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No. 17: Inclusive Growth and Small-Scale Food Vending in Nanjing, China

Zhenzhong Si

Taiyang Zhong

HUNGRY CITIES PARTNERSHIP

Inclusive Growth and Small-Scale Food Vending in Nanjing, China

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Inclusive Growth and Small-Scale Food Vending in Nanjing, China

Zhenzhong Si and Taiyang Zhong

Series Editors: Prof Jonathan Crush and Dr Liam Riley

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Preface

One of the major components of the urban food system in cities of the Global South is the food retail, distribution, and preparation sector. The informal or micro-enterprise food economy comprises a dense and diverse network of markets, suppliers, transporters, mobile traders, hawkers, retailers, and street food vendors making food more accessible and affordable to consumers. The micro-enterprise food sector is thus critical to the food security of many urban households in rapidly growing towns and cities in the Global South. While the vibrancy of the sector is everywhere apparent, the amount of research devoted to understanding the structure, organization, dynamics, and impacts of informal food systems under conditions of hyper-urbanization is limited. What is clear is that the sector is both diverse and complex. By working in an interdisciplinary context with mixed methodologies and across different cities, the Hungry Cities Partnership (HCP) aims to add considerably to our understanding of common elements and differences across the Global South.

The informal food sector represents an "urban laboratory" for examining whether and how inclusive growth strategies can have a positive impact in encouraging entrepreneurship, raising incomes, alleviating poverty, and mitigating food insecurity. The definition of informality and the informal sector has been a source of debate since the 1970s. Broadly understood, informality has become the defining feature of the landscape, politics, and economy of the contemporary city in the South. As a result, efforts to secure livelihoods depend heavily on informalized activity. The Organization for Economic Cooperation and Development (OECD) has noted that "it would be misleading to address food security without taking into account a large part of the economy that provides jobs, incomes and essential services for the urban population. Despite its important role, the informal economy is still poorly defined, poorly measured and consequently poorly taken into account in food security policies" (Hitimana et al 2011: 1).

As China has transitioned towards a market-based economy, two types of labour source have contributed to the growth of the informal economy: migrant peasant workers in cities and laid-off workers from state-owned enterprises (Park et al 2012, Yang and Pisani 2018). Chan et al (2015) point out that China's economic growth "miracle" is facilitated by the informal economic sector. Park et al (2012) conclude that, depending on the definition used, between 20% and 37% of workers in Chinese cities are employed informally. Liang et al (2016) suggest that the informal sector in China grew rapidly between 2007 and 2013. The informal economy both complements and competes with the formal sector in China (Chan et al 2015, Yang and Pisani 2018).

Despite the significance of informal work, this report uses the term "small-scale" instead of "informal" to characterize most urban food vending in Nanjing. The operational space for informal food sector activity in Chinese cities is increasingly constrained as the urban food system is modernized and the state is eradicating informal food business from the street through waves of so-called "beautification campaigns" (Dai et al 2019, Zhang and Pan 2013).

The major types of informal food vending in Nanjing are street food vendors and small corner shops. However, the predominant food sources for Nanjing residents are wet markets and supermarkets (Si and Zhong 2018, Si et al 2019). Less than 24% and 12% of Nanjing residents had sourced food from street vendors and small corner shops respectively in the year prior to the HCP household survey. In contrast, the equivalent figure for wet markets was 93%. Three-quarters of the households sourced food from wet markets at least five times a week. This survey therefore primarily focused on wet market vendors, complemented by smaller samples of street vendors and small food shops. Because wet market vendors in Nanjing have formal contractual arrangements with market management companies and are regulated by the government in various ways, wet markets in Chinese cities should be considered as components of the formal food economy, and wet market vendors as formal rather than informal operators (Zhong et al 2019).

The literature on informal or small-scale enterprise activity generally takes one of two positions. The first is a survivalist position, which suggests that individuals are pushed into the sector because they are desperate to provide for themselves and their dependants (Berner et al 2012). The corollary is that they will leave the sector as soon as formal employment opportunities are available. A second, opportunistic, position is that small-scale food vendors are motivated more by choice than necessity and see opportunities for economic and social advancement in the sector (Williams and Gurtoo 2012). An inclusive growth perspective asks how opportunists can maximize their outcomes and how survivalists can be supported to become more opportunistic. As such, this perspective requires a focus on the enterprise rather than the individual and on entrepreneurship, innovation, and job creation. Studies of the informal sector suggest that the opportunities and obstacles to successful informal entrepreneurship vary considerably by enterprise size, type and location, as well as the vendor's social connections, gender, migrant status, ethnicity, caste, and access to microfinance, markets, and support programs (Tang and Ke 2013).

National, regional, and municipal policies towards informality and informal entrepreneurship are highly variable (Young and Crush 2019). Policies towards the informal food economy span the spectrum from complete non-interventionism to draconian attempts to control and even eliminate informality. The pathologizing and criminalization of the informal food sector is especially common at municipal level. Regulation through various legal and policy instruments is also a pervasive response to informality. If the informal food sector is to grow and thrive, and to provide opportunities for innovation and entrepreneurship, then an enabling policy environment is essential. The survey results presented and discussed in this report add significantly to the evidence base on which supportive and workable policies can be constructed.

