



# Where supply and demand meet: how consumer and vendor interactions create a market, a Nigerian example

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## Abstract

Traditional food markets in lower-income countries are constructed through the interactions of their participants: those who sell food and those who buy it. Their joint actions and motivations interact to determine what is sold, to whom, and at which price; these actions are shaped by interpersonal relationships and cultural norms. Understanding these dynamics is useful for crafting equitable and impactful policies and program interventions that leverage, rather than oppose, market actors' initial motivations. This paper examines this process of “making a market” through a case study of vendors and consumers in Birnin Kebbi, Nigeria. It answers four interrelated research questions through a series of in-depth interviews with consumers ( $n=47$ ) and vendors ( $n=37$ ) using methods drawn from focused ethnography. The results demonstrate that market transactions are influenced by a complex interaction of vendors' norms on competition and collaboration, consumers' needs for credit amid unpredictable prices and restrictive gender norms, and a “moral economy” that appears to guide market actors' behavior. Based on this, it is suggested that the conceptualization of which characteristics shape consumer choices within food environments should be broadened to include factors such as credit access and bargaining ability, and the trusted interpersonal relationships that enable them.

**Keywords** Food choice · Ethnographic research · Urban food systems · Traditional markets · Sociocultural beliefs and practices

## 1 Introduction

Open-air or “traditional” food markets in low- and middle-income countries (LMICs) play a critical role in food security and nutrition. In most LMICs, over 50% of food consumed is

purchased (GloPan, 2016; Tschirley et al., 2015), purchased foods make important nutrient contributions to improving diet quality (Gelli et al., 2019; Sibhatu & Qaim, 2017), and market access is shown to correlate with higher dietary diversity (Headey et al., 2019; Hirvonen et al., 2017; Stifel & Minten, 2017). While households often use several different types of retail outlets to purchase food, traditional food markets remain relatively dominant in many LMICs (Gómez & Ricketts, 2013; Hannah et al., 2022; HLPE, 2017) and are considered a key component of the food environment, thought to structure food choice (Turner et al., 2018). They are a particularly important source of food for lower-income and food insecure populations (Crush & Frayne, 2011; Hannah et al., 2022; Wertheim-Heck et al., 2015) and for fresh, highly nutritious foods such as fresh fruits and vegetables (Hannah et al., 2022; Wertheim-Heck et al., 2014). The critical role of traditional markets gained increasing attention and respect amid market closures and restrictions during the COVID-19 pandemic (Béné et al., 2021; Devereux et al., 2020).

Reliance on these markets is not due solely to lack of alternatives: many LMIC customers prefer shopping in traditional markets due to convenient location, freshness of products,

### Highlights

- Market transactions are influenced by vendors' norms on competition and collaboration.
- Credit needs amid unpredictable prices and restrictive gender norms also play a role.
- A moral economy appears to guide market actors' behavior.
- A broader understanding of food environments could include these consumer choice factors.

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and negotiable prices, as well as the relational experiences they provide (Hannah et al., 2022; Wertheim-Heck et al., 2014). Indeed, traditional markets are also recognized as important settings for socializing and exchanging information and as generating social value, such as by enabling local development, preserving local customs, and supporting socialization (Guzmán-Pérez et al., 2021)—though most research in this vein has focused on high-income countries.

Research to date on traditional markets in LMICs has investigated a range of topics including producer-market integration (Fafchamps, 1992; Kabbiri et al., 2016); food safety issues (Nordhagen et al., 2022b; Wertheim-Heck et al., 2014, 2015); governance (Onodugo et al., 2016; Resnick, 2017; Resnick & Sivasubramanian, 2020); characterizing aspects of the “market food environment”, such as food availability and accessibility (Ahmed et al., 2021; Turner et al., 2019); and the growth of supermarkets and its implications (Reardon et al., 2003, 2010; Kimenju et al., 2015; Crush & Frayne, 2011). An additional strand of literature has focused specifically on informal food vendors or traders, including “street food” sellers and hawkers (Crush & Frayne, 2011; Resnick et al., 2019). That research has primarily probed the characteristics of employment within the sector as well as how informality is managed within municipal policy (Crush & Frayne, 2011), though work has also shown the important role that informal sources like mobile hawkers play in ensuring equitable food access (Giroux et al., 2021).

Most analyses of traditional food markets in LMICs, however, do not explicitly include the fact that a market is constructed through the interactions of its participants: those who sell food and those who buy it. Their joint actions and motivations interact to determine what is sold, to whom, and at which price. Such decisions may be impacted not only by “rational” economic factors such as profit and utility maximization but also by interpersonal relationships and cultural norms. Understanding these dynamics is useful for crafting equitable and impactful policies and program interventions that leverage, rather than oppose, market actors’ initial motivations. However, they have rarely been captured within existing research – and are indeed omitted in some of the main frameworks for examining food environments (e.g., Turner et al., 2018).

This paper examines this process of “making a market” – i.e., setting prices, agreeing on quantities exchanged, and establishing the rules of transactions through iterative social interactions. This is done through a case study of vendors and consumers in Birnin Kebbi, a secondary city in northern Nigeria. Four interrelated research questions are considered, demonstrating that market transactions are influenced by a complex interaction of vendors’ norms on competition and collaboration, some consumers’ needs for credit amid unpredictable prices and restrictive gender norms, and a “moral

economy” that appears to guide market actors’ behavior. Based on this, it is argued that the conceptualization of which characteristics shape consumer choices within food environments should be broadened to include factors such as credit access and bargaining ability, and the trusted interpersonal relationships that enable them.

## 2 Methods

### 2.1 Research questions and setting

The paper examines four interrelated research questions:

1. What factors do consumers consider when choosing a market and a vendor within that market?
2. How do market vendors interact with one another?
3. How do market vendors attract consumers?
4. How do gender roles and norms structure market interactions?

