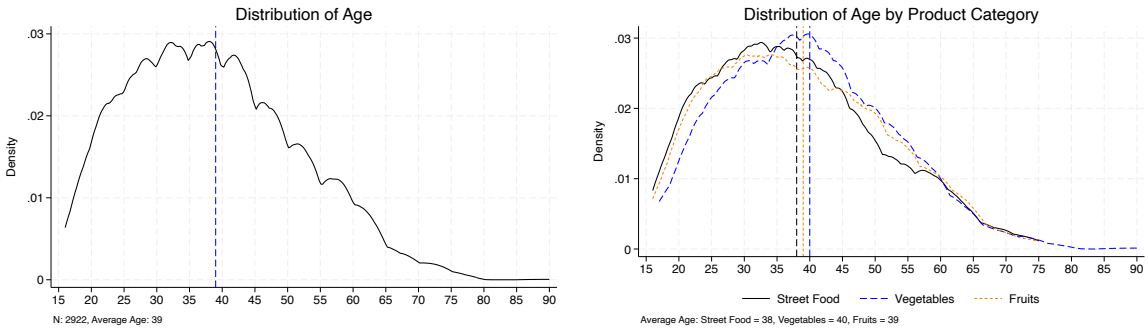


Figure 2: Distribution of Respondent's Age

Combined with the family-mediated entry pathways documented below, this persistence suggests that most vendors enter the occupation in early adulthood and remain for decades. The combination of long tenure and spatial immobility (99% never relocate) is consistent with the accumulation of location-specific knowledge, supplier relationships, and customer bases that would raise the cost of exit or relocation, though the paper cannot directly measure the value of such capital. The social ties and market embeddedness documented throughout this paper are not nascent, they have been built and consolidated over years of operating in the same spot, selling the same product, and sourcing from the same suppliers.

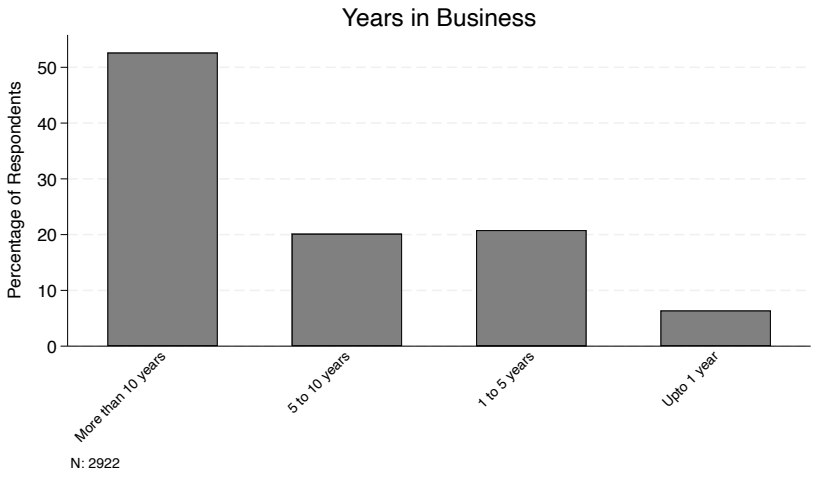


Figure 3: Years in Business

The vast majority of vendors are married (82 percent), consistent with the household-as-unit characterization developed later in the paper. Vending is not primarily a young, single person's activity, it is embedded in family structures that shape both its labour organization and its intergenerational transmission.

4.2 Caste and Social Disadvantage

A striking feature of the vendor profile is its caste composition. 87 percent of vendors belong to Other Backward Castes (OBC) and an additional 10 percent to Scheduled Castes or Scheduled Tribes, leaving only 4 percent classified as General Category. This near-total concentration among historically disadvantaged caste groups is consistent with the role of caste in structuring access to formal employment, capital, and occupational networks in Bihar. The literature documents how such barriers channel those with the fewest outside options into the informal

Table 1: Summary Statistics

Variable	Mean	SD
Age	38.64	12.76
Education	6.08	4.76
Male	0.88	0.32
Marital Status		
Married	0.82	0.38
Single	0.16	0.36
Widowed/Divorced	0.02	0.15
Caste Group		
Backward Caste	0.87	0.34
Scheduled Caste/Tribe	0.10	0.30
General	0.04	0.19
Product Category		
Vegetables	0.31	0.46
Fruits	0.27	0.44
Cooked Food/Drinks	0.42	0.49
Premises Type		
On Main Roads or streets	0.90	0.30
On Pedestrian Walkways	0.10	0.30
Business Infrastructure		
Have Stalls/Carts	0.85	0.36
On the Floor	0.15	0.36
Other Business Related Variables		
Work 7 days a week	0.95	0.22
Hours of Operation	9.22	3.67
Have employees	0.32	0.46
Yesterday's Sales (INR)	2984.55	2875.27
Yesterday's Profits (INR)	618.53	626.31
Weekly Sales (INR)	19268.62	23011.79
Weekly Profits (INR)	4259.65	4056.31
Own Other Businessess	0.15	0.35
Never Changed Marketplaces	0.99	0.08

Note: N = 2922. All monetary units are expressed in Indian Rupees (INR).

sector (Cassan et al., 2021, Munshi and Rosenzweig, 2006), and the compositional patterns here are consistent with that mechanism operating in Patna.

4.3 Education

Educational attainment is low across the sample, with vendors averaging approximately 6 years of schooling (Table 1). Close to a third of vendors (28.7%) have never attended school, and the majority of the remainder have only primary or middle school education, Class 5 being the most common terminal level. Only about 15 percent of vendors have completed Class 11 or above, including those with diplomas or university degrees. This profile reflects both the broader human capital constraints of Bihar, one of India's lowest-ranked states on educational attainment (Dreze and Sen, 2014), and the low skill barriers to entry that make street vending accessible to those excluded from more education-intensive occupations (ILO, 2018; La Porta and Shleifer, 2014).

Low educational attainment has consequences that extend beyond the entry decision. It can limit vendors' ability to navigate licensing bureaucracies, access formal credit, engage with digital payment systems, or benefit from government schemes nominally available to them, constraints that recur throughout the paper and that help explain why formalization efforts directed at this population have had limited uptake.

4.4 Entry into Street Vending: Default or Choice?

A central question for understanding vendor behaviour is whether street vending represents a deliberate occupational choice or a residual option for those with limited alternatives. The answer has direct implications for how we interpret vendor preferences and the likely response to policies that attempt to relocate or restructure the sector.

Figure 4 presents the reasons vendors report for entering the sector. We organize these into three categories: push factors, where entry is driven by the absence of viable alternatives; structural channels, where entry is mediated by family and community networks; and pull factors, where entry reflects a positive preference for features of vending.

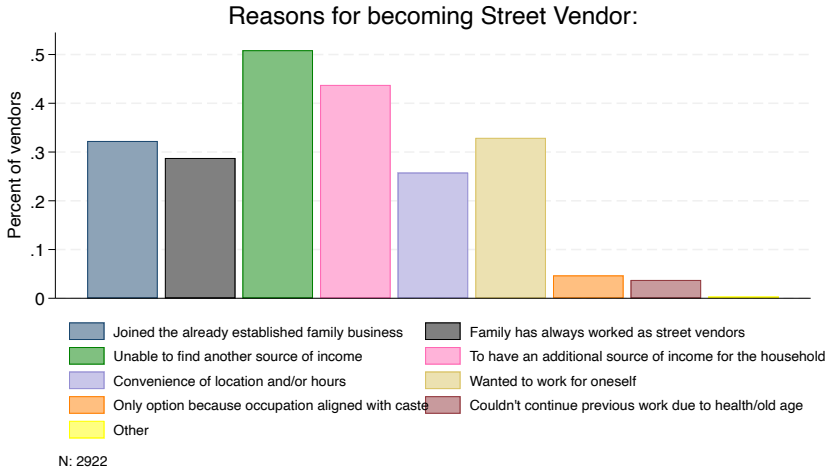


Figure 4: Reasons reported to choose Street Vending

Push factors dominate. The single most common reason for becoming a street vendor is the inability to find another source of income, cited by approximately half of all respondents.

The second most common reason is the need for an additional source of household income, reported by roughly 45 percent. Together, these responses indicate that for the majority of vendors, street vending functions as an employment of last resort or a necessary supplement to inadequate household earnings rather than a first-choice occupation.

Structural channels constitute the second major entry pathway. About a third of respondents report entering through an already established family business, and a similar share report that their family had always worked as street vendors. These pathways are not mutually exclusive with other push factors, a vendor may simultaneously face a lack of alternatives and have a family business available to join. The prominence of family channels implies that vending is sustained by intergenerational transmission of occupation-specific skills, supplier relationships, and location access. For these vendors, the "choice" of vending is less a discrete decision than a default trajectory shaped by the household they were born into, the first and most fundamental form of social embeddedness documented in this paper.

Pull factors, while secondary, are not negligible. Approximately a third of vendors express a desire to work for themselves, and more than a quarter cite the convenience of location and hours. These responses point to the autonomy street vending affords relative to wage employment and its flexibility around household responsibilities, features that, combined with the low entry barriers documented above, help explain why the sector retains participants even when outside options improve.

A small but notable share of vendors (about 5 percent) report that their caste alignment with the occupation was a factor in entry. This almost certainly understates the role of caste in shaping entry decisions. Caste likely operates less as an explicit reason vendors articulate and more as a structural constraint that narrows the feasible occupation set, channelling individuals toward vending through family tradition and community networks. The caste composition documented above, 97 percent from backward or scheduled categories, is itself the most direct evidence of this structural sorting.

Entry patterns vary meaningfully across product categories (Appendix Figure A1). The family tradition channel is stronger among produce vendors, both vegetable and fruit sellers, than among street food vendors, likely reflecting the lower skill barrier in produce vending, where family networks transmit supplier access and wholesale market knowledge rather than culinary skills. Street food and fruit vendors report higher shares of entrepreneurial motivation, while street food vendors are less likely to cite locational convenience, consistent with the more demanding operational requirements of food preparation, including longer setup times, cooking equipment, and less flexible hours. These within-sector differences foreshadow the broader heterogeneity across product categories that recurs throughout the paper.

The occupational backgrounds of vendors prior to entering the sector corroborate the dominance of push factors. Figure 5 shows that the largest share of vendors were students immediately before entering vending (21.25 percent), followed by casual labour (18.17 percent), unemployment (13.52 percent), own housework (11.16 percent), and private sector employment (10.68 percent). Students, the unemployed, and those engaged in unpaid housework together account for nearly half the sample, a population entering vending from a position of economic vulnerability rather than occupational transition. That only about one in ten vendors previously held private sector jobs reinforces the picture: for most, vending did not replace formal wage work but was instead the first sustained income-generating activity they engaged in. The high share of prior students is particularly notable: read alongside the age and tenure findings above, it suggests many vendors entered the sector in early adulthood, without any intervening formal

employment, and have remained ever since.



Figure 5: Previous Occupations Vendors Engaged In

5 Where do Street Vendors Locate?

Where vendors operate is as important as what they sell, location determines footfall, competition, and exposure to eviction and harassment. This section documents the spatial organization of street vending in Patna at three levels: the distribution of vendors across the city, the agglomeration benefits that sustain vendor clusters, and the micro-geography of product-based sorting within individual marketplaces. Taken together, the evidence establishes that vendor locations are neither random nor easily replicable, they reflect a spatial equilibrium shaped by demand, social ties, and decades of accumulated location-specific capital.

5.1 Location Across the City

Figure 6 maps the geo-locations of all 2,922 vendors in the sample across Patna, revealing clusters distributed across the city. The spatial distribution of vendors reveals strong clustering along transportation corridors. Approximately 90 percent of surveyed vendors operate along main roads or streets and only 10 percent operate on pedestrian walkways (Table 1). This concentration on arterial roads is consistent with vendors optimizing for accessibility and commuter-led demand, though it also underscores the encroachment and congestion externalities that motivate municipal enforcement action, as documented in Section 8.

The spatial distribution of vendors closely mirrors urban economic activity more broadly. Figures 7 and 8 present the distributions of vendor density, from both the PMC records (2020) and our baseline survey (2025), and Google Places Amenities at the 250 m x 250 m grid level across the study wards. Visual inspection suggests strong co-location: vendor density is highest in grid cells with the greatest concentration of commercial establishments indicating that vendors are not distributed randomly across public space; they cluster where demand is.

We compute pairwise Pearson correlations between PMC vendor counts and amenity counts at the grid-cell level (N = 852 grid cells). Figure 9 reports these correlations across five amenity categories: all amenities combined, commercial and retail establishments (clothing, electronics,



Figure 6: Locations of Surveyed Street Vendors

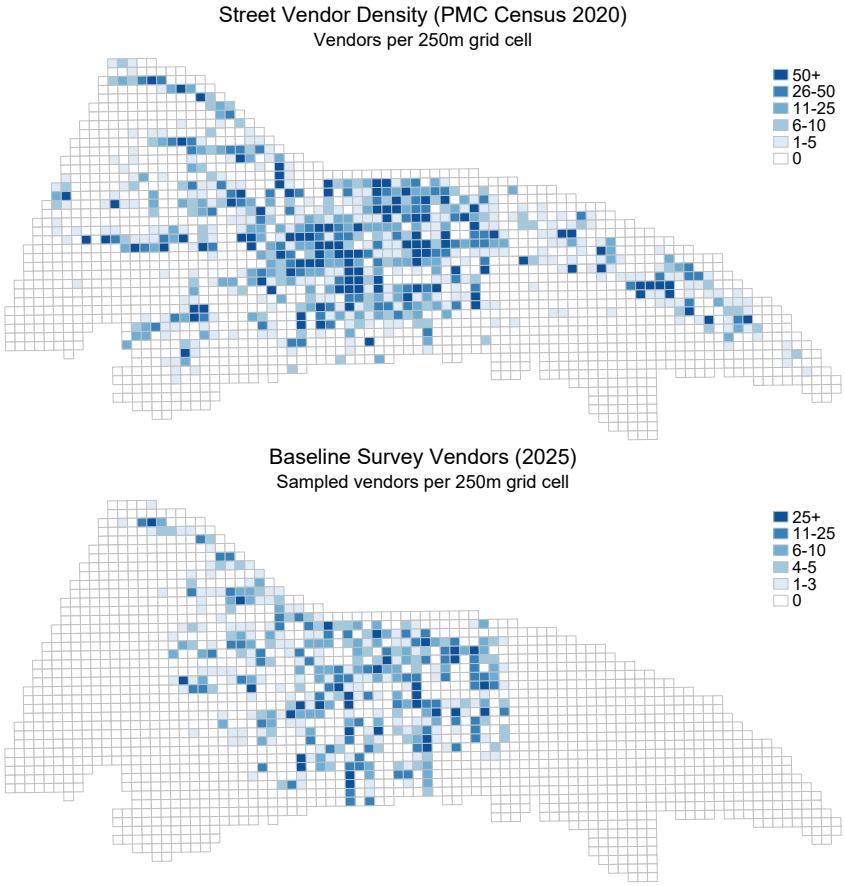


Figure 7: Distribution of Vendors as per PMC Census (2020) and Baseline Survey (2025)