1. Introduction

This report should be read in conjunction with HCP Report No.1: The Urban Food System of Nanjing, China (Si et al 2016) and HCP Report No. 9: The State of Household Food Security in Nanjing, China (Si and Zhong 2018). The first report provides contextual background on the history, demography, and economy of Nanjing. It also contains a review of existing studies on Nanjing's changing food system. The second summarizes the results of the household food security survey conducted in Nanjing in 2015. It provides essential information on the food purchase patterns of urban residents and highlights the importance of wet markets, street vendors, and small food shops in the city's food system. Building on both, this report presents and analyzes the findings of a follow-up, city-wide survey of 864 small food vendors conducted by Nanjing University and the Hungry Cities Partnership (HCP) in Nanjing from January to March 2017.

After agrifood business was liberalized in China in the late 1980s and the early 1990s, private retailers, who were mostly small-scale, started to compete with state-owned food vending businesses. The landscape of food retail diversified significantly as private capital opened up food businesses of various sizes. Wet markets in this period were informal as they were not registered or regulated (Hu et al 2004). During the 2000s, private actors began to play a more significant role in food vending and wet markets were gradually incorporated into the formal food sector through the implementation of the Vegetable Basket Project that highlighted the central role of wet markets in urban food provisioning (Zhong et al 2019). China's urban food economy also had an increasing number of informal street food vendors. While it is very difficult to be exact, Xue and Huang (2015) estimated that there were about 20 million street vendors in China. According to Liang et al. (2016), 9% of the food market in China was shared by 353,000 small food enterprises with fewer than 10 people in each in 2007. However, urban beautification campaigns have put more pressure on informal street vending (Bell and Loutaitou-Sideris 2014). In addition to wet markets and street food vendors, Chinese urban residents also source food from widely distributed small shops, including fruit shops, fast-food take-outs and community stores. Despite the expansion of supermarkets, small food vendors continue to play a central role in food access in Chinese cities.

The report includes important new information about three key actors in Nanjing's food system: (a) the public market system supported by the government, known locally as wet markets, (b) informal street vendors, and (c) small shops.

Wet markets are an important food source for Chinese urban residents, particularly for the purchase of vegetables and meat (Si et al 2019, Si and Zhong 2018).

In the recent HCP household survey of food sourcing behaviour, over 93% of Nanjing households had accessed food from wet markets in the previous year and 75% visited wet markets at least five days per week (Si and Zhong 2018). This is quite different from many countries in the Global North, and some in the Global South, where supermarkets dominate the food retailing sector. In 2017, there were 352 wet markets in Nanjing, and the government plans to increase that to 527 by 2030 (Nanjing Municipal Government 2016). Wet market vendors are mainly resellers of food purchased from wholesale markets. They sign contracts with market management companies that are privately or state owned or have mixed ownership. Wet markets also have diverse ownership structures but are predominantly owned by the state (Zhong et al 2019). Compared to supermarkets in China, food sold at wet markets is cheaper and fresher (Bougoure and Lee 2009). Wet markets also provide space for social interactions and regular customers often receive discounts or other special treatment (Chen et al 2015, Mele et al 2015).

Several food vendors operate outside of the wet market system, especially migrant workers in Nanjing who make a living selling food informally on the street (Liu and Li 2007). Street food vendors also mainly sell food purchased from wholesale markets. Around one-quarter of households in Nanjing had bought food from street vendors in the previous year (Si and Zhong 2018). Selling food on the streets has led to one of the most common conflicts in public spaces between street vendors and officers patrolling to maintain order and cleanliness (Dai et al 2019, Swider 2015). Street vending is tightly controlled by the government in Nanjing, both in terms of their operating times and the places they are allowed to do business (Nanjing City Management Committee Office 2009). City officers patrol the streets every day from 7am until 5pm, trying to persuade vendors to move their business indoors. In 2016, according to our interviews with local government officials, they found 2,775 cases of street vendors refusing to move indoors, with many forced to stop trading after several warnings. Managing street vending has thus become a persistent challenge for government, not just in Nanjing (Hanser 2016. Winter 2017). In some circumstances, compromise is reached between officers patrolling the streets and street vendors. Dai et al (2019) show that street vendors are sometimes allowed to operate when officers are not present, particularly when the officers and the vendors are from the same communities (Dai et al 2019).

The third category of enterprise examined in this report is small food businesses, such as fruit shops, breakfast stores, and milk tea shops. The HCP survey found that 30% of households had shopped at these outlets in the previous year (Si et al 2019). Although wet markets, street vendors, and small food shops are major food sources in Nanjing, they have received insufficient research attention. Little is known about the owners, their entrepreneurial motivations, business strategies, and challenges. Their contributions to urban household food security and inclusive growth also deserve more scrutiny.

In order to paint a broad picture of the small-scale food retailing sector in Chinese cities, this report summarizes the results of a survey conducted with 864 randomly sampled small food vendors in Nanjing, including wet market vendors, street vendors, and small food shops. It describes the demographic and socioeconomic features of these retailers, their enterprise structure, business strategies, challenges, employee characteristics, food hazard risks, and aspirations.