This analysis is based on data collected from traditional food markets in Birnin Kebbi, the capital city of the state of Kebbi in northwestern Nigeria. Nigeria, Africa’s most populous country, is rapidly growing and urbanizing, yet faces persistent issues of poverty and malnutrition. Two-thirds of dietary energy comes from relatively nutrient-poor cereals, roots, and tubers (compared to 50% as a world average), only 34% of children consume a diet of minimal diversity, and 15% of the population is undernourished (GAIN & JHU, 2020). It is estimated that 91% of the population cannot afford a healthy diet (FAO et al., 2020). Traditional open-air markets remain the main source of food for 65% of the population (Nzeka, 2011), with only 0.04 supermarkets per 100,000 population (compared to the global average of 5.4) (GAIN & JHU, 2020). Within Nigeria, most research on traditional markets has focused on issues of food safety (Nordhagen, 2022) or harassment by authorities under strict laws that limited their operations (Abe, 2012; Lawanson, 2014; Olurinola et al., 2014). Much of the research has focused on ready-to-eat food vendors, as opposed to vendors of fresh foods (Adeosun et al., 2022; Nordhagen, 2022).

In addition, most research on food markets and vendors in Nigeria has focused on the country’s largest metropolis, Lagos, while neglecting smaller cities (Resnick et al., 2019). However, secondary cities house half the global urban population, are a driving force in rapid industrialization worldwide, particularly in Africa, and can spark and sustain local economic growth (Hannah et al., 2022; Resnick et al., 2019; Satterthwaite et al., 2010). Within Nigeria, the focus on secondary cities is further relevant because considerable policy oversight, including of markets, resides at this local level (Resnick et al., 2019). The

choice of Birnin Kebbi (population 366,200, 2016 est. (Encyclopedia Britannica, 2019)) is particularly appropriate for the present research, given that its population is largely dominated by the Hausa Muslim ethnic group. Many Hausa Muslims ascribe to strong norms about gender roles in society (Robson, 2000), which can shape the roles and interactions of men and women within society – including in food markets. Understanding the social and cultural factors shaping market behavior in such a setting is highly relevant for policy and program design.

## 2.2 Data collection and analysis methods

This study is part of a larger analysis focused on food safety in traditional markets, the food safety-specific results of which have been reported elsewhere [*citation omitted for blind peer review*]. It used an adapted Focused Ethnographic Study (FES) approach (G. H. Lee et al., 2019; Pelto & Armar-Klemesu, 2014) consisting of two data-collection phases: an initial phase examined key themes, while a second phase (conducted after analysis of the phase 1 data) confirmed emerging insights from the first and explored them more deeply.

Three traditional open-air markets in Birnin Kebbi were chosen for data collection; the city's main market as well as two smaller neighborhood markets. All markets were open every day and sell a diverse range of foods and some non-food goods. They are all regulated by the local government, though this exerts little control over the actions of individual vendors.

Data collection consisted of in-person interviews with consumers and vendors and a structured observation in each market. Consumers were defined as those shopping in a target market at least monthly and having responsibility (sole or shared) for purchasing household food. Vendor interviews focused on vendors selling grains and legumes (rice, maize, cowpea, soybean), green leafy vegetables, fish, and beef; these focus foods were chosen in order to cover a diverse range of widely consumed foods and in line with the priorities of local government and donor stakeholders. Vendors were defined as those regularly selling at least one of these foods in a target market. The sample size for Phase 1 was 13 vendors and 16 consumers; that for Phase 2 was 24 vendors and 31 consumers. Such a sample size is considered sufficient for achieving saturation in key viewpoints (P. J. Pelto, 2013) and similar to those used in other FES on food topics (Lee et al., 2019; Blum et al., 2019; Pelto & Armar-Klemesu, 2014).

Both consumers and vendors were recruited through market visits. Potential respondents were selected at random among vendors selling at and consumers shopping at the market, screened for eligibility and willingness to participate, then selected for interview to meet a set of quotas

for diverse respondents. For consumers, quotas were set for men, women, and those younger/older than 30. For vendors, food-specific quotas were applied<sup>1</sup>; it was intended to interview both female and male vendors, but no female vendors were available for most foods, as the market was dominated by male sellers.

Data were collected in February – May 2021 by trained local interviewers via in-person semi-structured interviews. The interviews included *free listing*, a type of cognitive mapping in which respondents are asked to list all items in a defined domain (Bernard, 2018). Interviews were conducted in Hausa, audio recorded, transcribed, and translated into English. All participants provided written informed consent, data were treated with confidentiality throughout collection and analysis, and the study was approved by the National Health Research Ethics Committee of Nigeria (NHREC/01/01/2007-26/11/2020). Due to the ongoing COVID-19 pandemic, social distancing, masking, and use of hand sanitizer were applied to ensure researchers' and participants' safety.

Demographic data were analyzed in Stata SE15. Free-list data were analyzed per (Weller et al., 1988), considering the frequency of an item's mention and its rank within each list, using Visual Anthropac 4.9 software (Analytic Technologies). Interview transcripts were analyzed using an inductive coding approach, both through hand-coding and using the software ATLAS.ti. The **Results** section synthesizes responses and includes quotations to illustrate either common views or relevant contrasting ones; aside from correcting typographic and punctuation errors, quotations are presented verbatim. Each quote is accompanied by an anonymous code with a short description of the respondent.

## 3 Results

Summary demographic information for FES respondents is given in Table 1 for consumers and Table 2 for vendors. Consumers were about half women, whereas vendors were all men. For both vendors and consumers, most were Muslim and ethnically Hausa; among consumer respondents there was a minority of Christians, mostly ethnically Zuru. Among consumers, nearly all men were the principal income earner for their household, though only three women were; nearly all vendors are their household's principal income earner.

<sup>1</sup> In line with the food safety focus of the overall study, Phase 1 sampling included three vendors for each of the foods at highest food safety risk (beef, fish, greens) and one each for the others (soybean, maize, rice, cowpea). In Phase 2, focus was narrowed to greens and fish due to potential food safety risk; 12 vendors of each were interviewed.