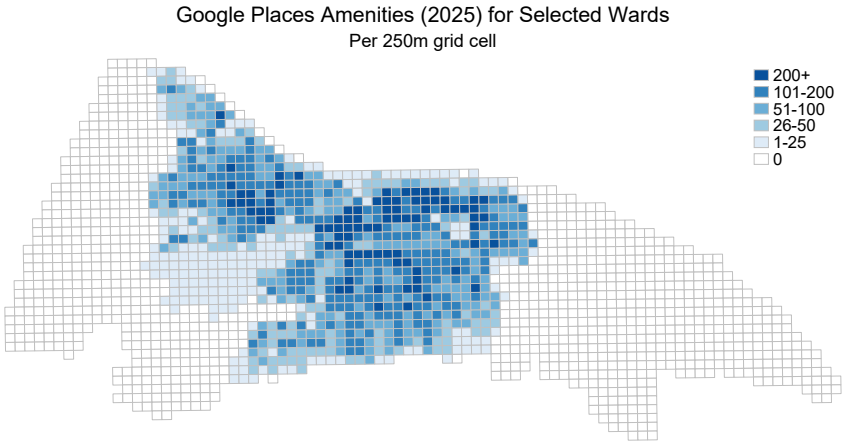


Figure 8: Distribution of Amenities (all types) in Selected Wards

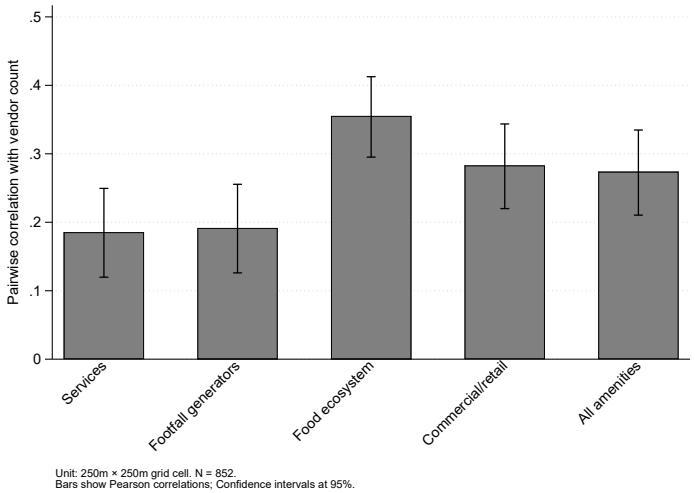


Figure 9: Pairwise Correlations of Vendor Counts (PMC, 2020) and Counts of Different Amenity Types

home goods, markets, and wholesalers), food ecosystem establishments (restaurants, quick-service food outlets, cafes, and bars), footfall generators (educational institutions, government offices, hospitals, transport hubs, and religious sites), and services (finance, pharmacies, personal care, and professional services).

The strongest association is with food ecosystem amenities, followed by commercial and retail establishments. Footfall generators and services show weaker but still significant correlations. The ordering is consistent with the demand environment that produce and street food vendors depend on: locations rich in food-related establishments attract both the customer traffic and the supplier networks that sustain vending, while purely institutional locations, hospitals, government offices, generate foot traffic but of a type less oriented toward street-level food purchases. That commercial and retail density correlates with vendor density nearly as strongly as the food ecosystem category suggests vendors also benefit from the general agglomeration of commercial activity, consistent with the "one-stop shopping" logic that draws customers to diverse marketplaces and that the urbanization economies literature emphasizes as a driver of co-location across complementary sectors (Duranton and Puga, 2004; Rosenthal and Strange, 2004).

The relationship between where vendors live and where they work provides a first indication of how much location-specific value they attach to their current spot. If vendors simply chose the nearest available market, commuting distances would be uniformly short. Instead, the distribution reveals meaningful variation (Figure 10): while the majority of vendors live within 2 kilometres of their vending location, a substantial minority travel considerably farther. More than 10 percent commute more than 3 kilometres, and 6 percent travel more than 5 kilometres each way. Vendors who bypass closer markets to reach a more distant one present a pattern that is consistent with location-specific value (customer base, agglomeration economies, supplier proximity) exceed the additional transport costs incurred. However, this revealed-preference interpretation rests on assumptions that cannot be verified with these data: that vendors have reasonable information about nearby alternatives, that non-economic constraints (family ties to a particular neighbourhood, inherited location access, social obligations) do not independently bind location choice, and that the absence of relocation reflects an active optimizing decision rather than inertia or the costs of searching for alternatives. The commuting data establish that vendors are not simply selecting the nearest available market, but they cannot, on their own, distinguish between location-specific economic value and other forces that produce the same spatial pattern.

Nearly all vendors (99%) report that they have always vended in their current marketplace, underscoring the remarkable spatial persistence of vendor locations. Combined with the fact that 53 percent have been in business for more than 10 years, this means a typical vendor has occupied the same few square meters of public space for a decade or more. This persistence is both an asset, for vendors build repeat customer relationships and location-specific knowledge, and a potential barrier to formalization efforts that require spatial reallocation.

5.2 Agglomeration Benefits: Why Vendors Cluster Together

The preceding subsection established that vendors cluster where commercial demand is concentrated. A complementary question is whether vendors derive benefits not only from the demand characteristics of a location but from the presence of other vendors at that location. If proximity to other vendors generates positive externalities, through customer attraction, information sharing, or mutual support, then the clustering patterns documented above may be partly sustained by agglomeration economies, and individual relocation would risk severing them.

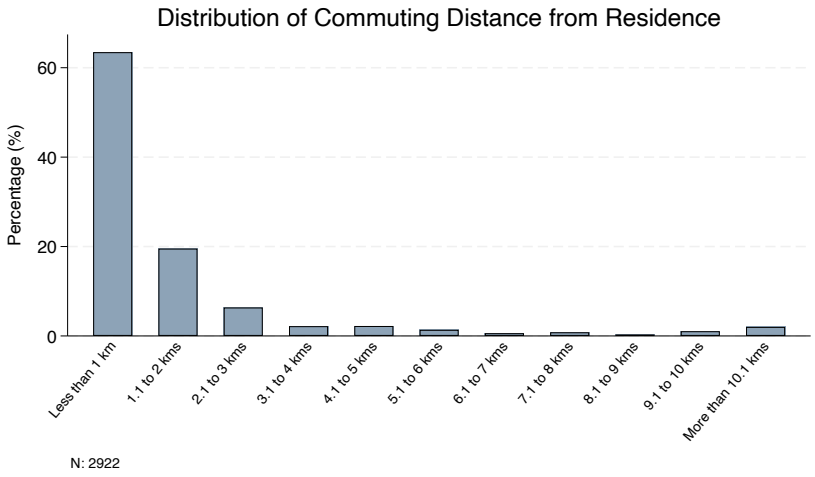


Figure 10: Commuting Distance from Residence

Figure 11 shows that vendors derive substantial benefits from proximity to other vendors, both within and across product categories. It presents vendors' reported benefits from same-sector vendors (top panel) and different-sector vendors (bottom panel).

The most commonly cited benefit from same-sector vendors is that a large number of vendors attracts customers, reported by approximately 80 percent of respondents. This demand-side agglomeration effect dominates all other benefits and is consistent with the market-thickness channel emphasized in the theoretical literature on agglomeration: a larger concentration of sellers draws more buyers by reducing search costs and increasing the probability that customers find their preferred product variety (Vitali, 2024). In the context of perishable goods, where customers value freshness and variety, vendor clusters function as informal marketplaces that offer the same search-cost advantages as formal retail agglomerations.

Secondary benefits include sharing information about suppliers and negotiation strategies, sharing costs of electricity/transportation, agreements on pricing, borrowing money or materials on credit, protecting the right to occupation, and providing security from theft. These secondary benefits, while individually less prominent, collectively describe a rich ecosystem of mutual support that would be costly to replicate in a new location. These benefits map onto the supply-side agglomeration economies identified in the broader literature, knowledge spillovers, input sharing, and labour market pooling (Duranton and Puga, 2004; Rosenthal and Strange, 2004).

Benefits from different-sector vendors follow a similar pattern, reflecting the "one-stop shopping" logic that draws customers to diverse marketplaces. The finding that nearby businesses themselves serve as customers for two-third respondents adds an additional interdependency layer: vendors are not merely co-located with different-sector businesses but economically linked to them through direct exchange relationships. This cross-sector demand linkage means that the value of a vending location depends not only on the presence of same-product vendors but on the composition of the broader market, creating complementarities that purely within-sector relocation policies would fail to preserve.

These agglomeration benefits have a direct bearing on the relocation question. If the value of a vending location depends critically on the presence of other vendors, especially those selling complementary products, then individual relocation decisions are inherently strategic. A vendor who moves to a formal vending zone alone would, on this account, sacrifice these agglomera-

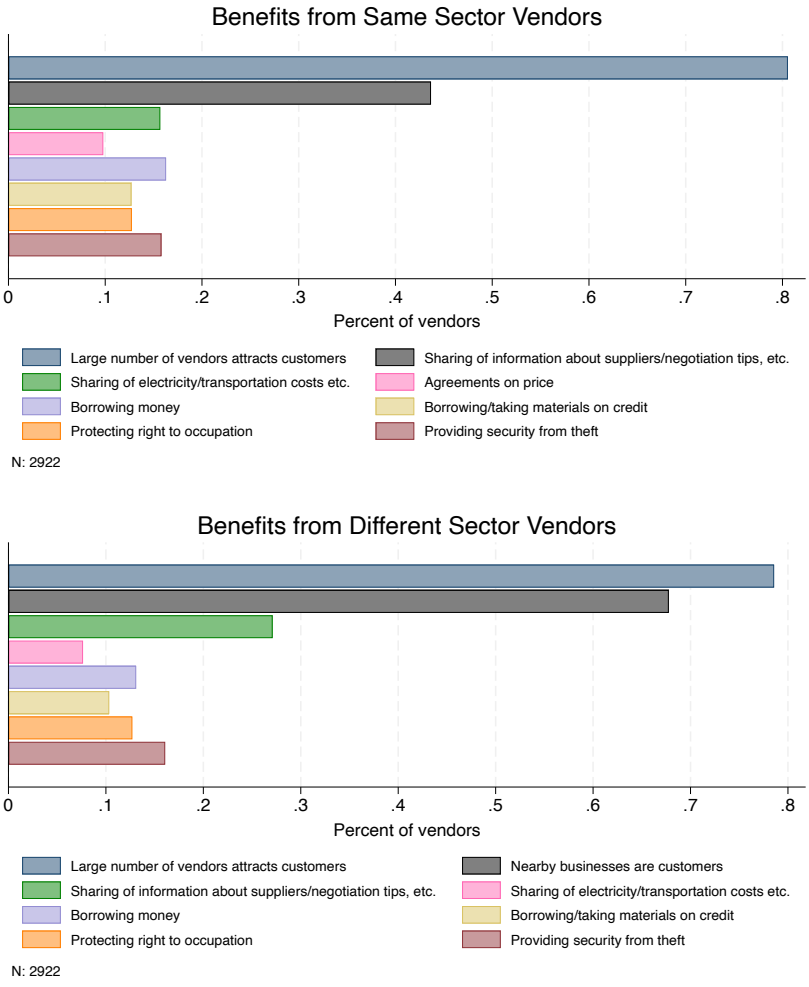


Figure 11: Agglomeration Benefits

tion economies; coordinated group relocation could preserve them but would require solving a collective action problem that individual licensing offers no mechanism to address.

5.3 Within Marketplace Organization

The agglomeration benefits documented above operate at the level of the marketplace as a whole as vendors benefit from being in a market with many other vendors. But the spatial organization of vending is not random *within* marketplaces either. This subsection documents the micro-geography of vendor sorting within markets, drawing on geo-located vendor positions across the 206 marketplaces in the sample.

We begin with the basic spatial scale at which vending operates. Figure 12 presents the distribution of mean and median nearest-neighbour distances across 203 marketplaces[2]. The average market-level mean distance to the nearest vendor is 17 meters, with a median of 9 meters; the corresponding market-level medians are 9 and 4 meters respectively. These figures confirm the physical density of street vending markets. The typical vendor operates within a few meters of their nearest neighbour, and even in the most dispersed markets, vendors are rarely more than a few dozen meters apart.

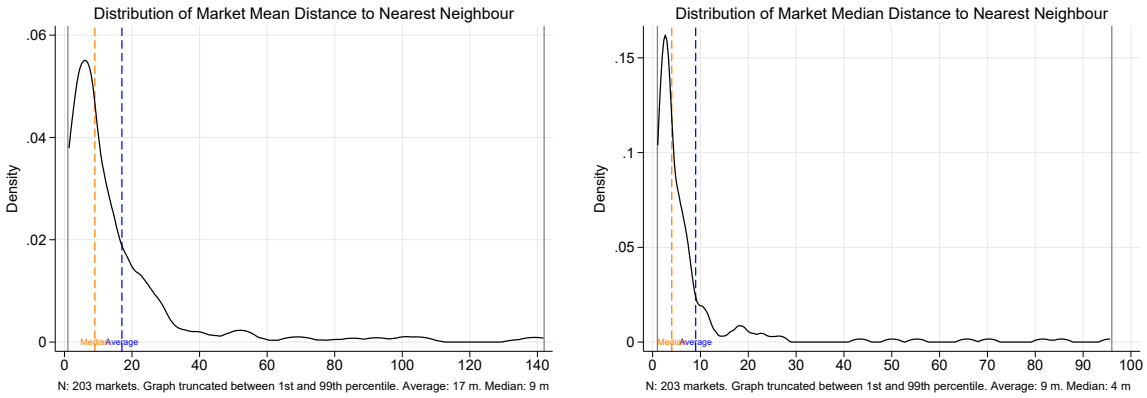


Figure 12: Distribution of Market Mean and Median Distance to Nearest Vendor

Figure 13 presents nearest-neighbour distances at the individual vendor level, calculated within the vendor's own marketplace. The figure decomposes distances into three panels: to the nearest vendor of any category (top row), to the nearest same-category vendor (middle row), and to the nearest different-category vendor (bottom row), with product-category breakdowns shown alongside each. The overall average distance to the nearest vendor is 11 meters (median 3 meters), confirming the tight spatial scale at which vending operates. The key comparison is between same-category and different-category distances. The average distance to the nearest same-category vendor is 16 meters (median 4 meters), while the average distance to the nearest different-category vendor is 24 meters (median 6 meters), roughly 50 percent higher on both measures. This constitutes evidence of product-based spatial sorting within markets: vendors selling the same product locate substantially closer to each other than to vendors selling different products.

The product-category breakdowns reveal further structure. Vegetable vendors are the most tightly clustered within their own category, with a median same-category nearest-neighbour

[2]The remaining 3 marketplaces only had one completed survey each and hence the distance between vendors could not be calculated.

distance of just 3 meters, compared to 4 meters for fruit vendors and 5 meters for street food vendors. The tighter clustering of vegetable vendors is consistent with the nature of vegetable purchases, which tend to be planned and routine: customers seeking vegetables actively search out the vegetable cluster, rewarding spatial concentration among same-product sellers. Street food vendors, who depend more on impulse purchases by passing pedestrians, benefit less from within-category clustering and more from positioning along high-traffic frontages. When distances to different-category vendors are examined, the gap widens: the median distance to the nearest different-category neighbour is 9 meters for street food vendors, compared to 5 meters for both vegetable and fruit vendors. That the median street food vendor sits farthest from different-category neighbours is consistent with the spatial sorting documented in the case study below: street food stalls positioned along main road frontages at some distance from the vegetable clusters.