2. Methodology

The HCP vendor survey questionnaire was collaboratively developed by the HCP partners in 2016. The instrument seeks information on issues including vendor demographic characteristics, entrepreneurial motivations, business financing, enterprise character, operations, challenges, strategies, and aspirations. The survey was loaded onto android tablets and 28 students from Nanjing University were trained to use the ODK data collection app. The survey was implemented from January to March 2017. The collected data was uploaded and synthesized on the online Ona database for analysis.

A sample of 42 wet markets was drawn from the 352 in the city (Figure 1). The sampled number was distributed across all 11 districts proportional to the population size of each district (Table 1). All wet markets in each district were numbered and the relevant number of wet markets was randomly selected from the district list. In the pre-investigation phase, the students visited the sampled wet markets to reconfirm their location, count the number of food vendors within each market, and map the distribution of food vendors in these markets. Because of rapid urbanization and the city's renovation process, some wet markets had closed or moved. Five of the selected wet markets had to be replaced with others nearby. Two that had been demolished had only one other nearby so they were replaced with that market. With another demolished market, no nearby replacement could be found. This meant that 40 wet markets were surveyed (Figure 2).

The students also collected information on small food shops (with five or fewer employees) and street vendors within 50 metres of the sampled wet markets. In total, 1,661 food vendors were operating in the surveyed wet markets, and there were 440 small food stores and 163 mobile vendors surrounding these markets. The total survey target of 900 was weighted proportionate to this distribution, giving a sample target of 636 wet market vendors, 164 small food shops outside wet markets, and 100 street vendors. These were distributed among the markets and surrounding areas based on the number of vendors mapped in the pre-investigation period.