**Table 1** Consumer demographic characteristics (n=47)

Respondent characteristics	
<b>Gender</b>	Male (49%), female (51%)
<b>Average age (range)</b>	33.7 (22–64)
<b>Ethnicity</b>	Hausa (47%), Zuru (30%), Fulani (15%), Igbo (6%), Other (9%)
<b>Religion</b>	Muslim (62%), Christian (38%)
<b>Highest education completed</b>	Primary (94%), Tertiary (53%)
<b>Marital status</b>	Married (monogamous) - 66%; married (polygamous) - 6%; single - 26%, widowed - 2%
<b>Principal household income earner</b>	45%
<b>Occupation</b>	Professional/Managerial - 30%; Small business owner/ entrepreneur - 15%; Not employed outside home - 23%; Sales/services employee - 11%; Petty trader, hawker - 6%; unskilled labor - 2%, technical labor - 9%, agriculture - 4%
Household Characteristics	
<b>Avg. household size (range)</b>	6.2 (1–19)
<b>Avg. number of children (range)</b>	2.6 (0–11)
<b>Home has electricity</b>	91%
<b>Pct. poor (3.10 PPP)*</b>	12%
<b>Household owns car</b>	32%
<b>Household owns mobile phone</b>	98%
<b>Household has improved toilet</b>	91%
<b>Farms or owns farmland</b>	55%

\*The percentage of the population estimated as poor based on the Poverty Probability Index for a threshold of 3.10 PPP per person, per day (Innovations for Poverty Action, 2020). Table reproduced from (Nordhagen et al., 2022a)

### 3.1 Gender roles and relations within the marketplace

Gender roles and relations influenced both the act of shopping and that of vending. As reflected in the interviewees' demographics, the vast majority of vendors of the study focus foods (all uncooked commodities) were men; women, in contrast, were observed to be selling primarily ready-to-eat (RTE) foods. Vendors offered two main

explanations for this gender divide: the local culture and a lack of capacity among women to source food from rural areas, which would require travelling and interacting with male suppliers. Two respondents also reasoned that men were better able to acquire the capital needed to start working as a vendor; the lower barrier to entry for RTE foods was suggested as a reason for women selling these foods. Women were, however, noted as re-selling various types of food in their neighborhoods.

**Table 2** Vendor demographic characteristics (n=37)

Vendor characteristics	
<b>Percent male</b>	100%
<b>Average age (range)</b>	40 (22–65)
<b>Ethnicity</b>	Hausa (95%), Fulani (5%)
<b>Religion</b>	Muslim (100%)
<b>Pct. completing primary school</b>	51%
<b>Pct. completing secondary school</b>	22%
<b>Pct. completing tertiary school</b>	3%
<b>Avg. years vending (range)</b>	19.2 (5–43)
<b>Respondent is household's principal income earner</b>	95%
<b>Respondent has another income source</b>	70%
<b>Other income sources</b>	Farming or livestock (23); selling other food/goods (2); contractor (1)

Table reproduced from (Nordhagen et al., 2022a)

*The reason why most [vendors] are men is that most of the things we sell, women can't sell them. And again, most of the women are married: it's not good for a married woman to be rubbing her body with men in the market. – V1112, a 25-year-old male beef vendor*  
*As a male, I have advantages over females because I transact, mingle without any restrictions, unlike the females. Men always lead, women are weaker vessels, as we all know. Men are always the head. – V1107, a 43-year-old male grains and legumes vendor*

In contrast to the highly gendered nature of vending, and to cooking (exclusively the responsibility of women and girls), shopping was usually shared by the husband and wife of the household, sometimes involving children (particularly for small purchases), neighbors, or household help. In married households, however, it was more common for the husband to do the shopping than the wife; as one vendor noted, “It’s our tradition that any woman that is married should not go anywhere. Anything she needs, the husband will get it for her” (V1101, a 33-year-old male grains vendor). Even if the woman did the shopping, the man, the reported main income earner in all households interviewed, usually provided some or all of the money for it—giving men more financial flexibility in making shopping decisions.

*[Men] will feel more comfortable shopping... Because they provide the money for the shopping.... But for the women, if you are going to the market for shopping, you will be thinking if your money will be enough to buy certain items or, let me just buy what I can afford and leave the ones I cannot afford to buy.... – C1202, a 24-year-old woman*

Nearly all consumer respondents opined that men and women differed in their shopping practices. Women were noted as taking more time (including on choosing a vendor and negotiating prices) and being more discerning of quality, with more knowledge about what foods were needed for the household, given their central role in cooking, and harder negotiators on price – which also related to their willingness to spend more time in the market, searching for good items at cheap prices, and to their lack of budget flexibility.

*[A man] cannot buy it cheap like me, they do not bargain, and they cheat them a lot. They do not know the usual price and the best product or produce; they just buy whatever they see, irrespective of the price.... Women go to the market like every day, and they know the prices of almost everything in the market, as they patronize it often; men go to the market spontaneously and have limited idea of what the prices are and how the prices fluctuate. – C2205, a 33-year-old woman*  
*Men can go to the market to buy what they want. But women are cautious. They try to check... she makes sure*

*she goes round the market to make sure that it gives peace of mind to her. ... She will check and check and check, before she buys. – C2201, a 25-year-old man*

Vendors’ perceptions of men and women shoppers generally aligned with those of consumers: women were seen as more discriminating customers, more likely to ask questions, bargain over price, and potentially complain later; some vendors believed that encounters with such a shopper also required a particular forbearance (see discussion of “patience”, below). One vendor described this as, “Women also like demanding extras at no additional charge, but men don’t do that. Women complain a lot, too...!” (V1102). By contrast, male shoppers were frequently described as too busy to engage in questioning or haggling, their main priority being to get in and out of the market without delay. Vendors also distinguished between married female shoppers and unmarried ones; with the latter, friendly jesting and banter could help secure business, whereas this was off-limits with the former group: “unmarried females can play and joke.... but married females come strictly for business. Religion does not permit unnecessary jokes with a male outsider” (V1102).