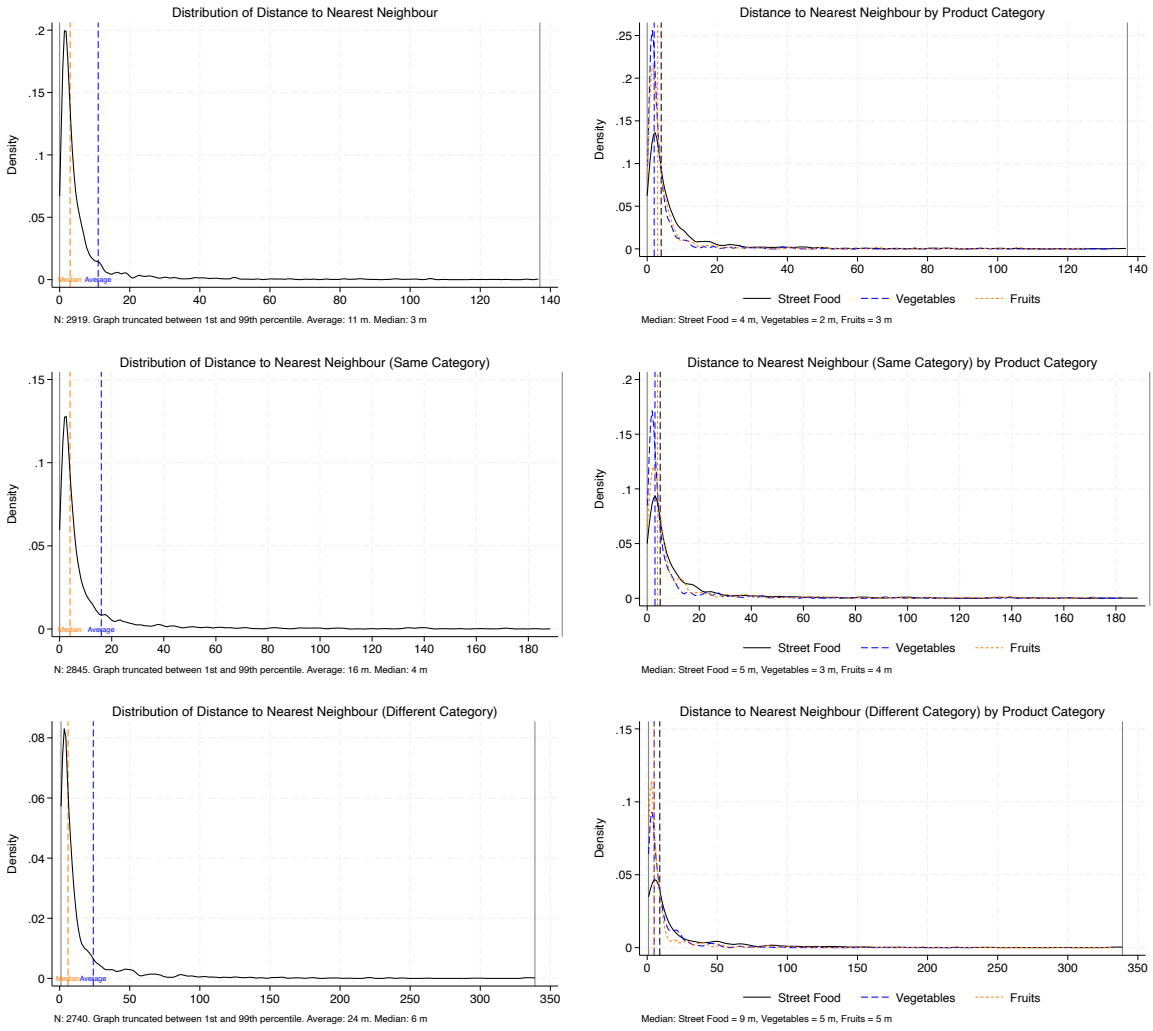


Figure 13: Distribution of Distance to Nearest Vendor

Figure 14 illustrates how this sorting manifests in two contrasting market structures. Digha Market (left panel), one of the larger markets in the sample with 91 surveyed vendors, is organized around a road intersection and exhibits a compact, high-density structure. All three product categories are present, but their spatial arrangement follows a discernible logic. Vegetable sellers cluster predominantly along an internal road running perpendicular to the main thoroughfare, while fruit and street food vendors concentrate along the main road itself. This

spatial arrangement illustrates the demand-type sorting documented in the aggregate statistics above: street food and fruit vendors positioned to capture impulse purchases along the high-visibility main road, vegetable vendors clustered along the secondary axis where planned-purchase customers will seek them out regardless of exact position, all without any central authority directing the allocation of space.

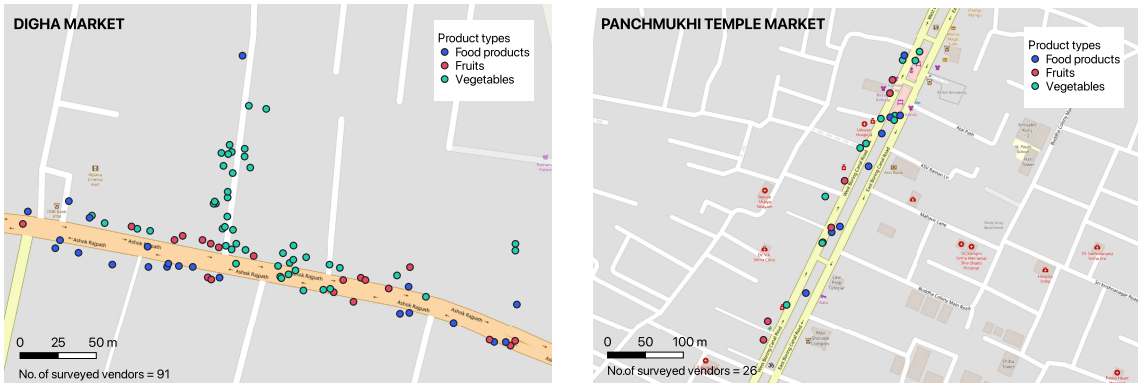


Figure 14: Market Structures

Panchmukhi Temple Market (right panel), with 26 surveyed vendors, presents a contrasting structure. Vendors are arranged linearly along the main road in a more dispersed configuration, with no clear secondary axis or internal clustering by product type. The market's presence along a main road generates a directional flow of foot traffic, around which vendors position themselves to intercept customers rather than forming a dense, self-contained cluster. The lower vendor count and greater spatial spread imply a thinner market in which the agglomeration economies documented above, particularly the demand-side benefits of vendor density and the mutual support mechanisms that require regular interaction, are likely attenuated relative to a concentrated market like Digha.

A vendor thus occupies not just a marketplace but a specific micro-location within a spatially differentiated market, one that reflects their product type, their customer base, and their relationship to the surrounding physical environment. This micro-spatial specificity adds a further dimension to the cost of relocation: a vendor who moves does not merely leave a marketplace, they leave a particular position within a spatially organized system of complementary and competing sellers, one that has emerged through years of decentralized adjustment rather than administrative design.

6 How do Vending Markets Function?

The preceding sections established who street vendors in Patna are, how they enter the sector and their spatial organization. This section turns to the internal logic of how vending markets operate, what vendors sell, how they organize procurement and inventory, how they price their goods, and how they use labour and technology. Taken together, these dimensions reveal a sector whose economic organization is more structured than it might appear from the outside, and one in which family networks and repeated relationships play a central role not just in entry but in day-to-day market functioning.

6.1 Product Choice: Following Family and Community

Vendors in our sample sell three broad categories of products: cooked food and drinks (42 percent), vegetables (31 percent), and fruits (27 percent). This distribution reflects our deliberate focus on perishable goods and food for immediate consumption, product categories tightly linked to local foot traffic and repeat customers, which allows us to study market organization without confounding variation from tourist demand or durable goods markets. More broadly, ESIS data and the PMC records (Figure 15) indicate that approximately two-thirds of all static vendors sell produce or street food for immediate consumption, suggesting our sample captures the dominant segment of the sector.

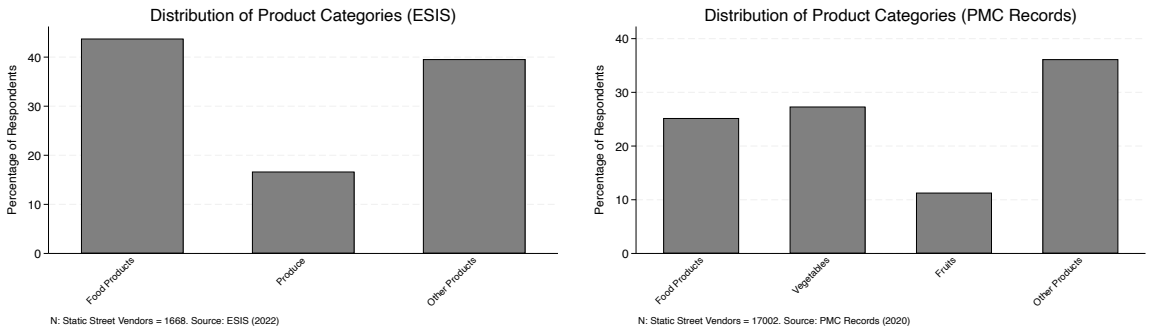


Figure 15: Product Mix among Static Street Vendors as per ESIS and PMC records

Product choice is not random, it follows the same family and community channels that shape entry into vending itself. Figure 16 shows that the two dominant reasons for choosing a particular product category are joining an already established family business selling that product (approximately 35 percent) and following the family trade (approximately 30 percent). Friends and community members selling the same product also play a role, consistent with network-based information transmission and skill acquisition. When disaggregated by product type (Appendix Figure A2), this pattern holds across all three categories, reinforcing the central finding of the previous section: both the decision to become a vendor and the choice of what to sell are heavily mediated by family and social networks. The implication for policy is direct, vendors' social ties are not ancillary to their business operations, they are constitutive of them. Relocation policies that sever these ties may not merely inconvenience vendors; to the extent that product knowledge, supplier access, and skills are transmitted through these networks, disruption of the network is a plausible channel through which such policies could reduce vendor welfare, a hypothesis the current evidence is consistent with but cannot directly test.

6.2 Procurement and Supply Chain Organization

Vendors source their supplies predominantly from wholesale markets, which account for 78 percent of procurement arrangements. A smaller share purchase from retail markets (21 percent), while the remainder have supplies delivered directly by a supplier (Figure 17). The dominance of wholesale market procurement reflects both the cost advantages of buying in bulk and the proximity of Patna's wholesale markets to major vending clusters in the city.

A notable feature of procurement is the extent to which vendors rely on a fixed set of suppliers rather than shopping around. Just over half of vendors (53.62 percent) report purchasing consistently from the same supplier or set of suppliers (Figure 17). This points to the importance of repeat relationships and trust in organizing supply chains, a pattern well documented in

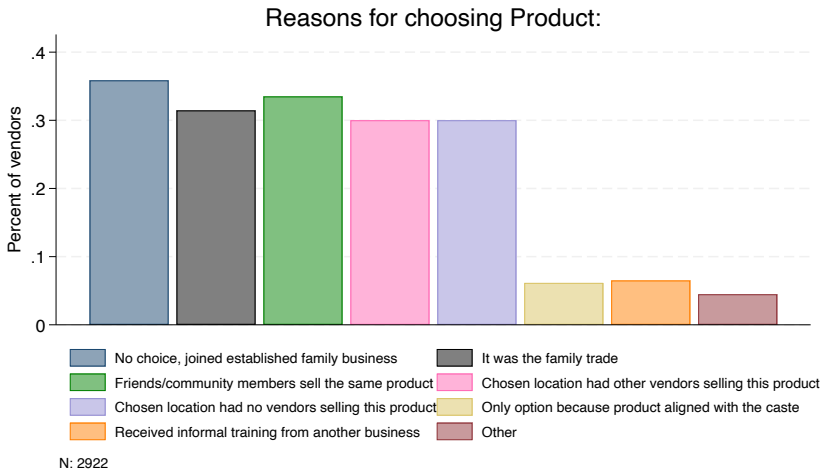


Figure 16: Reasons reported to choose Product Category

informal markets, where supplier credit, preferential pricing, and reliable quality are mediated through ongoing relationships rather than spot transactions (McMillan and Woodruff, 1999). The mechanism Granovetter (1985, p. 487) identifies is directly applicable here: individuals with whom one has a continuing relation have an economic motivation to be trustworthy so as not to discourage future transactions, and over time these continuing economic relations become overlaid with social content that carries strong expectations of trust and abstention from opportunism. For vendors sourcing perishable goods daily under time pressure, this relational structure is not merely a preference, it is a functional substitute for the formal contract enforcement mechanisms that are unavailable to them. This is economic embeddedness in its most direct form: the supply chain itself is organized through stable relational ties rather than anonymous market exchange.

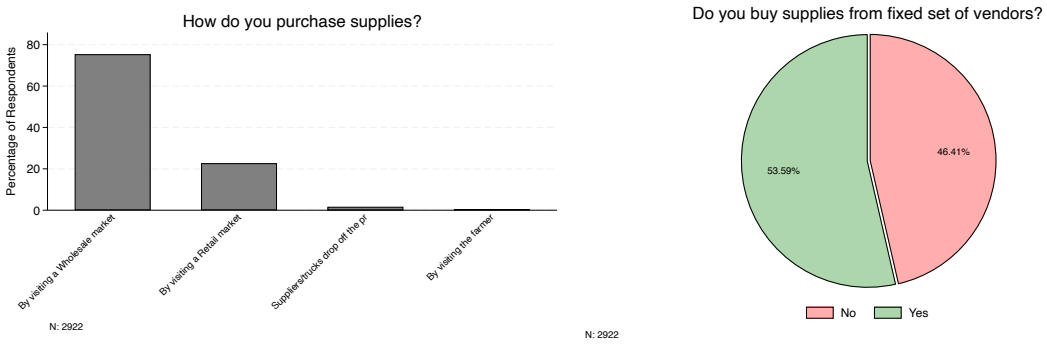


Figure 17: Procurement of Goods

The prevalence of fixed supplier relationships varies meaningfully by product category. Street food vendors are more likely to source from a fixed supplier (63 percent) compared to produce vendors (48 percent). Street food vendors require consistent ingredient quality and often depend on supplier credit tied to established relationships, while produce vendors may benefit from shopping across suppliers to secure the freshest or cheapest stock on a given day.

Restocking is a near-daily activity for the vast majority of vendors, 81 percent restock every day, consistent with the perishable nature of most goods sold (Figure 18). The main exception is fruit sellers, among whom 20 percent restock multiple times per week, likely reflecting the

slightly longer shelf life of some fruits and the higher per-unit cost of bulk fruit purchases which may constrain daily restocking.