FIGURE 1: Distribution of 352 Wet Markets in Nanjing, 2017

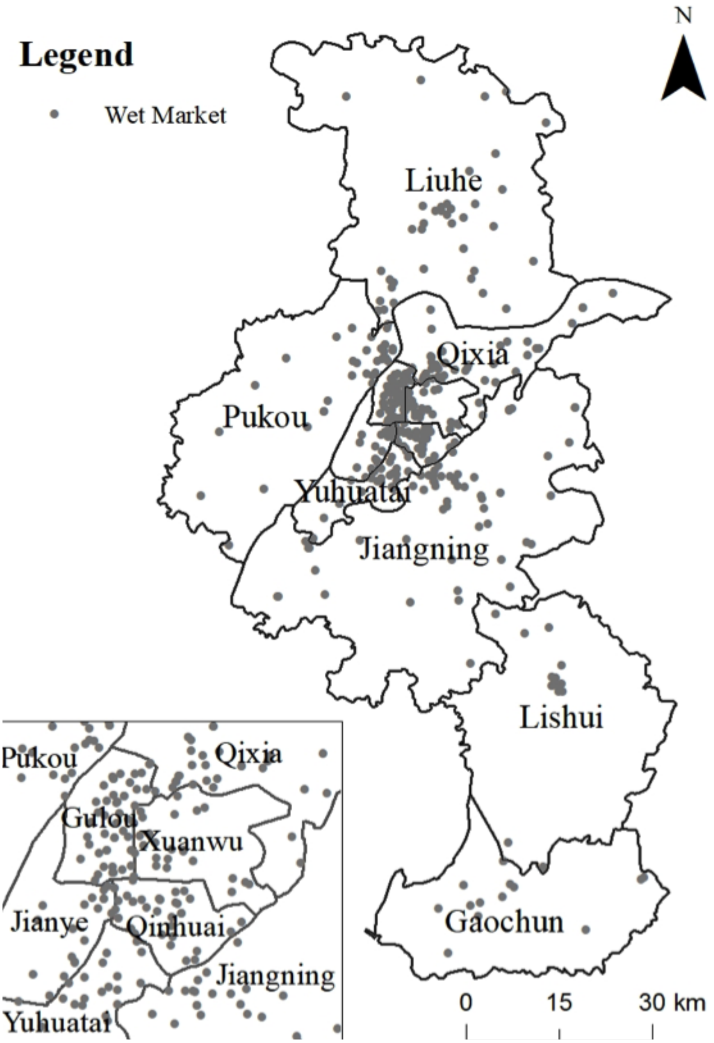


FIGURE 2: Distribution of Surveyed Wet Markets in Nanjing

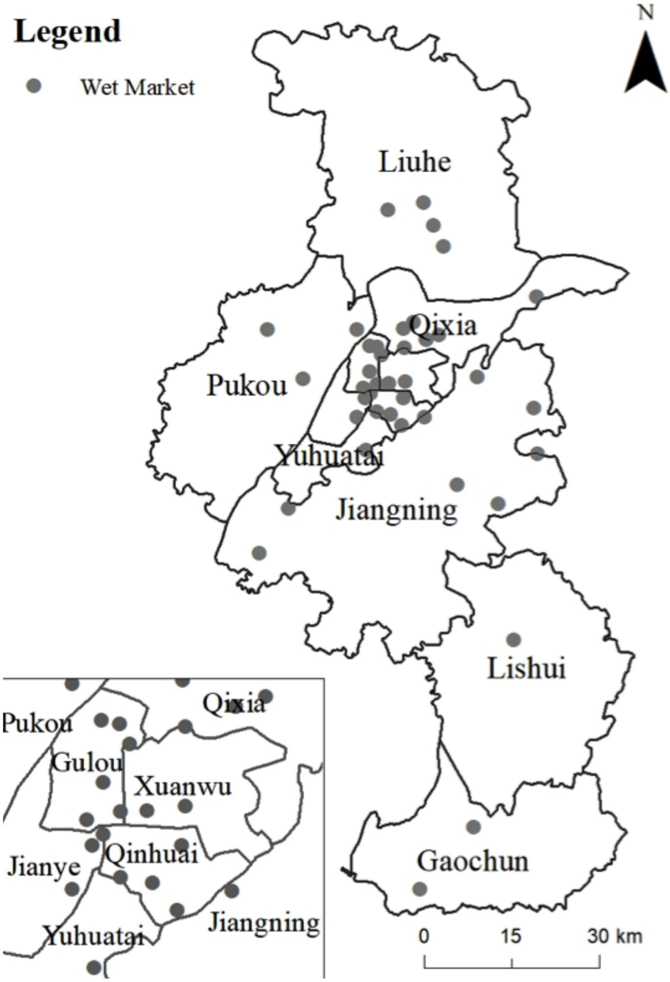
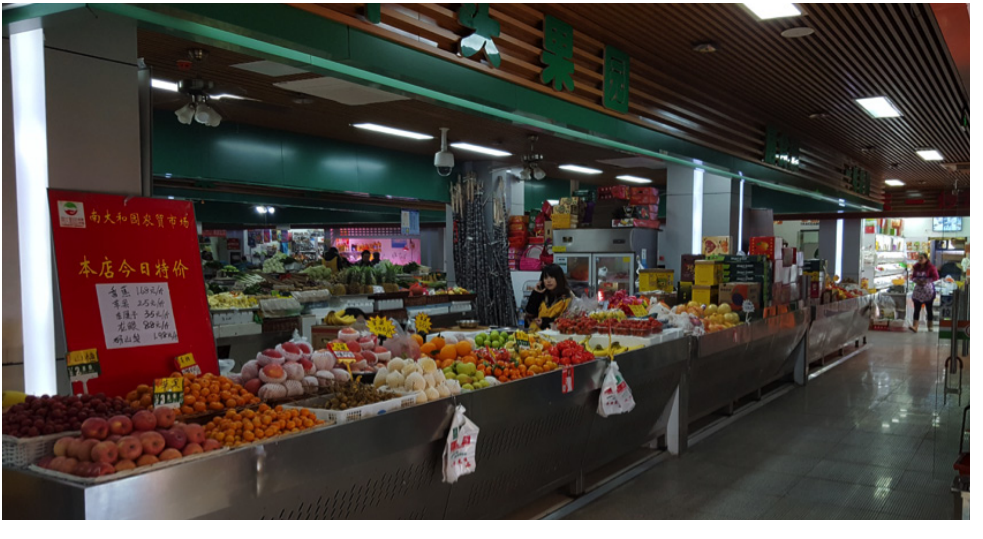


TABLE 1: Distribution of Surveyed Vendors in Nanjing

Districts	Population (thousands)	No. of wet markets	No. of wet markets sampled	No. of wet market vendors surveyed	No. of small shops surveyed	No. of street vendors surveyed
Gulou	1,168.4	54	7	77	27	8
Qinhuai	1,000.3	27	3	33	15	5
Xuanwu	600.2	21	3	49	32	5
Jianye	472.6	25	3	139	6	8
Yuhuatai	454.5	27	3	17	1	1
Qixia	717.9	38	5	90	13	8
Pukou	798.8	37	4	49	13	6
Jiangning	1,248.5	55	7	91	22	20
Liuhe	963.5	37	4	33	15	5
Gaochun	446.4	16	2	41	3	0
Lishui	463.9	13	1	22	1	9
Total	8,335	350	42	641	148	75

Within each wet market, all food vendors were first given a number and then a random number generator determined the specific vendors to be surveyed. The students conducted the surveys with these vendors using the tablets. If a sampled vendor did not wish to participate, a neighbouring vendor was sampled to maintain the allocated sample size within each market. The final data set comprised 864 small food retailers in total, including 641 wet market vendors, 148 small food stores, and 75 street food vendors. Due to limitations in the availability of personnel, the survey was conducted in eight days over a two-month period. Most surveys were done before the Chinese New Year and the rest afterwards. Given that households normally stock up with food before the festival and prices vary considerably in this period, it is possible that vendors' business experiences could differ according to when they were questioned.