### 3.2 What do consumers seek in a shopping trip, a market, and a vendor?

Considering general shopping practices, most consumers used a traditional market as their main source of food, aside from for highly perishable foods that needed to be purchased regularly, which might be bought from roadside hawkers or neighborhood sellers. Supermarkets and small shops/kiosks were occasionally used for rice, bouillon cubes, and other packaged goods. While some respondents described shopping as done out of necessity, most saw it as a satisfying experience. The main elements contributing to satisfaction were striking a good bargain, getting exactly what one needed, being able to cook as planned for the family, getting good service from vendors, seeing new things, and being able to socialize and see people. These did not appear to differ considerably between men and women. One aspect noted as particularly satisfying by some respondents, particularly women, was having change left over—i.e., not having had to spend the full amount provided (usually by the husband). This gave the respondent either extra money to spend or the praise of being able to return the money to their spouse.

*The times I go to the market I enjoy my outing because I meet people, I buy many things, it's a form of exercise to me.... [And] even after buying everything I ought to buy, I end up bringing some change home, so it gives me that satisfaction, and I feel happy. – C2202, a 31-year-old man*

The main aspects cited that made it unenjoyable or unsatisfying were not getting the expected items (i.e., them being unavailable or poor quality) and high prices or price fluctuations<sup>2</sup>:

*Nowadays, you can't go to the market and know if you will be happy or not because of the fluctuation of price. Today the groundnut oil I bought is N330, tomorrow you will go, it's N400, next tomorrow you will go, it's N500, now again I'm hearing that it is N700 -- so tell me, how will you be happy? – C2210, a 35-year-old woman*

Many consumers purchased from more than one market, but most had one market as their primary market. Price was a key concern when considering a market, and certain markets were known to be cheaper than others.<sup>3</sup> The second-most commonly cited factor was product availability (i.e., knowing one could get what one came for) and the convenience of being able to buy all products (including non-food products) in one location. As one man noted, “I prefer buying it [vegetables] in the market because I have choices to make... But in my vicinity, I just have to buy what they offer for sell” (C1214, 30-year-old consumer). The third-most-commonly noted factor was location close to home, along a commute, or easy to get to. Familiarity or habit were also mentioned. Women were less likely than men to note availability and instead focused more on ease and convenience of access to the market—perhaps reflecting the constraints on married women’s movement in public or their working less outside the home.

As for choosing a market, the choice of a vendor within that market was driven largely by price, including the provision of discounts or the addition of free goods. Ability to buy on credit was mentioned by about a third of respondents: while not a concern for all, particularly the affluent, it was an important motivator for lower-income shoppers, particularly in a context of often increasing and unpredictable food prices.

Beyond price, the main characteristics motivating vendor choice related to interpersonal qualities: niceness, politeness, and good customer relations were named as important by more than half of respondents. This included feeling that the vendor considered their wellbeing, that they could joke and talk together, that the vendor was happy or friendly, and that they related in a respectful way with customers.

*There is something that the marketers call strategies on how to approach your customers, in such a way*

*that the buyers will always want to buy from you... [My preferred vendor], he will always entertain his customers with stories that make them laugh and feel comfortable and welcome. – C2227, a 28-year-old man*  
*There are some vendors, there is a way they treat you, like if you treat a customer like a king. But some vendors treat you as if they are doing you a favor, not knowing that you are doing them a favor. – C2209, a 33-year-old man*

Chief among the interpersonal qualities named was patience, which was related to the vendor’s willingness to spend sufficient time bargaining with the consumer, but also being generally supportive of customers.

*The customers bring in the money... and [the vendor], he has to be patient with the customers. It is like helping each other.... Women like to beat price down, and the vendor has to be patient. – C2206, a 30-year-old woman*

Quality of products was only mentioned as a vendor-choice criterion by a few respondents, perhaps due to limited variation in quality among vendors, many of whom relied on the same suppliers. Additional criteria mentioned, but only by one or two respondents, were having a wide variety of goods, speed of service, ability to deliver, other family members’ preferences, the vendors’ longevity in business, and large numbers of other customers choosing that vendor. Few respondents had a single criterion: most relied on balancing a set of important criteria to choose a vendor.

### 3.3 The ongoing vendor-customer relationship

Consumers differed considerably in terms of whether they tended to patronize the same vendors. Just over half reported that they generally went to the same vendors repeatedly, at least for certain goods—but others reported regularly switching, including to be able to compare options and to keep vendors from becoming complacent and taking the shopper for granted (and thus, e.g., not pricing competitively). Those who changed vendors were more likely to be women, in line with the comments above about women being thought to spend more time comparison shopping. Switching vendors was more common for perishable foods, like fish, meat, and vegetables, due to greater reported variation in availability and quality.

*I maintain one to two particular vendors... because now we have become good customers to each other and whenever there is trust, he can give me items even when I don't have money, so I pay later. Another thing that makes me maintain a vendor is that when I discover that his prices are cheaper than that of others, I would always go to him whenever I need anything. – C1207, a 31-year-old woman*

<sup>2</sup> Indeed, Nigeria’s annual inflation was at a four-year high around the time of data collection, at 18.2%, largely driven by increases in food prices. <https://www.reuters.com/world/africa/nigerias-annual-inflation-hit-more-than-4-year-high-march-2021-04-15/>

<sup>3</sup> None of the markets have prices routinely displayed for products; instead, the price is communicated by the vendor to the client and may be bargained over.

*...Often times, you may go to a particular vendor, and you don't know that what he's giving you is below standard until you try another person so that you can weigh your options... so that's the reason why I try different vendors and compare and get the best out of them and if discover another vendor is better than him then I switch. – C2209, a 33-year-old man*

Repeated use of the same vendors was particularly important for obtaining credit or discounts and ensuring product quality. Credit provision, in particular, was a central motivator of a repeated vendor-shopper relationship, contingent on mutual trust.