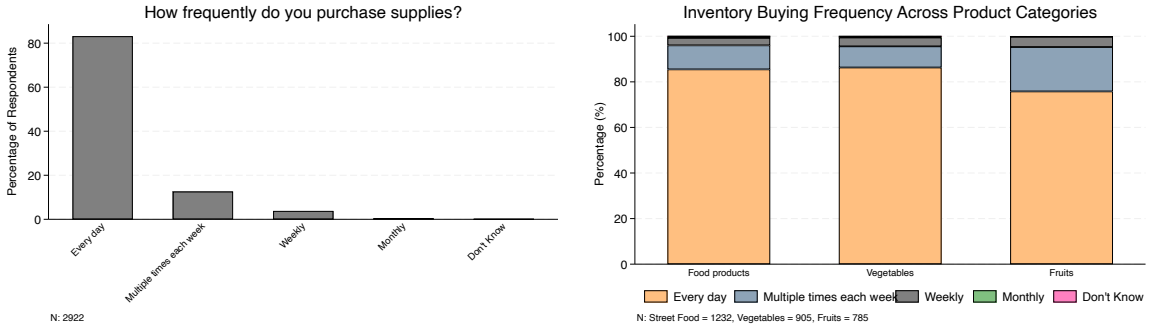


Figure 18: Inventory Buying Frequency

6.3 Storage, Spoilage, and Operational Constraints

Storage arrangements are largely home-based and informal. When asked where they store products at the end of the working day, 65 percent of vendors report taking goods back home, while 35 percent leave them at the vending spot overnight (Figure 19). Dedicated or shared storage spaces are almost entirely absent, each cited by fewer than 5 percent of vendors. This reflects the broader lack of vending infrastructure in Patna, a recurring failure of the 2014 Act's mandate to provide vendors with designated spaces and ancillary facilities.

Storage practices vary by product category. Vegetable vendors are somewhat more likely to take stock home (55 percent) but a substantial share (41 percent) leave produce at the vending spot overnight, a higher rate than observed among fruit and street food vendors. Leaving produce at the spot likely reflects the bulkiness or weight of vegetable stock rather than a preference, and exposes vendors to losses from theft, spoilage, and weather.

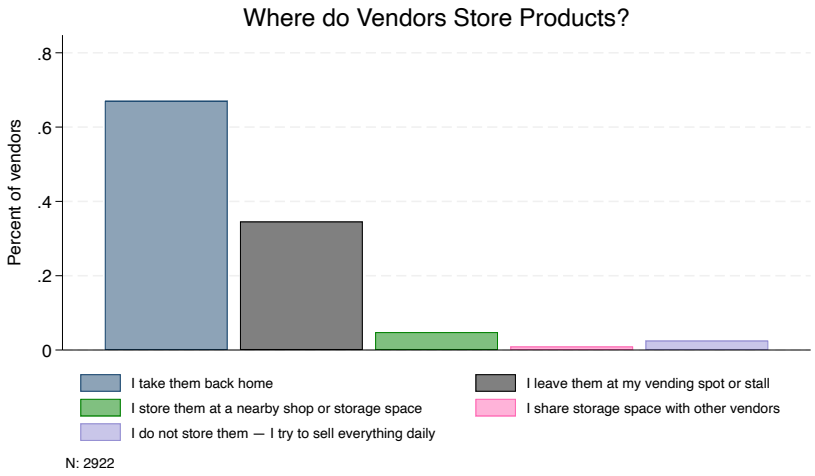


Figure 19: Where do Vendors Store their Products?

For produce vendors, perishability creates persistent pressure to sell before goods deteriorate. When asked about distress selling, reducing prices toward the end of the day to clear remaining inventory, 58 percent of produce vendors report doing so always or sometimes (Figure 21).

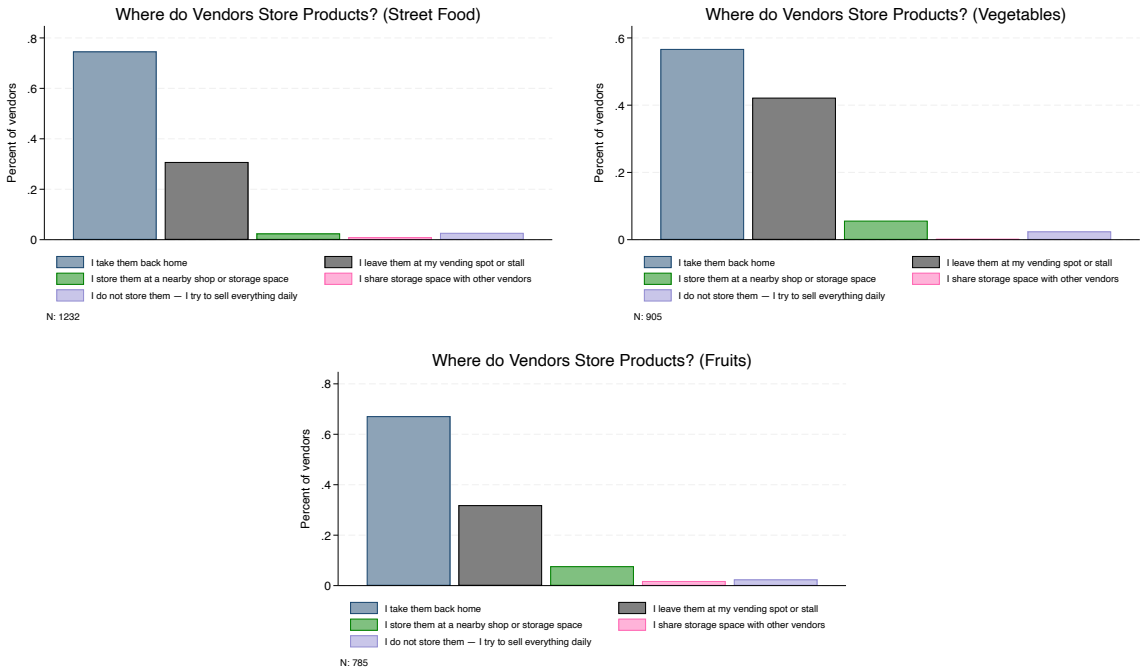


Figure 20: Where do Vendors Store their Products? (by Product Category)

Distress selling compresses margins on the days it occurs and is a plausible source of day-to-day income volatility that aggregate earnings figures would not capture, though isolating its contribution to earnings variance would require panel data on daily revenues and discounting behaviour: a vendor's headline daily revenue might mask considerable day-to-day variation driven by how much stock they were forced to discount.



Figure 21: Distress Selling Practices

Infrastructure for weather protection is largely absent at vending spots in Patna. Vendors rely instead on informal coping strategies, covering produce with plastic sheeting or cloth, moving goods to a shaded or indoor area, and packing up earlier in the day during extreme conditions. These strategies impose real costs in time, materials, and foregone sales from early closure, and underscore the vulnerability of vendors to environmental conditions that more formalized retail operations routinely manage through fixed infrastructure.

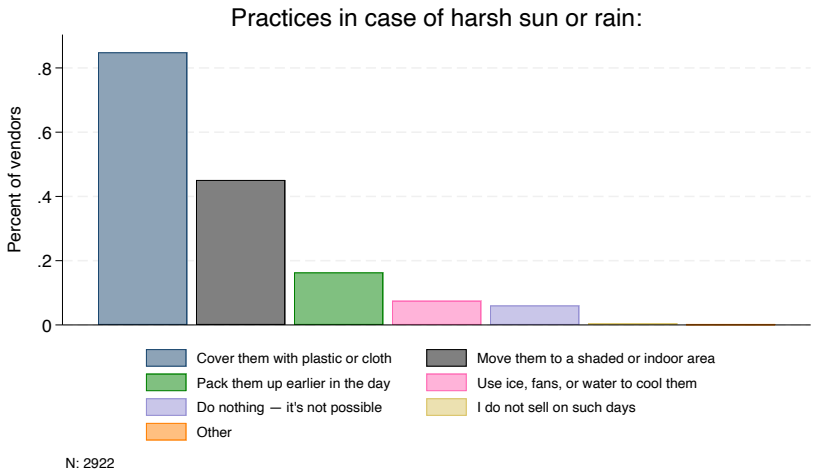


Figure 22: Practices to Protect Supplies from Harsh Weather

Waste disposal falls into two broad patterns. Street food vendors are more likely to use a small bin close to their stall, while produce vendors more commonly leave waste on the ground for the municipality to collect. The divergence reflects the nature of the waste produced, food preparation generates concentrated organic waste that is practical to contain, whereas produce vendors generate scattered trimmings that are harder to manage in a single bin. The reliance on municipal collection presupposes a regularity of service that is not guaranteed across the city, leaving waste management as a potential source of tension between vendors and local authorities.

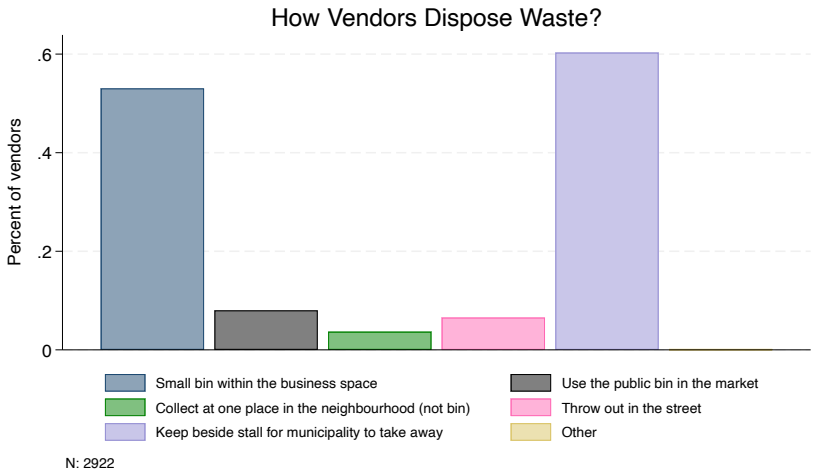


Figure 23: How do Vendors Dispose Waste?

6.4 Labour: The Household as the Firm

Street vending in Patna is overwhelmingly a solo operation. Around 70 percent of vendors report having no additional workers, paid or unpaid, helping them run their business (Figure 25). The remainder operate with one or more helpers, though enterprises with more than one worker are rare. This confirms the characterization of street vending as a predominantly own-account

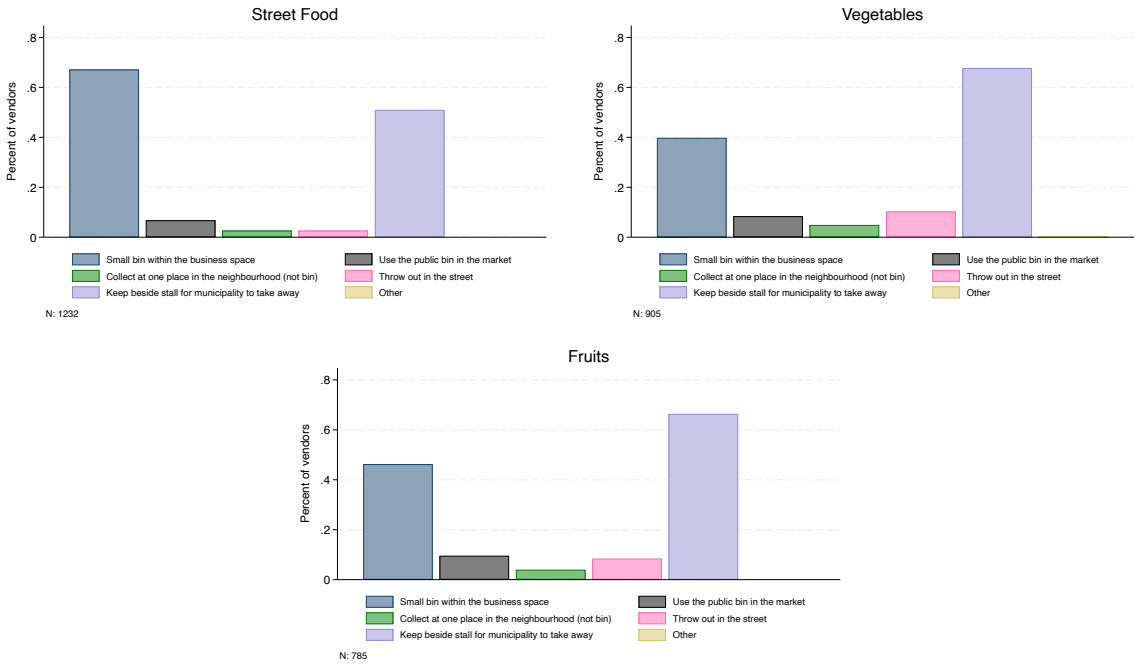


Figure 24: How do Vendors Dispose Waste? (by Product Category)

activity, where the vendor is simultaneously owner, worker, and manager.

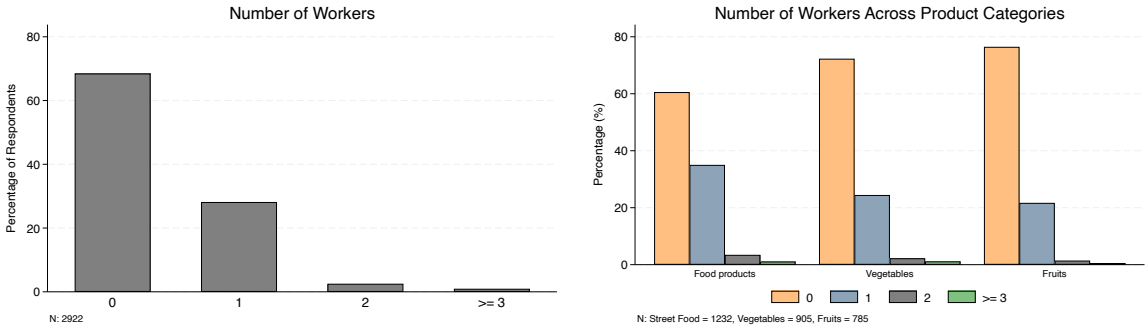


Figure 25: Number of Workers

The likelihood of having helpers varies by product category (Figure 25). Street food vendors are the most likely to work with others, 60.5 percent report having no additional workers, compared to 72 percent among vegetable vendors and 76 percent among fruit vendors. The relatively higher labour intensity of street food vending reflects the preparation demands of cooked food, chopping, cooking, serving, and cleaning require more hands than displaying and selling produce.

Among vendors who do have helpers, the labour force is almost entirely family-based: 90.5 percent of such vendors report that all workers are family members, and 89.9 percent have no paid workers whatsoever (Figure 26). What appears on the surface as a multi-person enterprise is, in most cases, a family livelihood strategy rather than a conventional employer-employee relationship. This has two implications. First, reported daily revenues are effectively shared across multiple household members whose labour contributions are uncompensated and invisible in standard income measures, a point to bear in mind when interpreting the earnings data

in Section 7. Second, and more fundamentally, it means the operative unit of this sector is either the individual vendor or the household, and rarely a firm with hired labour. The embeddedness of vending in family structure is not merely a demographic observation, it shapes the economics of the enterprise at its core.