Wet Markets in Nanjing




原生态卤制
五香牛肚
水晶牛筋
红烧牛肉


冰爽神速
PAUL FR

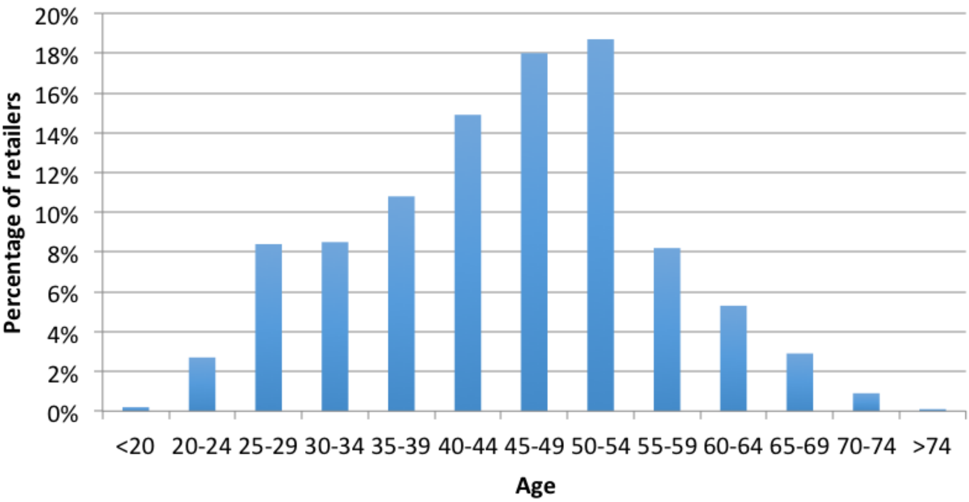

中国福利彩票
乐透 惠民大放送
遇8有好礼
11选5
今日奖池
3800万
大派奖
5亿大派奖
双重豪礼

3. Food Vendor Characteristics

3.1 Demographic Composition

Over half (55%) of all surveyed vendors were women. They varied in age from 18 years old to 77 years old. In general, the sample was not particularly youthful with just over half between 40 and 55 years old, and 35% older than 50. Only 20% were under 35, the international cut-off age for youth. There was no significant difference between the age distribution of male and female vendors. In sum, food vending is more the preserve of middle-aged residents than the city's youth.

FIGURE 3: Age Profile of Vendors



3.2 Migration Status

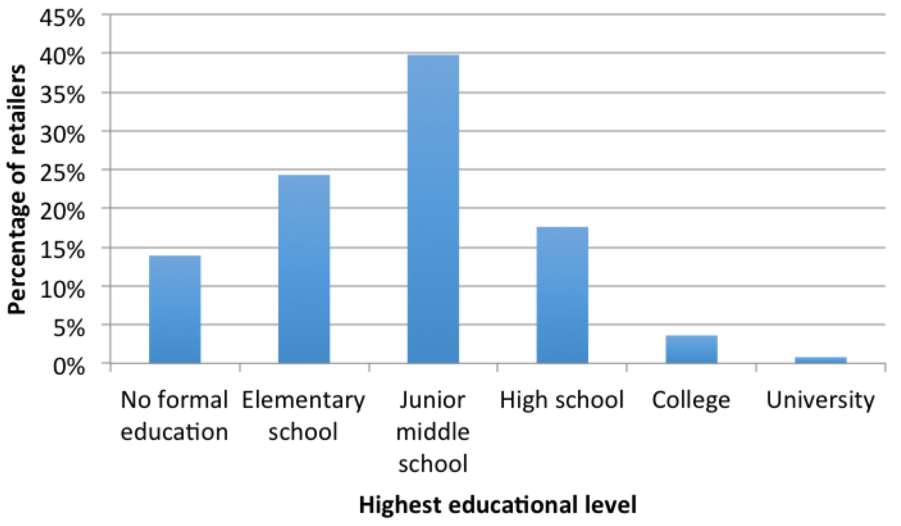
Nearly two-thirds of all the vendors were migrants to the city, including 49% who came from rural areas and 17% from other cities. Only 35% of the vendors were born in Nanjing (Table 2). The survey data therefore suggests that the small-scale food retailing sector provides critical livelihood opportunities for migrants, who are the most socially and economically marginalized group of urban residents in Chinese cities. The results for the different types of vendors were roughly similar, although a greater proportion of wet market vendors were born in another city in China and small shop vendors were more likely to be migrants from rural areas.

TABLE 2: Origins of Vendors

Origins	Wet market vendors (%)	Small shop vendors (%)	Informal street vendors (%)	Total (%)
This city	35.1	34.0	34.7	34.9
Another city in this country	18.1	11.8	12.0	16.5
A rural area in this country	46.8	54.2	53.3	48.6
Total	100.0	100.0	100.0	100

In general, the educational level of small food vendors was very low (Figure 4). Of the 842 vendors who reported their highest level of education, 40% had been to junior middle school, 24% to elementary school, and 14% had no formal education. Less than 5% had been to college or university.

FIGURE 4: Highest Level of Education



3.3 Previous Occupation

Two-thirds of respondents had another occupation before starting their food business. Of these, 29% were agricultural workers, which corresponds with the high proportion of migrants from the countryside (Table 3). Another 35% of the vendors had been manual workers (both unskilled and skilled). About one in five (18.3%) had worked in the informal sector, including operating another informal business or being employed in the informal sector. The relatively significant proportion of vendors with prior occupations raises the question of why they moved into food vending. Very few vendors (6%) had other work in addition to running their food business.

TABLE 3: Occupations Before Starting Food Vending Business

Previous occupations	No.	%
Agricultural worker	165	29.3
Manual worker (unskilled)	139	24.7
Manual worker (skilled)	58	10.3
Operated own informal sector business (different activity)	43	7.6
Operated own informal sector business (same activity)	41	7.3
Hotel/restaurant worker	30	5.3
Employed in informal sector	19	3.4
Office worker	12	2.1
Domestic worker	8	1.4
Businessman/woman formal sector (self-employed)	7	1.2
Police/military	4	0.7
Security	4	0.7
Employer/manager	3	0.5
Health worker	3	0.5
Mine worker	2	0.4
Professional (e.g. lawyer, doctor, academic, engineer)	2	0.4
Student	2	0.4
Teacher	1	0.2
Other	20	3.6
Total	563	100

3.4 Reasons for Starting a Food Vending Business

One of the most important questions in the survey was what motivates people to start a food vending business. Respondents were asked to rank a pre-determined list of possible reasons on a scale from 1 to 5 where1 means no importance, 2 means little importance, 3 means moderate importance, 4 means very important and 5 means extremely important. Table 4 categorizes the 24 possible reasons into four major groups related to (a) economic survival; (b) provision of employment or a service to others; (c) business experience and appeal; and (d) entrepreneurial orientation. The table also presents the average score for each of these reasons and compares the average scores of male and female respondents.