*[If] you go to the market to buy food and you are short of cash, if the seller gives you what you want and later the next day you get money and return back to the seller, it will make you happy that the seller trusts you... Because of that singular act, the next time you would like to go back to that seller to buy anything you want to buy. - C2231, a 28-year-old woman*

Both consumers and vendors also mentioned other services offered by vendors to customers with whom they had an existing relationship. For example, vendors may serve as custodians of preferred shoppers' other groceries, cash, or belongings while they move about the market; they can agree to retain shoppers' funds until suitable produce is received from suppliers; they fill orders for the children of regular shoppers sent on errands by their parents; they arrange for home delivery; they maintain mobile phone numbers of shoppers and alert them to the arrival of new stock; and when they are not present in the market, or when they do not have stock to sell, they may recommend a colleague who can make the sale at the same "trusted customer" price—or may borrow products from another vendor to be able to make the sale themselves. Some vendors described assisting in shoppers' purchases of other market foods, either by providing interest-free loans or by guaranteeing purchases made on credit from other vendors. These services constitute a vendor-shopper relationship that goes well beyond the transactional act of sales/purchase. These repeat relationships were even reflected in language: as seen in the quote above (C1207), both consumers and vendors used the word 'customer' to refer to the *vendor* as well as the shopper – i.e., that a vendor to whom a client went repeatedly was the client's 'customer' just as the client was the vendor's 'customer.'

These recurring relationships carried expectations and benefits on both sides. A preferred vendor could be expected to know the customer's favorite forms of food; extend credit and be patient about repayment; undertake additional services; add a little extra food to the amount purchased; and be honest about the quality of his or her food. The vendor, for his part,

would expect the shopper to ride out the inevitable fluctuations in price and quality, accepting that the vendor was doing his honest best to offer a good product at the best price.

*My customers that are used to come and buy my [green] vegetables, even if they don't have money, I can sell to them on credit. And because they already have this understanding that whether they have money or not, if they need vegetables, when they come to me, they will get it – that is just another way to make them continue coming to your place when they are in the market. – V2109, a 50-year-old male vegetable vendor*  
*When you sell what customers don't like, they will complain. They will tell you that they want to buy vegetables, but they don't feel like buying [from you], because the one they bought last time was not good... they go further and buy from the next vendor. Anyone who interacts with people in this kind of business might sell a customer what they don't want. But the real customers will bear it. Because they know that it wasn't your fault that caused you to have that. They know there will be a day when you will sell the one that is good. – V1109, a 35-year-old male vegetable vendor*

### 3.4 Vendors' collaboration, and competition

Vendors collaborate through both formal and informal organizations. Nearly all vendors interviewed were members of a commodity-specific vendor association, which collaborated in several ways: purchasing food in bulk to secure low prices; jointly hiring transport; relying on the association's financial guarantee for loans or large purchases; sharing information on risks (e.g., customers defaulting on credit); and advocacy for individual or collective vendor concerns to wider authorities. Vendors also rely on associations to increase their leverage with suppliers, e.g., in case of disagreements about food quality. Associations also seek to establish unity on matters of common concern, such as enforcing sound business practices or a unified approach to pricing foods or grades of food quality. For example, one fish vendor described the association reaching a unified approach to lowering fish prices during Ramadan, to ensure affordability for consumers. In interviews, vendors made the positive case that vendors should stick together for these purposes—but some also suggested that doing the opposite (operating on one's own outside the association) could bring trouble:

*People doing the same business are supposed to stick together so that they get quality goods from dealers. When we stick together and we have any issue with the type of goods that are supplied to us in the market, we*

*can collectively make complaints, or even reject the goods... in the market, you cannot always be an island if you want to progress. When other vendors discover that you don't want to stick together with them, they will have a way of frustrating your effort. – V2113, 35-year-old male vegetable vendor*

In addition to these formal associations, many vendors participate in informal traditional savings groups with other vendors; group funds may be directed to business-related crises or personal needs (e.g., a newborn's naming ceremony). Both formal and informal associations offer benefits: spreading risk among a wider pool, enhanced leverage, and an expanded network of social and business ties. However, group members may not be free to act independently (e.g., to establish their own prices).

While a form of competition does occur between vendors, it thus takes a muted form. A minority of vendors opined that competition does not occur at all. As one noted, "We don't compete with each other. I don't know any vendor who competes, I have never heard of such... Here we don't do that. If you take your goods [to market], you just wish for luck" (V2104). A more typical sentiment was that competition was necessary but subject to limits: "Yes, in business there must be competition. But we don't allow it to get to the extent of having problems with one another" (V2105).

As noted above, a number of shoppers have loyalties to certain preferred vendors whom they patronize regularly. A rather proprietary approach applies when these regular customers are involved, whereas vendors are more comfortable trying to recruit unaffiliated shoppers:

*Most customers know who they buy from... If the customer is not satisfied with what he bought [elsewhere], it is not advisable to call customers... a vendor calling [out to a] different vendor's customer... can cause rifts between vendors. – V2122, a 55-year-old male vegetable vendor*

*Whenever a customer comes to the market to buy items from a stall, even if the customer is at your stall, I will not say "I will call the customer to buy from me". I know it's not my luck. Another customer can come to me as well [i.e., instead]. – V2104, a 52-year-old male vegetable vendor*

However, all shoppers start off unaffiliated, and even affiliated shoppers can switch without active encouragement of other vendors. To foster this, vendors perceive three legitimate ways of competing for new shoppers: vendor pricing/credit, food quality, and vendor conduct, as discussed in the next section. Other forms of competition, or competing fiercely within these domains, were generally seen as socially unacceptable to vendors.