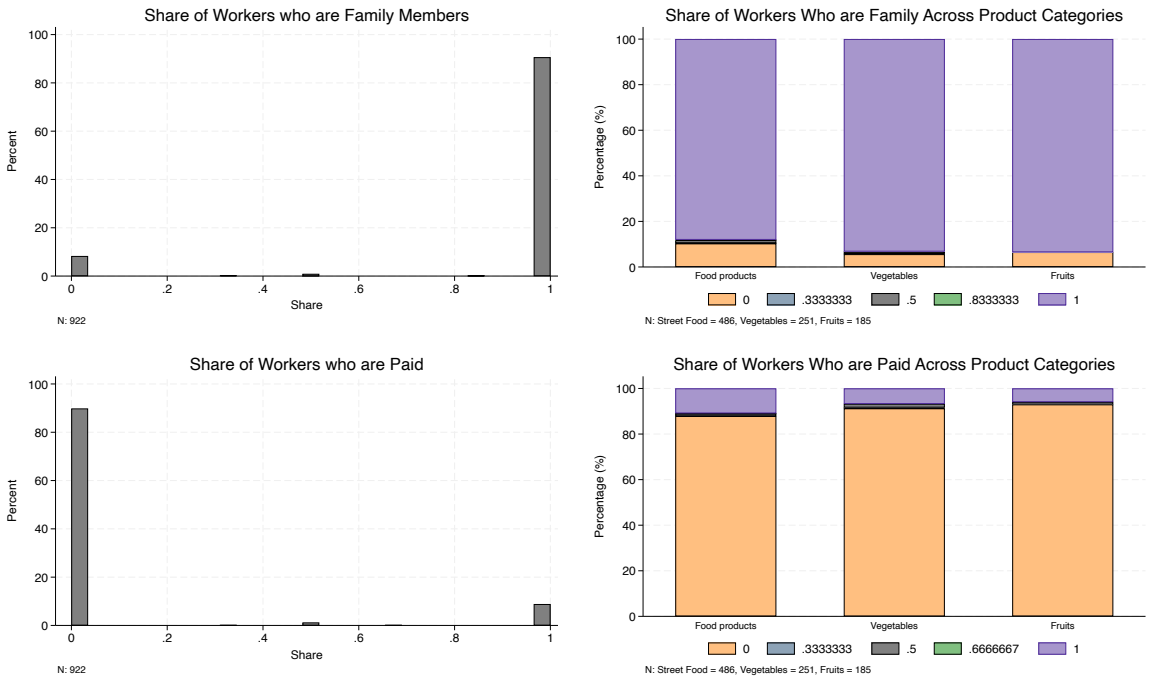


Figure 26: Share of Workers Who are Family or Paid

6.5 Pricing: Cost-Plus Logic and Implicit Coordination

Despite operating without formal accounting practices, vendors display a clear and consistent logic in how they set prices. The two dominant strategies are adding a fixed absolute amount to the cost of goods (90% of vendors) and applying a percentage markup to cost (75% of vendors). Both are fundamentally cost-plus in nature, suggesting vendors have a working understanding of their input costs and build their margin deliberately rather than simply following prevailing prices or pricing by intuition (Figure 27).

The prevalence and mix of these strategies vary across product categories in ways that reflect the underlying economics of each product type (Figure 28). Produce vendors overwhelmingly rely on adding a fixed absolute amount to wholesale cost, consistent with the transparency of their cost structure: a vendor who buys at a known wholesale price adds a fixed rupee markup per unit. Produce vendors are also more likely to report pricing through agreements with other vendors. This is consistent with the product homogeneity characteristic of vegetable and fruit markets, where adjacent stalls sell near-identical goods and price is the primary dimension of competition (Banerjee et al., 2022), which creates both the incentive and the feasibility for implicit coordination around prevailing price levels. Street food vendors, by contrast, more commonly maintain a fixed sale price regardless of input cost fluctuations, absorbing cost variation into margins rather than passing it through to customers. This rigidity reflects the menu-pricing logic common in prepared food markets, where customers expect stable prices for familiar items and where product differentiation reduces the pressure to coordinate on price with neighbours.

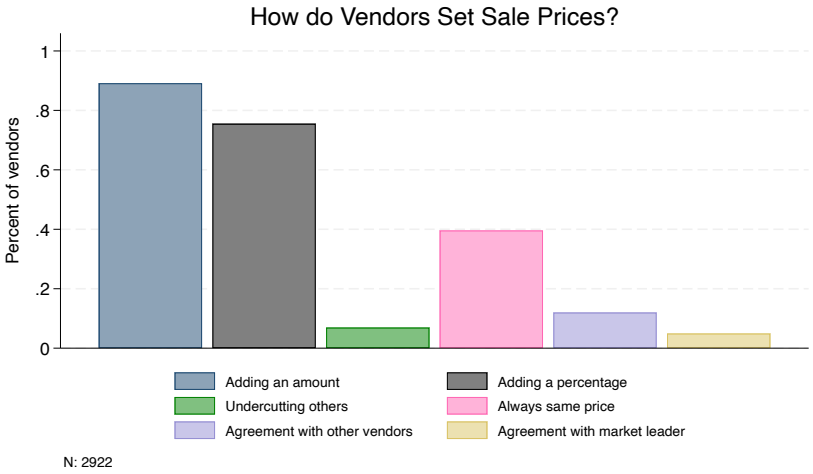


Figure 27: Pricing Strategy of Products

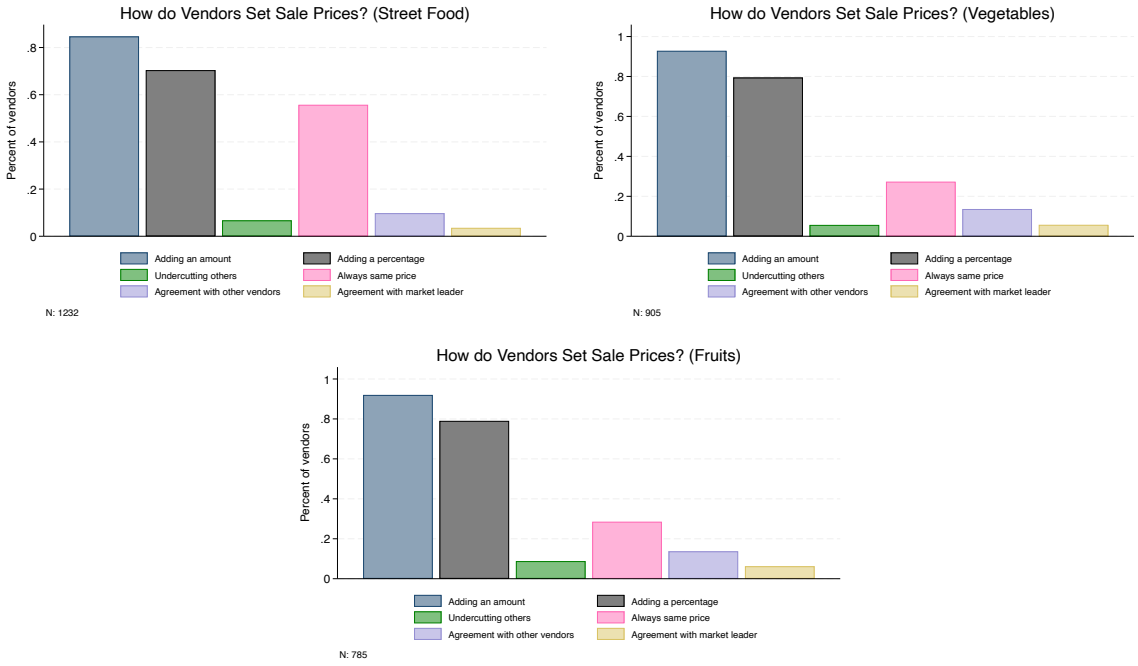


Figure 28: Pricing Strategy of Products by Product Category

The cost-plus logic that individual vendors follow interacts with market structure to produce a distinctive form of price coordination at the marketplace level. Since wholesale market prices serve as a common cost anchor for vendors sourcing from the same markets, and since vendors operate in close physical proximity where prices are directly observable, retail prices tend to converge without explicit agreement or collusion. Vendors routinely observe the prices charged by their neighbours and adjust accordingly, producing an informal price discovery process that disciplines individual pricing decisions. The result is a narrow band of prices within which most vendors operate, constrained from above by the risk of losing customers to adjacent competitors, and bounded from below by the shared wholesale cost floor. Some undercutting occurs at the margins, particularly toward the end of the day when distress selling pressure intensifies, as discussed above. This pattern is consistent with models of price convergence under common costs and spatial proximity (Stigler, 1964), though here the mechanism is not strategic interdependence among oligopolistic firms but the transparency of costs and prices in an open, informal setting, a form of coordination that is, in effect, a by-product of the spatial clustering documented in Section 5.

6.6 Digital Adoption

Digital technology has penetrated this sector more deeply than the informal, street-based nature of vending might suggest. Of the 2,922 vendors in the sample, 2,644, nearly 90 percent, own a mobile phone. Crucially, the vast majority of these are smartphones: only 573 phone-owning vendors report owning a basic handset, meaning that roughly 70 percent of all vendors in the sample own a smartphone. This is a striking baseline for a population that is predominantly low-education, socially disadvantaged, and operating in the informal economy.

Consistent with high smartphone ownership, digital payment adoption is widespread. 88 percent of vendors report using digital payment platforms such as Paytm for business transactions, a rate that likely reflects both the post-demonetization and UPI-driven expansion of digital payments in India and the practical advantages of cashless transactions in a high-footfall, small-transaction environment. The adoption of digital payments is notable not only for its scale but for what it implies about vendors' technological capacity: this is a population that has already navigated the transition to digital financial infrastructure, suggesting that the barrier to further digital adoption is not primarily one of basic technology access.

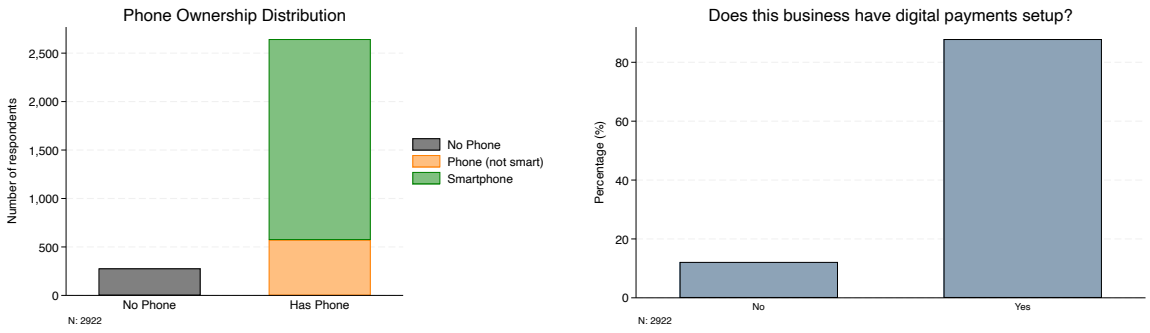


Figure 29: Phone Ownership and Digital Payments Usage

Against this backdrop of high phone ownership and payment digitization, vendor appetite for a more ambitious hypothetical digital tool (not currently available in the market), a platform connecting them to local customers, with delivery managed by the vendor themselves, is considerably more muted. When asked about interest in such an application, 917 vendors (31.3 percent) expressed willingness to participate. Among those who are interested, the reasons cited

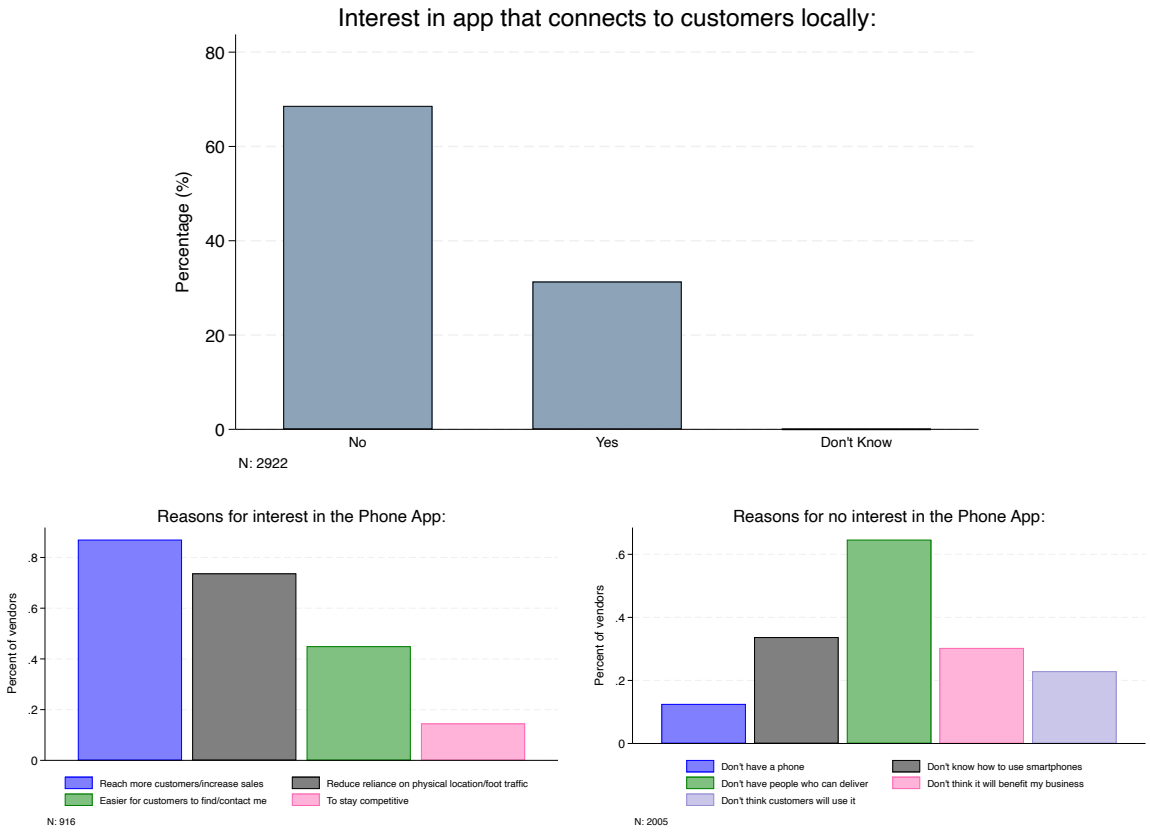


Figure 30: Are Vendors Interested in an application connecting them to customers via phone?

in order of importance are: increasing customer reach and sales, reducing reliance on foot traffic, making it easier for customers to make contact, and staying competitive with other vendors. These motivations are coherent and business-oriented; vendors who are interested are drawn by the demand-side benefits of expanding beyond their immediate physical catchment area, which is precisely the constraint that spatial embeddedness imposes most directly.

Among the 68.7 percent who are not interested, the stated barriers are equally revealing. The most common reason is the absence of anyone available to handle deliveries, followed by not knowing how to use a smartphone, doubting the platform would benefit the business, scepticism that customers would use it, and, least commonly, not owning a phone. This ordering is instructive. The primary barrier is not technological but operational: delivery logistics represent a binding constraint for vendors who are already managing solo or family operations with no slack capacity. The second most common barrier, not knowing how to use a smartphone, is notable given the high rate of smartphone ownership, suggesting a gap between device ownership and functional digital literacy that simple ownership statistics obscure.

Together, these findings point to a nuanced picture of digital readiness in this sector. The infrastructure for deeper digital integration, smartphone ownership, payment digitization, is largely in place. What is missing is the operational capacity and institutional support to translate that infrastructure into new business models. A platform that offloads delivery logistics or provides hands-on onboarding support would address the two primary barriers directly, and may find a more receptive audience than the aggregate 31 percent interest rate suggests.

7 Economic Decisions

So far, this paper documented the social and operational structure of street vending in Patna. This section turns to the economic outcomes that structure produces: what vendors earn, what they spend, and what the net returns to vending look like across product categories. We also document vendor wellbeing, both physical and mental, as a non-monetary dimension of the cost of operating in this sector.