TABLE 4: Significance of Factors Influencing Decision to Start Food Business

	Average score	Average score: Male	Average score: Female
Economic survival/financial support of dependants (average score 2.83)			
I needed more money just to survive	3.87	3.90	3.83
I wanted to give my family greater financial security	3.82	3.81	3.83
I was unemployed and unable to find a job	2.37	2.39	2.34
I wanted to make more money to send to my family in my home area/country	2.55	2.58	2.52
I had a job but it did not pay enough	2.64	2.73	2.56
I had a job but it did not suit my qualifications and experience	1.73	1.77	1.70
Providing employment/product/service (average score 1.9)			
I wanted to provide a product/service to consumers in my neighbourhood	2.36	2.45	2.29
I wanted to contribute to the development of this country	1.86	1.90	1.82
I wanted to provide a service/product to consumers in other parts of the city	1.75	1.79	1.71
I wanted to provide employment for people from my home area/country	1.57	1.56	1.57
I wanted to provide employment for members of my family	2.33	2.47	2.22
I wanted to provide employment for other people	1.53	1.50	1.55
Business experience/appeal (average score 2.35)			
I wanted more control over my own time/to be my own boss	3.10	3.07	3.10
I have always wanted to run my own business	2.86	2.92	2.81
Support/help in starting my business was available from other people	2.17	2.21	2.13
I decided to go into business in partnership with others	1.64	1.68	1.61
My family has always been involved in business	1.96	2.03	1.90
Entrepreneurial orientation (average score 2.0)			
I have the right personality to run my own business	2.85	2.90	2.80
I wanted to do something new and challenging	2.05	2.15	1.98
I like to learn new skills	1.88	1.88	1.88
I enjoy taking risks	1.70	1.79	1.61
I like to challenge myself	1.80	1.89	1.73
I wanted to increase my status in the community	1.85	1.91	1.80
I wanted to compete with others and be the best	1.90	1.91	1.89

Overall, economic survival was the most important motivation (2.83), followed by business experience and appeal (2.35). Provision of employment or a service to others was the least important motivation (1.9), slightly less important than motivations related to entrepreneurial orientation (2.0). Among the 24 possibilities, only three had average scores of 3 or more out of 5: "I needed more money just to survive", "I wanted to give my family greater financial security", and "I wanted more control over my own time/be my own boss". Economic motivations were therefore paramount but vendors also tended to value the personal freedom that running a business granted them. Some aspects of entrepreneurial orientation were more important than others. For example, a desire to run their own business and having the right personality to run a business both scored relatively highly (around 2.8) but most other markers of entrepreneurial motivation had low scores, as did the whole category of providing employment/products/services to others. Overall, this indicates the perceived irrelevance of a sense of giving and verifies the overall significance of self-interested economic motivations.

Gender also plays a role in shaping vendors' motivations. Comparing the motivations between men and women, men rated most of the economic survival reasons, except giving the family greater financial security, higher than women. Similarly, men tended to rate their own entrepreneurial orientation and business experience/appeal more highly than women, with the exception of women wanting "more control over my own time/to be my own boss". Women also rated "providing employment to people from my home area/country" and "other people" slightly higher than men. These findings suggest that female food retailers in Nanjing may have a stronger desire to help others and need to be more independent in managing their own time. This is probably due to their need for flexibility to provide care to family members and meet their domestic obligations seen as the norm in Chinese society.