**Table 3** Free-listing Results: Qualities required to be a successful vendor, n = 37

Item	Frequency (%)	Average Rank	Saliency
Be patient	47.2	1.82	0.369
Be honest/truthful	38.9	1.86	0.286
Be friendly	36.1	2.15	0.259
Have competitive prices	25	3.22	0.128
Be trustworthy	22.2	1.63	0.194
Have capital	16.7	1.67	0.137
Be reliable	13.9	2.8	0.072
Offer credit	8.3	3.67	0.024
Be welcoming	8.3	3.67	0.035
Be clean	8.3	2.33	0.061
Be polite	5.6	2.5	0.028
Have quality product	5.6	1.5	0.051
Have clean/washed product	5.6	2	0.043
Add extra to purchase	5.6	2	0.032

Items named only once are omitted from the table

### 3.5 What makes a good vendor?

A free-listing exercise asked vendors to list the qualities they believed were required for business success. Results are shown in Table 3, below. The most salient list items (i.e., those that were both commonly named and highly ranked<sup>4</sup>) describe vendor character, with "patience" ranked most salient of all. Several high-saliency responses probably overlap (i.e., they may constitute different ways to describe the same phenomenon), but the overall picture is that for vendors, considerations of personal character and how they treat others are paramount.

Chief among the salient traits is patience, often described in terms of holding one's tongue with customers for the sake of sales (short term) and the business more broadly (long term). From vendors, it emerged that the emphasis on patience is related to two separate business challenges: (i) the daily provocations and frustrations of selling (including hard-bargaining customers), and (ii) the specific problem of credit that has not been repaid. Scenarios described by vendors included unreasonable demands for price reductions; shoppers who are rude or impatient; indecisive shoppers; and shoppers who dispute the amount of their debt.

<sup>4</sup> Saliency is calculated as the sum of the item's percentile ranks divided by the total number of lists and ranges from 0 (low saliency) to 1 (high saliency). Very similar or synonymous items (e.g., 'be honest' and 'be truthful') were consolidated before analysis.



*Patient vendors like to satisfy their customers, and they need to avoid making troubles with customers because they value customer relations. A patient vendor hates to lose customers. They will try to retain customers – even the difficult ones. – V2117, a 50-year-old male fish vendor*

*The reason why I feel I'm more patient [is], if customers come to my stall to price my goods anyhow [i.e., offer an unrealistic purchase price], I don't get rude with them but try to let them know that the price of goods has increased, and this is the last price I can go [offer]. – V2109, a 50-year-old male vegetable vendor*

Central to vendors' relationship with certain shoppers is the matter of credit: a trusted vendor, familiar with the shopper, is expected to extend credit and be flexible about repayment. Being patient with credit defaulters was characterized as placing long-term objectives (the prospect of continuous loyalty from a shopper) before short-term ones (payment for outstanding purchases). While it was acknowledged that sometimes vendors' own debts to suppliers do not permit them to be generous with customers' repayment timelines, it was considered the most prudent response. The salience of credit appeared to be somewhat commodity-dependent. For instance, vendors of fish and GLV – two highly perishable foods – expressed anxiety about the risk of being left with unsold product that would command a lower price the next day. In such situations, extending credit is beneficial not only for consumers, but also for vendors, as a means of securing the best price for produce that is rapidly losing value.

Trustworthiness, while secondary to patience in the free-list results, was a central feature of vendor narratives. As noted above, vendor interactions with many individual shoppers are continuous, permitting the development of long-term relationships in which mutual trust plays an important role. Shoppers need to demonstrate that they are worthy of a vendor's trust to make purchases on credit, while vendors ascribe the trust they earn from shoppers to the services they provide in addition to selling food (see prior section). This trust (and the associated credit) ensures loyal customers.

*I think [my success] is due to the way I sell at a reduced price to my customers. And even if I don't have fish, I can collect their money and go and buy [it] for them. And whenever I have fish, I call them on the phone to tell them my fish is available, or I can even take it to their houses. – V2120, 35-year-old male fish vendor*

*Yes, I give them goods on credit, and I also lend some of my customers money. Some of them come to the market without buying anything from me, but they ask for money from me to be able to buy some other things in the market. – V2109, a 50-year-old male vegetable vendor*

Trust was noted as something easily broken by a vendor's failure to be honest about the limitations of a particular batch of food, but above all, vendors associate trustworthiness with honesty in pricing. Vendors' opinions reveal that they do not believe themselves to be operating in a classic free market: rather than pricing products at what the market will bear, they feel obliged to limit product markup. Taking advantage of a low supplier price to maximize profit (rational economic behavior in most settings) was repeatedly cited in moral terms: as a form of dishonesty, even by some vendors as "a lie". Price is thus linked to vendor notions of trustworthiness: a trustworthy vendor is one on whom shoppers can rely to set his market price reasonably close to his acquisition cost, with only a slight mark-up.

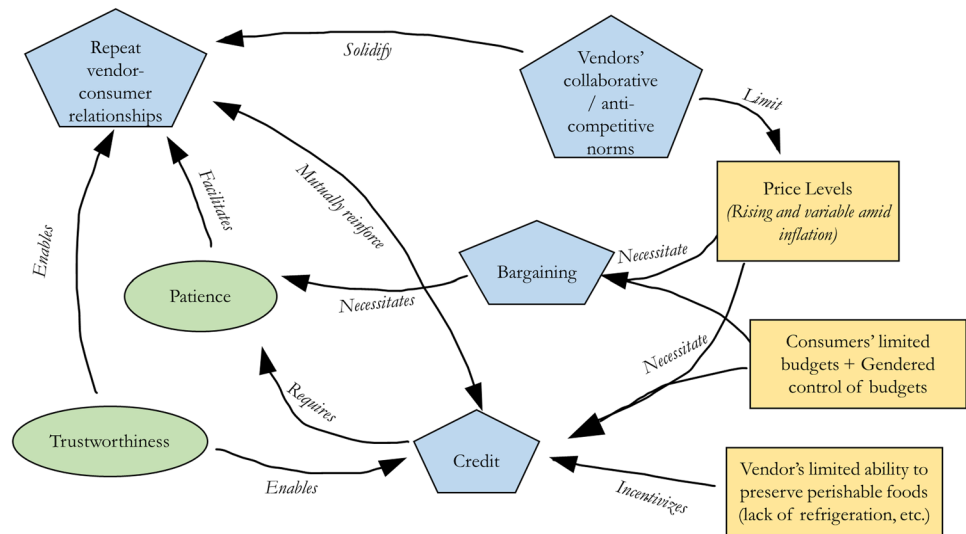
*The characteristic [of a successful vendor] is, if you bought your perishable goods and they were cheap, you have to sell it cheap. If you bought your goods and it was expensive, you have to sell it expensive as well. But, if you bought your goods cheaper and you sold them expensive to your customer, that is not right. – V2104, a 52-year-old male vegetable vendor*