7.1 Income and Earnings

Average daily sales across the sample are Rs. 2,985, with average daily profits of Rs. 619. Scaling up, average weekly sales are Rs. 19,269 and average weekly profits Rs. 4,260. These figures are somewhat higher than the implied average sales of informal microenterprises in India as per the ESIS, 2022 (Appendix Figure A3) and similar to the returns documented for informal vendors in 2023 Kolkata (average daily profits of Rs. 578) by Banerjee et al., 2024, though direct comparisons are complicated by differences in product mix, city size, and survey methodology.

The distributions of both sales and profits are right-skewed, with a long tail of high-earning vendors pulling the mean well above the median. Median daily sales are Rs. 2,000 and median daily profits Rs. 500; at the weekly level, median sales are Rs. 14,000 and median profits Rs. 3,500. The gap between mean and median, roughly 50 percent for daily sales and 25 percent for daily profits, is a reminder that a minority of high-earning vendors pull the mean above the median, as is common in right-skewed informal enterprise earnings distributions, and that the typical vendor's economic position is more modest than sample means suggest. This degree of right-skewness is consistent with patterns documented in informal enterprise surveys across developing countries.

A notable feature of the profit distribution is that a non-trivial share of vendors report negative profits for the previous day, that is, realized revenues below reported costs. This is consistent with the perishability dynamics documented in Section 6.3: on days when distress selling is severe or footfall is unusually low, vendors may recoup less than their procurement cost. Because the profit variable captures a single realized day rather than a typical day, the share of vendors in loss on any given day likely overstates the share operating at a structural loss over time. Nonetheless, the presence of loss days in a sector with no social protection and daily household expenditure obligations underscores the income volatility that aggregate earnings figures obscure. Panel data tracking daily revenues and costs would be needed to characterize the full distribution of earnings risk this population faces.

Sales and profits differ meaningfully across product categories, and the pattern is instructive. When plotted by product type, both daily and weekly sales are lower for street food vendors than for produce vendors, a finding that might initially suggest street food is a less remunerative activity. The picture changes substantially when profits are examined. The gap between street food and produce vendors narrows considerably in the profit distributions, pointing to a structural difference in profit margins: produce vendors achieve higher gross revenues but operate on thinner margins, while street food vendors generate lower revenues but retain a larger share as profit. This is consistent with what the operational data in the previous section would lead us to expect, produce vendors face higher spoilage losses, greater distress selling pressure, and more variable wholesale input costs, all of which compress net returns relative to gross sales. Street food vendors, by contrast, have more control over their cost structure through preparation and can price the value-added component of cooking rather than simply passing through commodity prices.

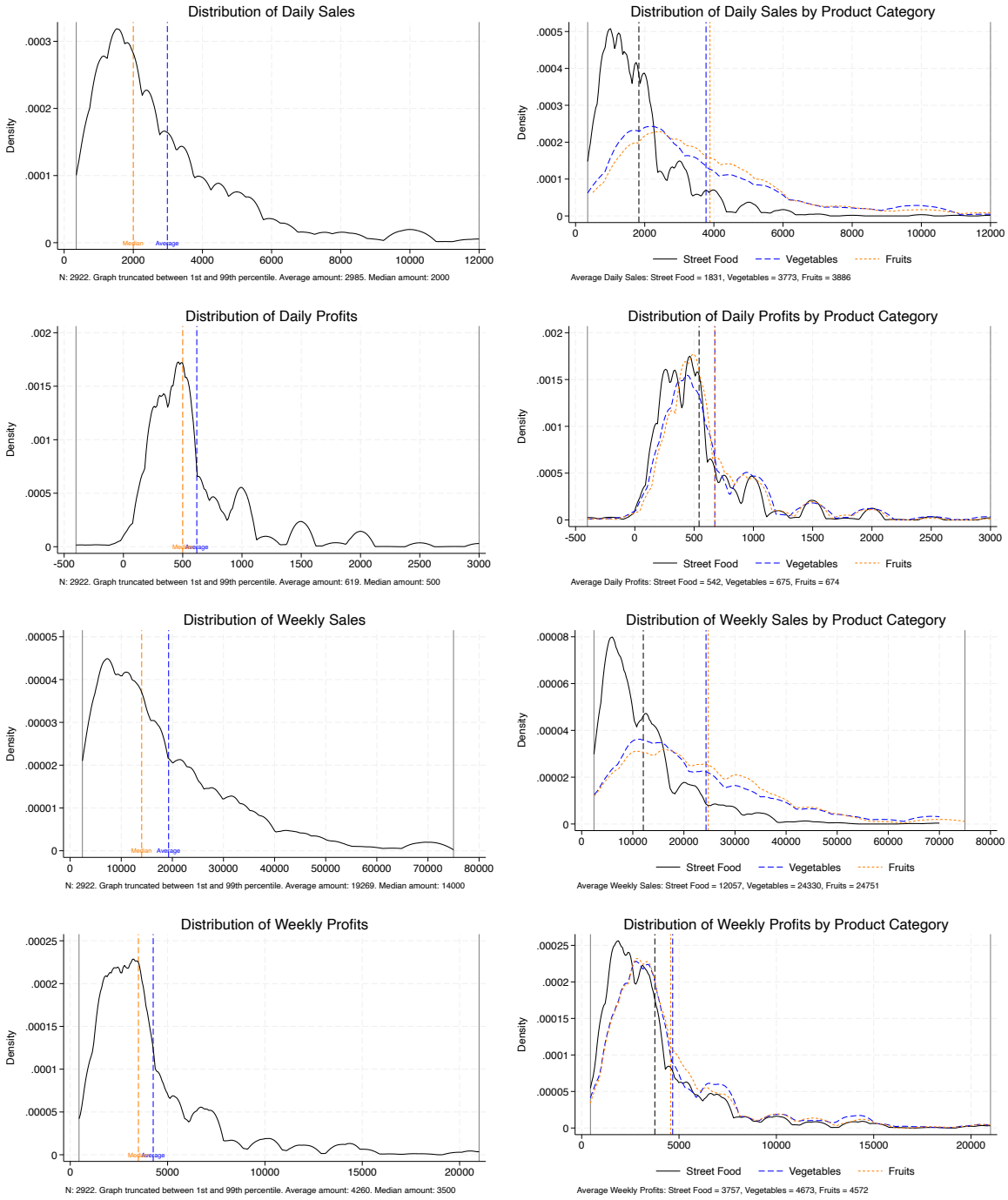


Figure 31: Distribution of Sales and Profits

7.2 Costs and Expenditures

Vendor costs fall into four categories captured in the survey: inventory, travel, electricity, and eating out during the workday (Figure 32). The cost structure is dominated by inventory, with average daily costs of Rs. 3,308 (N = 2,914)[3]. The distribution of inventory costs is right-skewed, mirroring the sales distribution, with a long tail of high-volume vendors purchasing substantially more than the median.

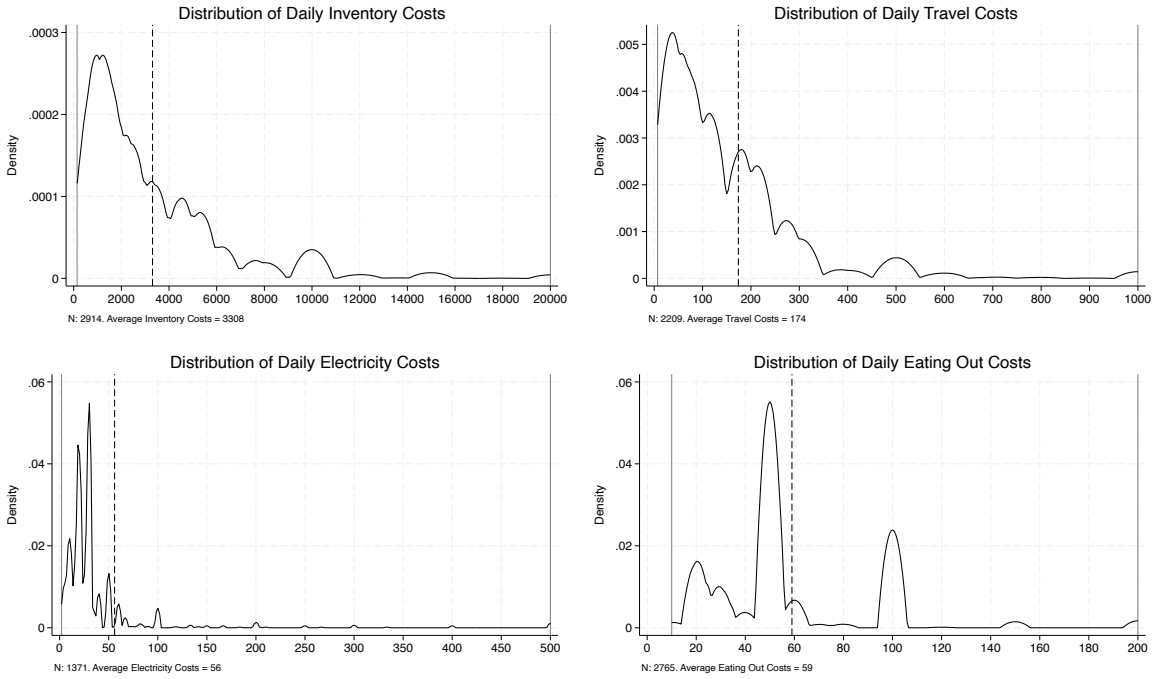


Figure 32: Distribution of Daily Costs

The remaining cost categories, travel, electricity, and eating out, are individually smaller than inventory but collectively significant relative to vendor earnings. Average daily travel costs are Rs. 174 (N = 2,209), encompassing both the vendor's own commute to the marketplace and the cost of transporting goods from wholesale markets to the vending location. That roughly 700 vendors report no travel costs is consistent with the commuting distance distribution documented in Section 5: vendors who live close to their marketplace and source from nearby wholesale markets, or who have supplies delivered directly, as reported in the procurement subsection, incur minimal separate transport expenditure. Average daily electricity costs are Rs. 56 (N = 1,371), with fewer than half the sample reporting any electricity expenditure at all. Average daily eating-out costs are Rs. 59 (N = 2,765), a near-universal expenditure reflecting the reality that vendors spend long hours at their stall and cannot return home for meals. This is effectively an implicit labour cost, the monetary equivalent of the time and household resources that would otherwise provide meals.

Taken together, daily operating costs exclusive of inventory average approximately Rs. 290 for vendors who incur all three non-inventory cost categories. The magnitude of these non-inventory

[3]Sales and profits were elicited as realized outcomes for the previous trading day ("how much did you earn/profit yesterday"), while cost figures reported in Section 7.2 were derived from vendors' reports of typical spending at a stated frequency, converted to daily equivalents. The two measures are therefore not components of a common profit and loss account: sales and profits capture a single point-in-time observation subject to day-to-day volatility, while costs represent an average daily rate. Comparisons between the two should be interpreted accordingly.

costs relative to profits underscores how sensitive vendor earnings are to even modest increases in transport fares, electricity charges, or food prices. This sensitivity has direct implications for formalization: relocation policies that increase commuting distances or shift vendors away from established supply routes would raise operating costs against already thin margins, adding a further source of friction to the resistance documented throughout this paper.

The cost structure varies meaningfully across product categories in ways that reflect the underlying economics of each product type (Table 2). Inventory costs are by far the largest driver of variation: fruit and vegetable vendors face dramatically higher procurement costs (Rs. 4,946 and Rs. 4,412 per day respectively) than street food vendors (Rs. 1,457), consistent with the higher wholesale prices of fresh produce relative to the raw ingredients used in food preparation. Electricity costs run in the opposite direction, street food vendors incur the highest electricity expenditure (Rs. 84 per day) compared to produce vendors (Rs. 40 for vegetables and Rs. 30 for fruits), reflecting the cooking equipment that food preparation requires. Eating out costs are broadly similar across categories, consistent with the near-universal nature of this expenditure documented above. These cost differences across product categories reinforce the margin argument made in Section 7.1: produce vendors face substantially higher input costs relative to their profits than the raw revenue figures suggest, while street food vendors trade higher electricity and labour costs for greater control over their cost structure through value-added preparation.

Table 2: Average Daily Costs by Product Category

	Inventory	Electricity	Travel	Eating Out
Product Category				
Food products	1456.85	83.51	82.77	53.51
Vegetables	4411.61	40.01	185.83	61.08
Fruits	4946.14	30.13	240.09	63.99
Total	3308.04	55.51	174.39	58.80

Note: All monetary units are expressed in Indian Rupees (INR).

Taken together, the cost structure points to a form of operating leverage that amplifies income volatility for vendors in this sector. Inventory costs, the dominant expenditure, are committed each morning at a known wholesale price before revenues are realized, while daily revenues fluctuate with footfall, weather, and perishability-driven discounting. A vendor who spends approximately Rs. 3,300 on inventory at the start of the day faces meaningful uncertainty about whether that outlay will be recovered. This cost-revenue timing mismatch is a structural feature of the business model rather than a survey artifact, and connects directly to the psychological distress findings in Section 7.3: the income risk embedded in daily procurement decisions is precisely the kind of chronic low-level financial stress that the occupational health literature associates with elevated psychological distress among informal workers.

7.3 Wellbeing

The economic precarity documented above has a human dimension. Operating in an informal sector without social protection, fixed infrastructure, or legal tenure exposes vendors to a set of health risks, both physical and mental, that represent a non-monetary cost of vending that aggregate earnings figures do not capture.

On the physical health side, 14 percent of vendors report having been diagnosed with a disease in

the last year, and 39 percent report experiencing some ailment in the preceding month (Figure 33). Tables 3 and 4 present the detailed breakdown. Among vendors reporting a diagnosed disease (N = 411), injuries, including fractures and limb injuries, are the most prevalent, reported by 32 percent, followed by diabetes (10 percent), high blood pressure (9 percent), respiratory illnesses such as asthma and tuberculosis (8 percent), kidney or liver diseases (7 percent), and mosquito-borne diseases such as malaria and dengue (7 percent). The prominence of injuries likely reflects the physical demands and hazards of operating on roadsides alongside traffic. The disease profile more broadly is consistent with sustained outdoor exposure in urban environments: respiratory conditions from prolonged contact with vehicular emissions and dust, mosquito-borne diseases from operating near open drains and standing water common along Patna's roadside vending corridors, and chronic conditions whose management is complicated by the absence of regular working hours, limited access to preventive healthcare, and the inability to take time off from a daily-earnings livelihood without immediate income loss.

Among vendors reporting a recent ailment (N = 1,132), fever and chills dominate (57 percent), followed by headaches and migraines (27 percent), sore throat, cough, or loss of taste and smell (15 percent), stomach aches (12 percent), and dizziness or weakness (9 percent). The pattern of acute ailments reinforces the occupational exposure channel: the high rates of respiratory symptoms and fever are consistent with prolonged outdoor work on congested transportation corridors, the same arterial roads that vendors select for their high foot traffic, as documented in Section 5, also expose them to sustained vehicular emissions, dust, and extreme temperatures. The absence of weather protection infrastructure documented in Section 6.3 compounds this exposure.