Small Food Shops in Nanjing

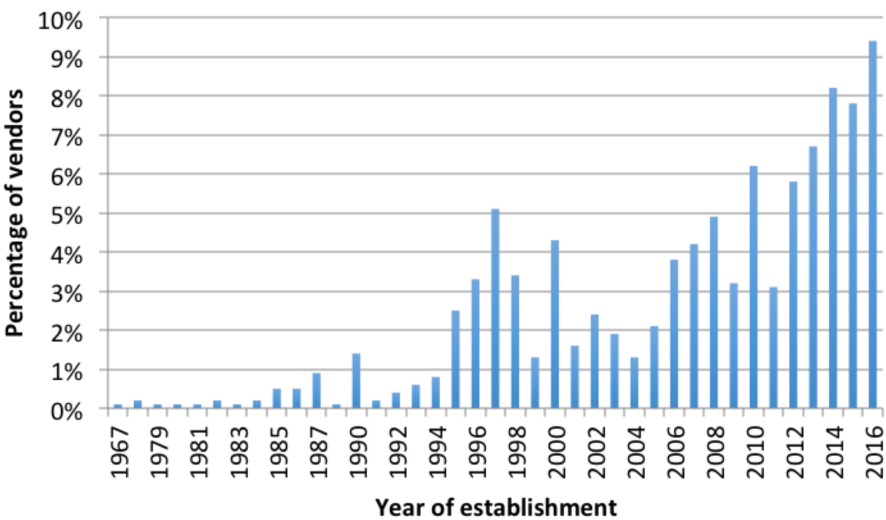
Informal Street Vendors in Nanjing

4. Vendor Enterprise Structure

4.1 Year of Establishment and Occupancy Status

Most retailers (93%) started their business after 1995, with over 40% starting since 2010. The rising importance of small-scale food vending in Nanjing is related to several factors, including the rapid growth of the city and consumer demand for fresh produce. It also relates to broad social economic restructuring such as the liberalization of the Chinese economy since the 1980s, which allowed the operation of private food businesses. Park et al (2012) point to the impact of broader structural trends including "the rise of a dynamic but relatively unregulated private sector, the aggressive restructuring of state-owned enterprises which led to layoffs of millions of state-sector workers, and a surge in rural to urban migration." Workers laid off from these state-owned enterprises were forced to make a living by starting their own businesses. Combined, these forces have led to an increasingly large number of self-employed workers in urban areas (Park and Cai 2010). That said, the fact that most businesses surveyed were started in recent years might also show the volatility of the sector, implying that it is a challenge to stay in business for an extended period.

FIGURE 5: Year of Establishment of Food Enterprises



The occupancy status of the business premises is mainly renting from a private owner (48%) and renting from the municipality (24%) (Table 5). About 21% of vendors own or partly own their business premises. About half of wet market vendors and small food store operators pay rent to private owners. The second most common occupancy status for both is to pay rent to the council or municipality and about 20% own or partly own their premises (Table 5). Although food retailers in wet markets pay fees to the market management companies, many do not have a licence issued by the city. This is because wet markets in Nanjing are managed by market management companies and vendors rent space from these companies. Street vendors in most cases also do not have licences and their most common occupancy status is rent-free without permission (43%). In total, 45% of vendors did not pay the city for a licence.

TABLE 5: Occupancy Status of Business Premises

Occupancy/ tenure status	Wet market vendors (%)	Small food stores (%)	Street vendors (%)	Total (%)
Pay rent to private owner (company or individual)	52.3	51.0	8.6	48.4
Pay rent to council/ municipality	24.2	28.0	10.0	23.7
I own it/am part owner	21.3	20.3	22.9	21.3
Rent-free, without permission (squatting)	0.2	0.7	42.9	3.8
Other	1.0	0.0	8.6	1.4
Rent-free, with permission	1.0	0.0	7.1	1.3
Total	100	100	100	100

4.2 Interaction with Financial System

Most vendors have minimal interaction with formal financial institutions. The amount of start-up capital required to enter the sector was relatively small (Table 6). About one-third (36%) invested less than CNY10,000 (USD1,481).1 A smaller number (around 15%) had significantly more to invest, starting with more than CNY90,000 (USD13,330). However, only 1% had obtained a bank loan to start their business (Figure 6). By contrast, as many as 94% started their business with their own savings. Around 18% obtained loans from relatives and 5% inherited or were given the business.

Only 16 food enterprises had applied for a bank loan for their business. Most were successful but reasons given for being turned down included incomplete documents, insufficient guarantees/collateral, and insufficient initial capital. Surprisingly, two-thirds of the vendors did not believe that banks were reluctant to make loans to informal businesses. Of the other one-third, 84% agreed that it was because informal businesses often could not provide sufficient guarantees/ collateral, 71% that it was because informal businesses have insufficient initial capital, and 66% that the banks believe informal enterprises would not be viable (Table 7). Around half of the sample believed that banks only loan money to formal businesses and that banks think that loans to informal operators will not be repaid. The results show that people believe the major reason is insufficient guarantees or initial capital, which are often associated with informal businesses.

TABLE 6: Amount of Start-up Capital

Amount of start-up capital	Number of retailers	%
<10,000	179	35.8
10,001-20,000	62	12.4
20,001-30,000	67	13.4
30,001-40,000	31	6.2
40,001-50,000	43	8.6
50,001-60,000	14	2.8
60,001-70,000	8	1.6
70,001-80,000	13	2.6
80,001-90,000	3	0.6
90,001-100,000	48	9.6
>100,000	34	6.8