## 4 Discussion

The responses of both vendors and consumers make it clear that the marketplace of Birnin Kebbi and the transactions that happen within it are shaped by more than just rational economic concerns of supply and demand. Many consumers, faced with limited budgets (particularly for women) and rising price levels, are dependent on credit and/or patient, trusted vendors who will be willing to negotiate or provide discounts. Providing credit required patience on the part of vendors, as repayment may take time, and is facilitated by the trust – which builds over time through repeat vendor-consumer relationships, themselves facilitated by patience. These repeat relationships are supported by credit provision – and also enable it, through the rapport they build. At the same time, vendors' norms of collaboration and limited competition serve to both limit price fluctuations and solidify these repeated relationships. Figure 1 summarizes these emergent and intersecting factors structuring the marketplace.

The concept of "moral economy" is used to refer to situations in which economic activities and relationships have an ethical character, particularly where rooted in mutual expectations and obligations between people engaged in repeated transactions over time (Carrier, 2018). It originates in the work of historian E.P. Thompson, who connected the loss of British feudal systems of exchange dependent on fairness and obligation to food riots; Scott (1976) transposed the idea to South Asia to show how twentieth century peasant revolts could be explained by the erosion of stable pre-capitalist

**Fig. 1** Intersecting characteristics of market actors, relations, and contextual factors. Authors' conception. Green ovals indicate the characteristics of vendors, blue pentagons characteristics of market relationships, and yellow rectangles contextual factors



landlord-tenant relations. Considering research on food, it has been used to examine historical grain milling as well as modern food supply chains in the UK (Jackson et al., 2009; Winter, 2023); to argue for better rebalancing of food surpluses alongside hunger and malnutrition in South Africa (Ndhlovu, 2023); and as a cause of food-related protests in Latin America (specifically, when “moral economies” governing food consumption fail) (Wolford & Nehring, 2013). Current conceptions of the term focus on the close study of relations of exchange between individuals – particularly relationships that are discretionary, where both parties have the agency to engage or not as they see fit (Carrier, 2018).

Using this definition, the results of this study jointly suggest the existence of a moral economy within the markets of Birnin Kebbi: they are characterized by relationships of obligation and reciprocity between buyers and sellers (and among sellers), with an expectation of conformity to those shared social norms (Carrier, 2018). Four related findings support this conclusion. First, the presence of vendor associations and social ties that function to minimize conflict and competition between individual vendors. This includes limitations on how much prices can be lowered beyond market norms; there is some flexibility and responsiveness to customer bargaining, but also limits on that. These social ties are likely strengthened by the gender norms that limit women’s participation as vendors, maintaining a more homogeneous group. Second, the prevalent idea of a “fair price”, not too high above acquisition costs or norms, functions to limit vendor freedom to set prices at what the market will bear—and sometimes includes vendors associations setting prices. Third, the importance of the reciprocal relationship that connects a shopper with a certain vendor in a type of mutual loyalty, to which some (but not all) consumers are bound through credit and which vendors consider to some degree proprietary (i.e., vendors do not attempt to recruit already

affiliated shoppers). This repeated interaction between vendors and consumers thus gives shopping and selling in this setting a strong relational quality, imposing constraints on vendor and consumer conduct. Finally, vendors consistently referred to key virtues that they believed should guide and inform vendor conduct—e.g., trust, honesty, and patience—with similar traits seen by consumers as markers of “good” vendors. This moral economy structures the transactions within Birnin Kebbi’s markets differently than would be the case if transactions were more dominated by economic forces of “supply and demand.”

The study results also indicated strong and shared norms and stereotypes associated with gender, which also help shape the abovementioned moral economy. Women vendors of raw commodities were very rare, with this ascribed primarily to local gender norms. However, reports of women selling in their own neighborhoods suggest that areas near the domestic sphere (e.g., on the road outside one’s house) are not subject to the limitations that apply in the public arena of the main markets. While women and girls are exclusively responsible for cooking, both genders play a role in shopping—representing a rare forum in which women are regularly interacting with men from outside their families. However, this is more limited for married women, who may be restricted in their ability to go to the market and to socialize with vendors and other shoppers while there. Moreover, respondents expressed clear, shared perceptions of gendered differences in shopping behavior. Women were seen as discerning, time-consuming shoppers and hard price negotiators who have limited budgets yet must bring home high-quality food to cook (with the quality of the cooking reflecting directly on their role as wife/mother)—and ideally would like to do so with some change remaining, to be redirected to other uses. They will take longer to make a purchase and “shop around” more. In contrast, men are seen as not wanting to “waste time” and will

shop quickly, with less discernment and less price sensitivity or desire to bargain. For women, bargaining well seems to be both a necessity – they have a tighter budget, since money is normally provided by men – and a point of pride. Similarly, some men seemed to take pride in the fact that they “didn’t have time to waste.” The market is thus not a gender-neutral space: gender norms structure who is in the marketplace and how they relate within a shopping transaction, with potential implications for its outcomes.