Table 3: Diseases Vendors Reported Having Within the Previous Year

	Share of Vendors
Injury (e.g., multiple broken bones, limb)	0.32
Major illnesses (e.g., heart attack, stroke, cancer)	0.04
Respiratory illness (e.g., asthma, tuberculosis)	0.08
Mosquito-borne disease (e.g., malaria, dengue)	0.07
Water/food borne disease (e.g., cholera, typhoid)	0.04
Skin diseases (e.g., scabies, dermatitis)	0.03
Severe acute malnutrition, anaemia	0.01
Hepatitis	0.04
Diabetes/sugar	0.10
Epilepsy	0.00
Jaundice	0.01
Kidney diseases, liver diseases	0.07
Polio	0.00
Pregnancy-related issues/illness	0.02
High blood pressure	0.09
Eye infection (e.g., conjunctivitis/pink eye)	0.04
Ear/ENT problems	0.05
Other	0.03
Observations	411

The mental health picture is equally concerning. Using the Kessler 6 (K6) psychological distress scale (a six-item screening instrument validated for use in population health surveys across diverse settings (Kessler et al., 2002, 2010), 58.21 percent of vendors score in the low or no distress range (0–5), 40.18 percent in the moderate distress range (6–12), and 1.61 percent in the serious

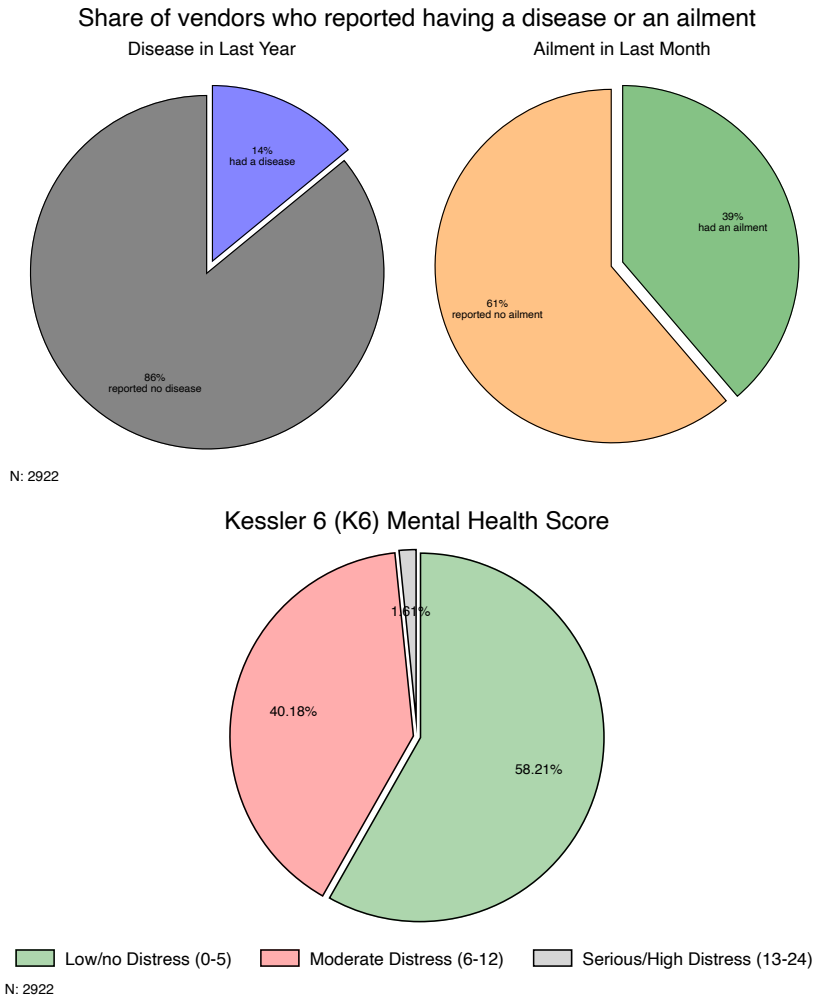


Figure 33: Physical and Mental Health

Table 4: Ailments Vendors Reported Having Within the Previous Month

	Share of Vendors
Headache, migraine	0.27
Stomach ache/cramp	0.12
Nausea, vomiting	0.03
Diarrhoea, dysentery	0.02
Rashes/skin issues	0.02
Dizziness, disorientation, weakness	0.09
Temperature/fever/chills	0.57
Sore throat, cough, loss of taste/smell	0.15
Severe muscle pain, cramps, back pain	0.08
Other	0.00
Observations	1132

or high distress range (13–24). The finding that over 40 percent of vendors report moderate to high psychological distress is striking in comparative context. The Global Burden of Disease Study for India estimated that one in seven Indians were affected by mental disorders of varying severity in 2017 (Sagar, Dandona et al., 2020). This figure is based on clinical diagnostic criteria applied through epidemiological modelling. The K6, by contrast, is a screening tool that captures non-specific psychological distress on a spectrum rather than diagnosing discrete clinical conditions and is known to identify a broader population than clinical diagnostic approaches, so the two figures are not directly comparable. With this caveat in mind, the gap between a general population clinical disorder prevalence of approximately 14 percent and the 40 percent moderate-to-high distress rate among vendors is substantial, and consistent with the broader evidence that informal employment, income volatility, and social disadvantage are significant risk factors for elevated psychological distress in low- and middle-income country settings (Lund et al., 2010). While we cannot establish causality from cross-sectional data, the conditions documented throughout this paper: potential income volatility from distress selling and spoilage, regular exposure to eviction and harassment (Section 8), long working hours averaging over 9 hours per day across 7 days a week without social protection (Table 1), and the physical demands of outdoor vending are precisely the conditions that the occupational health literature associates with elevated distress among informal workers. The elevated K6 scores are consistent with these mechanisms operating in this population, but establishing which specific features of the vending environment drive distress would require either longitudinal data or variation in exposure across otherwise comparable vendors.

Taken together, the physical and mental health findings underscore a point that earnings data alone would miss: the returns to street vending must be weighed against costs that are borne in the body and mind of the vendor, not just in the profit and loss account. This has direct implications for how policy evaluates the welfare of this sector. To the extent that physical and mental health burdens are driven by conditions that income improvements alone would not address: regulatory harassment, outdoor exposure, lack of fixed infrastructure, formalization policies that focus narrowly on earnings or legal tenure may leave a substantial component of vendor welfare unaddressed. Whether this is empirically the case is an open question. Conversely, the non-monetary benefits of formalized vending zones, reduced harassment, weather protection, and greater security of tenure, may be valued by vendors independently of any income effects (Lund et al., 2010).

8 Regulatory Environment

Street vendors in Patna operate in a legal and regulatory environment that is, for most of them, effectively invisible, unknown, unenforced in their favour, and experienced primarily through its coercive rather than protective dimensions. This section documents three aspects of that environment: vendors' knowledge of the policy framework nominally designed to protect them, their perceptions of government, and their direct experience of eviction and harassment.

8.1 Policy Knowledge and Formalization

The SVA 2014 is India's landmark legislation on street vending, mandating licensing, designated vending zones, and Town Vending Committees to protect vendor livelihoods and regularize their operations. In Patna, awareness of this framework is almost entirely absent. Only 7.7 percent of vendors in the sample are aware that any policies exist regarding the street vending sector, 6.3 percent know the name of any such policy, and just 1.3 percent, fewer than 1 in 75 vendors, are specifically aware of the Street Vendors Act of 2014 (Figure 34). This is a striking finding. A law passed over a decade ago, designed to protect this exact population, has simply not reached

them.

Licensing tells a similarly incomplete story. The Certificate of Vending issued under the Street Vendors Act is the primary formal recognition available to vendors, yet only 20.44 percent of the sample report holding one. Even this figure likely overstates effective formalization, possession of a certificate does not imply awareness of the rights it confers, and in a context where 92 percent of vendors are unaware that relevant policies exist at all, the certificate is more plausibly understood as an administrative artifact than as a meaningful integration into a protective legal framework.

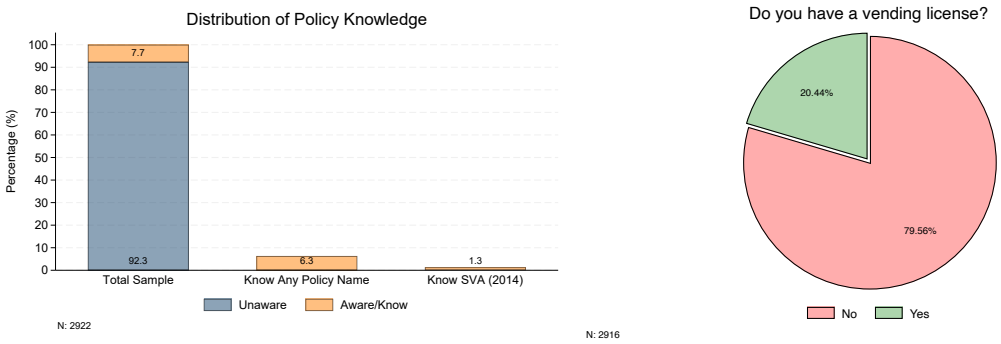


Figure 34: Policy Environment

Together, these figures document a fundamental implementation failure. The 2014 Act created a formal architecture for vendor protection that has not been translated into ground-level awareness or coverage in Patna. The vendors who stand to benefit most from its provisions, socially disadvantaged, low-education, operating without legal tenure, are precisely those least equipped to navigate the bureaucratic processes through which awareness and licensing are acquired.

8.2 Perceptions of Government

Vendors' perceptions of their local government reflect the implementation failure documented above. When asked how much they think the local government cares about the welfare of street vendors, 53.66 percent say not at all, 42.3 percent say some, 2.67 percent say a lot, and 1.37 percent say they do not know (Figure 35). More than half of vendors, operating in a sector that national legislation has explicitly recognized as deserving protection, believe their local government is entirely indifferent to their welfare.

This perception is not simply pessimism. It is grounded in the material experience of how the regulatory environment actually operates for most vendors, not as a source of protection but as a source of threat, as the following subsection documents.

8.3 Enforcement and Evictions

The most direct way in which vendors encounter the state is through enforcement rather than protection. Municipal authorities conduct eviction drives, locally known as "halla gadis", with striking regularity. When asked how frequently the municipality comes to their marketplace for evictions, 24.91 percent of vendors report multiple times a month, 22.07 percent report once a month, 19.82 percent report once every few months, 12.15 percent report once a week, and 10.75 percent report multiple times a week. Only 10.3 percent report never experiencing a municipal eviction drive (Figure 36). Taken together, nearly 90 percent of vendors operate in marketplaces that experience regular eviction pressure, and close to half operate in locations

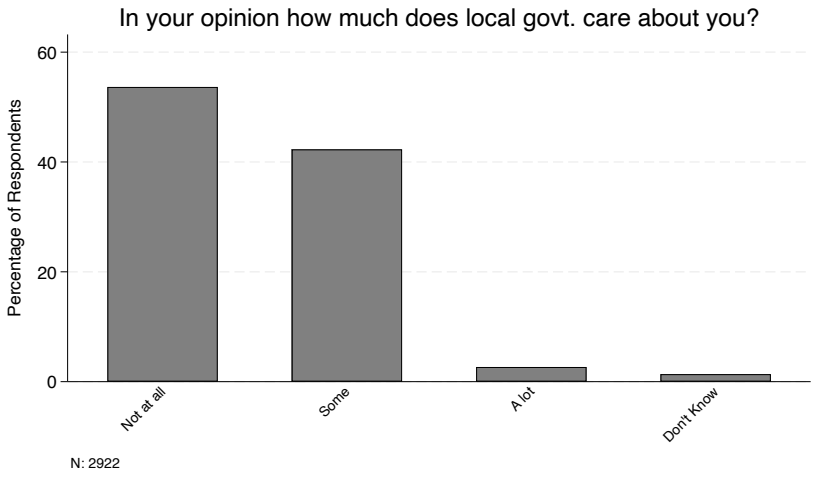


Figure 35: Opinion on Government Caring about Street Vendors

where eviction drives occur at least once a month.

The consequences of this enforcement environment are concrete. In the six months prior to the survey, 33 percent of vendors report having faced an eviction or confiscation of goods, one in three vendors losing stock or being forced from their location within a single half-year window. Harassment by police or local authorities is even more widespread: 42.55 percent of vendors report having experienced it in the same period.

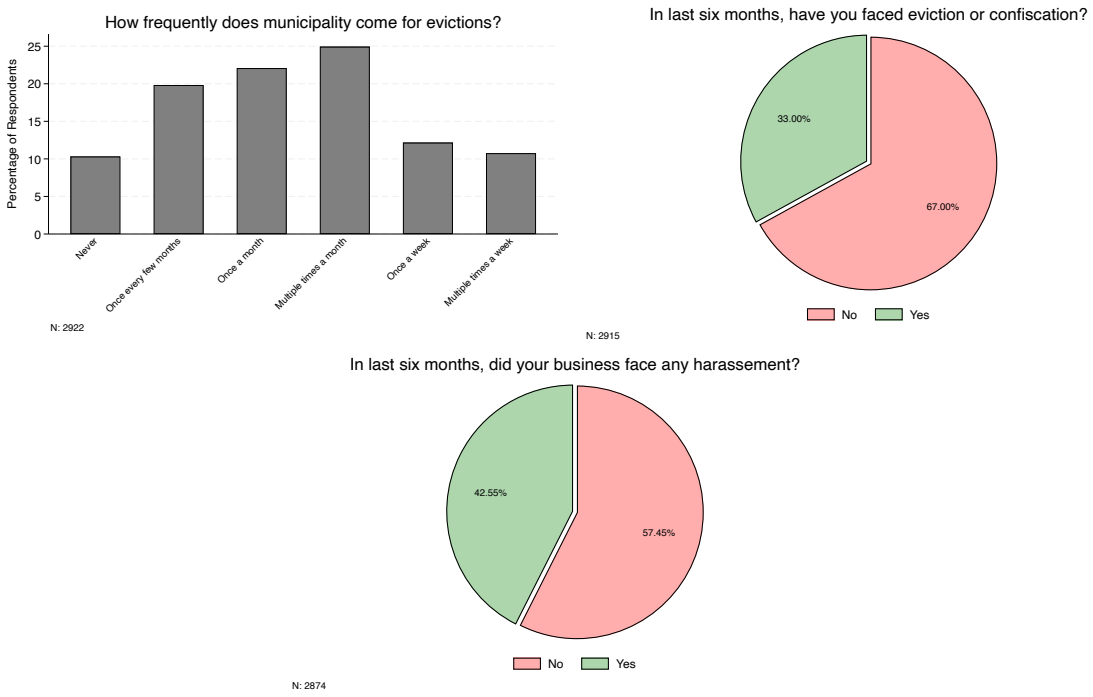


Figure 36: Harassment, Evictions and Goods Confiscations

These figures close the loop on the embeddedness argument developed throughout this paper. Vendors are spatially persistent, 99 percent have never moved from their current location, not because their tenure is secure but despite the fact that it is not. The social and economic ties that embed vendors in their locations are strong enough to make them absorb repeated eviction

pressure rather than relocate. But that persistence comes at a cost: a third of vendors lose goods or are displaced at least once every six months, and nearly half face direct harassment from the authorities nominally charged with implementing a law designed to protect them. The regulatory environment does not merely fail to support vendor livelihoods, it actively undermines them, while leaving vendors with neither the awareness nor the formal standing to push back.

9 Conclusion

This paper has documented the structure of street vending markets in Patna using original survey data from 2,922 vendors across 206 marketplaces. The central finding is that vendors are deeply embedded in overlapping social, spatial, and economic structures, and that this embeddedness is simultaneously the source of the sector's resilience and the key to understanding why policies designed to reshape it have repeatedly failed.

It bears emphasis that embeddedness is not straightforwardly good for vendors. Granovetter, 1985 warns against replacing one form of optimistic functionalism with another, in which social networks simply substitute for institutional arrangements as the structure that guarantees order. The embeddedness documented here generates vulnerabilities alongside the resilience it provides. Family labour that lowers operating costs also limits the firm's ability to grow or absorb shocks when household members are unavailable. Supplier relationships that provide credit and reliability create dependency on specific counterparties. Spatial clustering that generates demand-side agglomeration also concentrates vendors in locations that attract regulatory enforcement. The same structure that makes these livelihoods viable is also what makes them precarious, and understanding both faces of that structure is necessary for policy that aims to improve rather than simply regularize vendor welfare.

The policy implication follows directly from the structure of embeddedness rather than from any single dimension of it. If vendor livelihoods depended only on location-specific capital, relocation with adequate compensation for switching costs would in principle be feasible. If they depended only on supplier relationships, those relationships could in principle be transferred to a new location. If they depended only on agglomeration economies, coordinated group relocation would in principle preserve them. The difficulty is that all three dependencies are present simultaneously and are mutually reinforcing: the value of a location derives partly from the supplier relationships built around it, which in turn depend on the social networks and family labour arrangements that took years to establish in that specific market context. A policy that addresses one dimension while ignoring the others will underestimate the total cost of disruption. This is the practical content of the embeddedness argument, and it is why formalization efforts that focus narrowly on spatial reallocation, offering legal tenure in a new location as a substitute for all that the current location provides, have repeatedly fallen short.

The descriptive patterns documented here raise a set of specific, tractable questions for future research that we flag as the natural agenda this paper motivates.

Vendor preferences over formalization and relocation. How do vendors trade off legal security against the attributes of their current location? The near-zero awareness of the 2014 Act documented here raises a prior question: does information about the regulatory consequences of remaining informal shift vendor preferences? And how much does the expected number of co-relocating vendors from the same market matter for individual willingness to move? These questions require a combination of stated preference methods and field experiments to answer, and the baseline data assembled here provides the foundation for such an analysis.

The economics of spatial agglomeration in informal markets. The finding that 80 percent of vendors cite demand-side agglomeration as a benefit of clustering, and that vendors report a rich ecosystem of mutual support including shared information, credit, and collective security, raises questions about the magnitude and structure of these agglomeration economies. How much do earnings fall when a vendor is isolated from their cluster through eviction, relocation, or the departure of neighbours? What is the equilibrium spatial distribution of vendors in the absence of regulatory pressure, and how does it compare to the current distribution? Answering these questions would connect the street vending literature to a broader spatial economics agenda that has rarely been applied to informal urban markets.

Pricing, markups, and market power. The prevalence of cost-plus pricing and the emergence of implicit price coordination documented here raise questions about the degree of market power vendors exercise and how it varies across settings. Do vendors in less competitive locations charge higher markups? How do wholesale price shocks pass through to retail prices, and how quickly? Is there evidence of price leadership among established vendors, and does tenure at a location translate into pricing power? Answering these questions requires panel data on prices and costs, a natural extension of the cross-sectional survey conducted here.

Relational contracting in informal supply chains. The high incidence of fixed supplier relationships, particularly among street food vendors, suggests that relational contracting, a mechanism extensively studied in manufacturing and agricultural supply chains (Macchiavello, 2022), plays an important role in organizing supply chains in this sector. Open questions include what determines the formation and duration of these relationships, whether they involve implicit credit or insurance arrangements, how they respond to shocks such as price volatility or vendor eviction, and whether the disruption of established supplier relationships is a quantitatively important cost of forced relocation. Understanding how informal supply chains are organized has implications beyond street vending, for how price transmission and market integration work in urban food systems more broadly.

Digital adoption and the limits of platform-based formalization. The finding that 88 percent of vendors already use digital payments, while only 31 percent express interest in a customer-connecting platform, points to a specific pattern of digital adoption: vendors have embraced tools that reduce transaction friction without requiring operational change, while remaining sceptical of tools that would require new logistical capacity. The primary barrier to platform adoption is not technological but operational: the absence of delivery capacity in solo and family operations. This raises a design question: can platform interventions that bundle delivery infrastructure with marketplace connectivity overcome this barrier, and at what scale? A randomized evaluation of such an intervention would provide both commercial and policy-relevant evidence.

Health, welfare, and the non-monetary costs of vending. The finding that 40 percent of vendors score in the moderate to high psychological distress range, alongside a 39 percent monthly ailment rate and concentration on high-pollution transport corridors, points to a substantial non-monetary cost of vending that aggregate earnings figures do not capture. Future work should examine how health shocks propagate through household finances given the near-total absence of social protection, whether specific features of the regulatory environment, harassment frequency, eviction exposure, are associated with elevated distress after controlling for economic outcomes, and whether interventions that reduce regulatory insecurity have measurable mental health benefits.

Taken together, these questions form a research agenda around a simple organizing insight: street vending markets are not merely a welfare problem to be managed by policy, but a theoretically rich setting for studying how markets function under the conditions that characterize much of the developing world, including insecure property rights, unenforceable contracts, household-firm boundaries, and thin institutions.

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Appendix

Table A1: Balance Table: Non-participants vs Participants

	(1)	(2)	(3)
Variable	Non-Participants	Participants	Difference
Vegetables	0.267	0.310	0.043**
	(0.443)	(0.462)	(0.021)
Fruits	0.232	0.269	0.037*
	(0.422)	(0.443)	(0.020)
Cooked Food/Drinks	0.502	0.422	-0.080***
	(0.500)	(0.494)	(0.023)
Age	37.746	38.636	0.889
	(12.285)	(12.756)	(0.581)
Male	0.907	0.883	-0.024*
	(0.291)	(0.322)	(0.015)
Along narrow streets	0.111	0.055	-0.055***
	(0.314)	(0.229)	(0.011)
Along main roads	0.777	0.843	0.066***
	(0.416)	(0.364)	(0.017)
On Pedestrian Walkways	0.112	0.101	-0.011
	(0.316)	(0.302)	(0.014)
Have Stalls/Carts	0.856	0.851	-0.005
	(0.351)	(0.356)	(0.016)
Observations	570	2,922	3,492

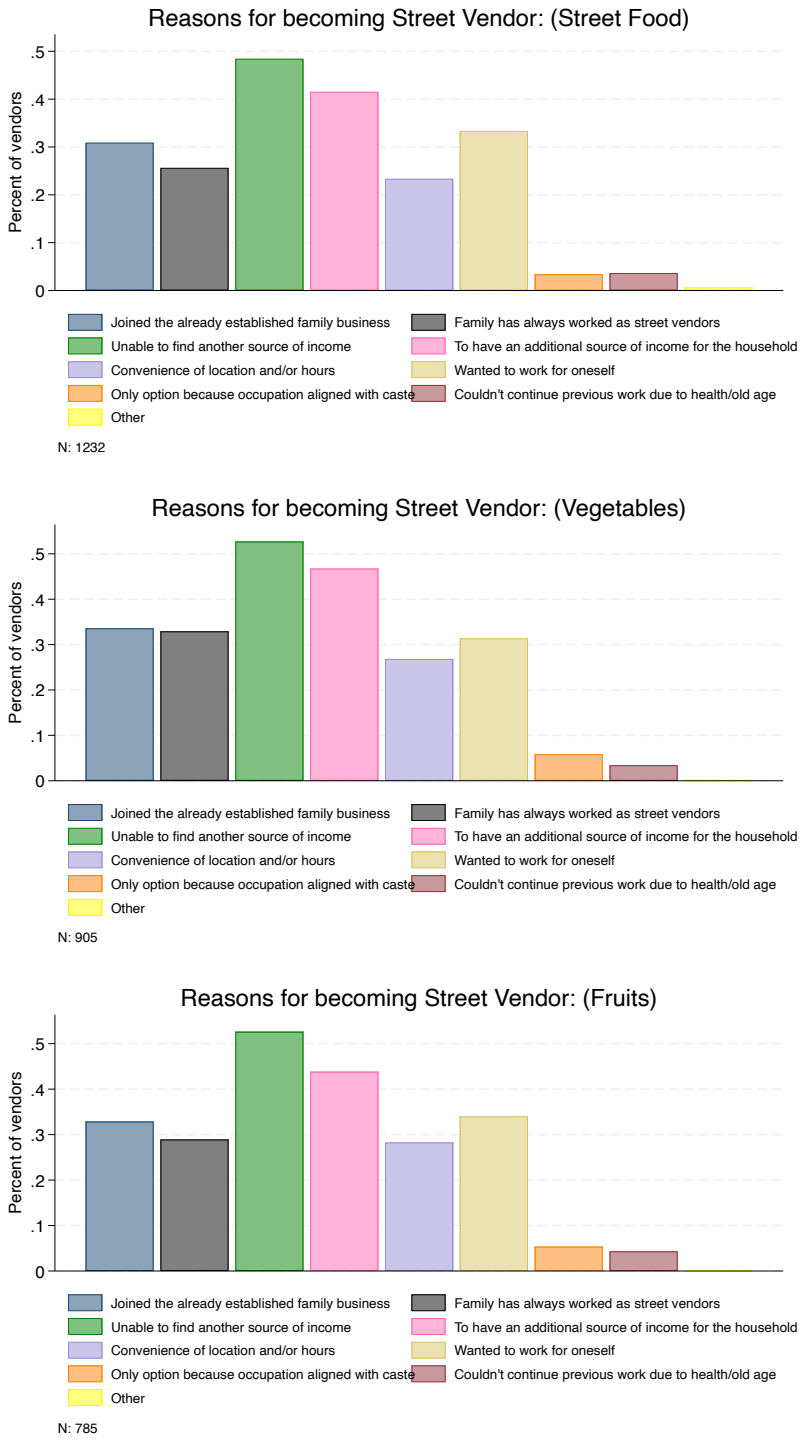


Figure A1: Reasons reported to choose Street Vending by Product Category

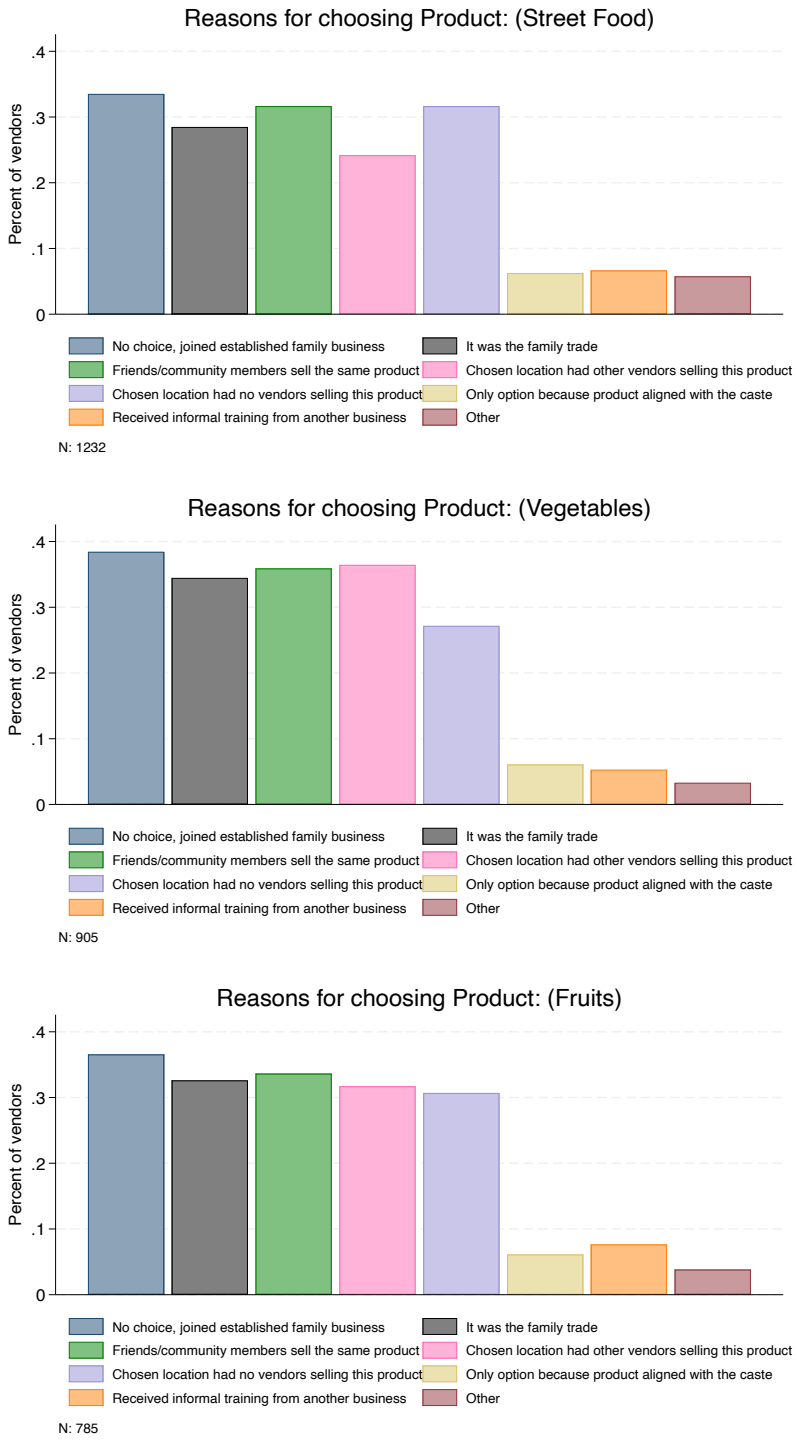


Figure A2: Reasons reported to choose Product Category by Product Category

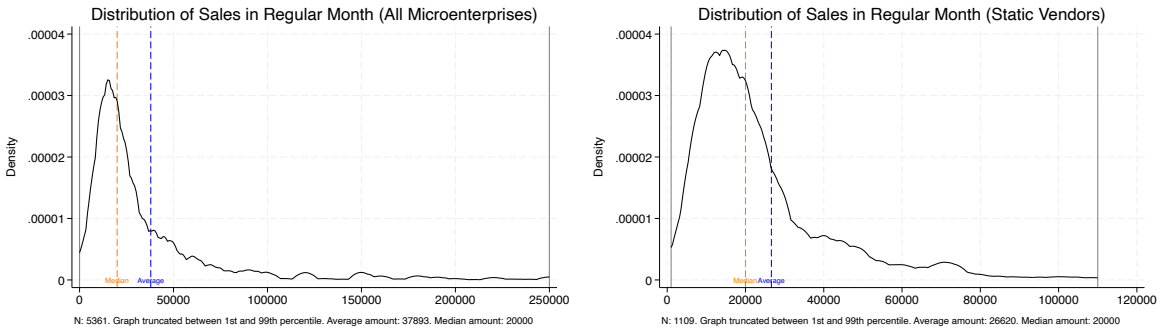


Figure A3: Distribution of Sales in Regular Month (Enterprise Survey, 2022)



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