It is interesting to view the study results through the lens of research on the food environment – i.e., “the interface that mediates people’s food acquisition and consumption within the wider food system” (Turner et al., 2018, 3). In recent years, examining the food environment as a way to better understand food choice, and thus to intervene to improve nutrition, has been widely recognized in the research literature and by major international bodies (Drewnowski et al., 2020; FAO, 2016; GloPan, 2017; HLPE, 2017; Turner et al., 2019; Westbury et al., 2021). A 2021 review (Toure et al., 2021) identified five conceptual frameworks of the food environment specific to LMICs (excluding one focused just on policy) (Downs et al., 2020; FAO, 2016; Herforth & Ahmed, 2015; HLPE, 2017; Turner et al., 2018). The widely used HLPE (2017) definition encompasses physical access to food; economic access (i.e., affordability); promotion, advertising, and information; and quality and safety. Herforth and Ahmed define the food environment as the availability, affordability, convenience, and desirability of foods. FAO (2016) use a similar definition, with “accessibility” in place of “convenience”; Downs et al. (2020) also use a similar definition but replace desirability with quality and promotion and add “sustainability properties.” Turner et al. (2018) present a broader conceptualization, including four “external” dimensions (availability, prices, vendor and product properties, and marketing and regulation) and four “personal” consumer dimensions (accessibility, affordability, desirability, and convenience). With the exception of a brief mention of credit as one potential aspect of “vendor properties” in Turner et al., none of these frameworks mentions access to credit, ability to bargain, trust, or relational factors as being important elements of vendor characteristics or of the food environment. “Affordability” is generally conceptualized based on prices as compared to purchasing power or incomes, without considering credit or relationships that can foster bargaining or discounts. Indeed, even research with an explicit focus on informal food environments is often silent on these aspects (Ambikapathi et al., 2021; Downs et al., 2020). However, use of credit in LMIC food markets is widely documented, including its use by vendors as a customer-retention tool and the important role it plays in enabling food security among lower-income consumers (Opiyo & Ogindo, 2018; Fuseini et al., 2018), as well as the extent to which it may be differentially available to

community members, depending on their personal characteristics (Ambikapathi et al., 2018).

Certainly, such factors are not relevant to everyone, everywhere – e.g., for upper-income consumers in formal food systems where most food purchasing happens through supermarkets (Gómez & Ricketts, 2013) – or even for everyone in this setting. Indeed, data from a survey conducted in the same setting suggest less than 10% of consumers consider availability of credit as a key reason to choose a market or a vendor within the market, although it is possible that respondents may not have been comfortable disclosing personal financial information in a survey setting. However, these relational factors are particularly relevant for the lower-income consumers most at risk of malnutrition and poor diets, including lower-income consumers in formal food systems. The interrelated factors of credit access, reliance on trusted relationships, and bargaining or securing discounts have positive influences in that they may make food economically accessible when it otherwise would not have been and enabling for smoothing of consumption over time. For example, Nordhagen et al (2021) note that credit enabled artisanal miners in Guinea to smooth their food consumption over time, despite unpredictable incomes and expenses. At the same time, such factors may also have hidden costs in that such reliance makes consumer choices less “free” than they may originally appear; lower-income consumers may not have the flexibility to opt to go to a new vendor due to, for example, the safety or quality of their food. Similarly for vendors, they may feel little option but to offer credit, knowing their ongoing customer relationships depend on it. These dynamics at play in the market may thus have implications for both consumers’ diets and health (due to the type, amount, and safety of foods that consumers do purchase), and vendors’ livelihoods. As noted by Holdsworth and Landais (2019), “Acknowledging the socially embedded nature of dietary behaviors is crucial” when trying to promote improvements to them. These relational factors that structure traditional markets thus deserve greater visibility within the research literature in LMIC contexts where they are relevant. This includes understanding which aspects of social class or social capital might enable or restrict these types of relationships, which could have important equity implications. A greater, and more cohesive, research focus could be enabled by adding a new dimension to existing food environment frameworks (described above) that focuses on social interactions and relations.

This study’s ethnography-derived methods were tailored to the context and research questions, focusing on in-depth analysis of vendors’ and consumers’ perceptions and opinions within a specific community and fostering open-ended, flexible responses that could capture unexpected themes. While an appropriate match for this study, there is considerable scope for building on this work through the use of

other methods. In particular, survey-based methods could use simpler and less exploratory lines of inquiry but seek to ensure the results found here are representative of the broader local population, or other populations – which is not possible through a small sample. Survey research could examine a broader set of vendors than those selling the foods examined here, including women vendors (other evidence suggests there is a small minority of women vendors at these markets), and aim to attain a sample of consumers that is representative of the urban Nigerian average in terms of wealth and education (NPC & ICF, 2019). Additional qualitative research could widen the focus to include market management, street hawkers, and modern retailers.

## 5 Conclusion

This paper has examined how consumers and vendors in Birnin Kebbi, a mid-sized Nigerian city, interact to “make a market”, probing how consumers choose markets and vendors, vendors’ interactions among themselves and with consumers, and how market interactions are influenced by gender norms. Using data from in-depth interviews with 47 consumers and 37 vendors, the analysis identified how personal vendor traits like patience and trustworthiness interact with contextual factors like price levels and gender to structure market relationships, including repeat vendor-consumer transactions, credit provision, and vendor collaboration. A moral economy appears to operate within the market, and market transactions are also shaped by gender norms, such as limitations on women’s roles as vendors and their purchasing power. To the best of the authors’ knowledge, this is the first in-depth examination of the moral economy of a traditional food market—though the results will likely resonate in other traditional market settings in LMICs. Viewing the results in the context of a burgeoning literature on the food environment shows how relational factors such as those highlighted here are almost absent from this work, despite their potential implications for consumers’ food and nutrition security and safety, as well as vendor livelihoods. Jointly, the results from this in-depth qualitative study help to add depth and nuance to existing depictions of traditional markets and the food environments in which they are embedded.

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**Author contributions** SN, JL, GP designed the research; AO, EL, EM, NOO, provided feedback on the research design; NOO oversaw the fieldwork; SN, JL undertook data analysis; SN, JL wrote the paper with input from EM; all authors have reviewed and approved the final manuscript.

**Data availability** The data used in this study may be made available on request to the lead author.

## Declarations

**Ethical statement** All subjects gave their informed consent for inclusion before they participated in the study. The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the National Health Research Ethics Committee of Nigeria, Protocol Number NHREC/01/01/2007-26/11/2020.

**Competing interests** The authors declare no competing interests.

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