FIGURE 6: Sources of Start-up Capital

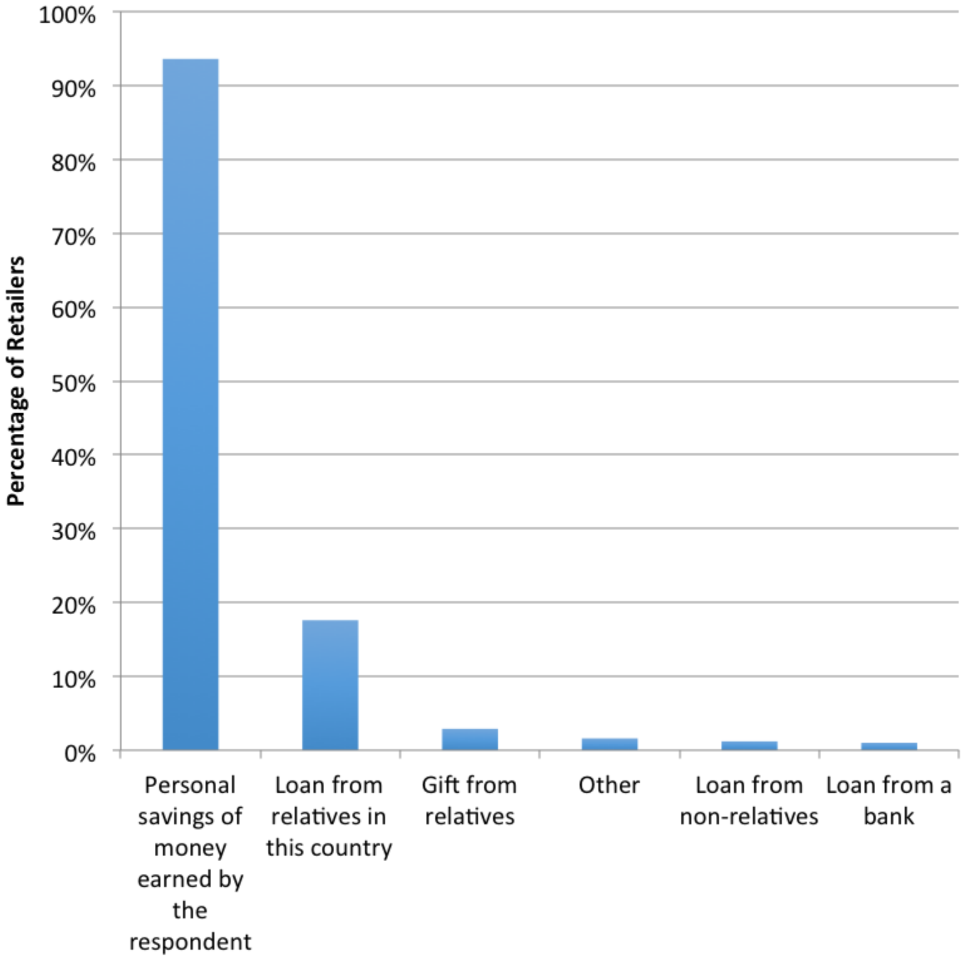


TABLE 7: Vendor Perceptions of Reasons Why Banks are Reluctant to Lend

	Agree		Disagree		Neither	
	N	%	N	%	N	%
Because of insufficient guarantees/collateral	101	84.2	3	2.5	16	13.3
Because of insufficient initial capital	79	70.5	5	4.5	28	25.0
Because the banks believe informal enterprises are not viable	74	65.5	7	6.2	32	28.3
They only loan money to formal businesses	61	53.0	21	18.3	33	28.7
Because the banks think that the loan will not be repaid	56	48.7	11	9.6	48	41.7

4.3 Foods Sold

The small food vendors in Nanjing were selling all kinds of food, ranging from fresh vegetables and fruit to processed food (Table 8). The most common food item sold is leafy green vegetables, with almost 30% of vendors having sold this product in the previous month. Tubers, broccoli, cauliflower, peppers and tomatoes were also common, with each being sold by more than 20% of vendors. Around 20% of vendors had sold processed food (such as tofu, steamed buns, and pancakes) in the previous month. Seven percent sold fruit. Pork, sold by 12% of vendors, dominates the list of meats, followed by seafood and fish (8%). Eggs and dairy products were not as common as vegetables and pork.

TABLE 8: Food Items Sold

Food groups	Food items	Wet market vendors (%)	Small food stores (%)	Street vendors (%)	Total (%)
Vegetables	Leafy greens	35.4	2.0	28.0	29.8
	Tubers	31.4	1.4	9.3	24.9
	Broccoli/cauliflower	29.0	2.0	5.3	22.9
	Fruit vegetables	27.5	2.0	2.7	21.5
	Melon vegetables	24.2	1.4	0.0	18.6
	Fruits	4.5	16.2	10.7	7.2
	Other vegetables	7.3	0.7	2.7	5.9
Meat	Pork	15.3	1.4	0.0	11.9
	Fish and aquatic products/seafood	7.8	3.4	13.3	7.7
	Chicken	5.9	3.4	2.7	5.3
	Duck	5.0	4.1	4.0	4.9
	Offal	3.9	1.4	1.3	3.3
	Beef	2.8	1.4	1.3	2.5
	Mutton/lamb	2.3	0.7	0.0	1.9
	Cooked meat	1.4	2.7	0.0	1.5

Egg, milk, and drinks	Eggs (including chicken eggs, duck eggs, and other eggs)	5.6	6.1	8.0	6.0
	Milk/milk tea/pop drinks/juice	0.5	7.4	0.0	1.7
Other	Processed food (e.g. tofu, steamed buns, fried dough, pancakes)	14.2	45.3	18.7	20.4
	Noodles/rice/rice noodles	5.1	6.8	2.7	5.3
	Other grains/beans	2.8	6.8	2.7	3.6
	Alcohol	1.6	6.8	0.0	2.4

Food Vendors at Wholesale Markets in Nanjing

4.4 Sources of Food

The major places where vendors bought food items for resale were wholesalers and formal markets (i.e., wet markets or supermarkets) (Table 9). All food items listed in the questionnaire were procured from one or both but wholesalers tended to be the more popular with most products purchased there by over 40% of vendors. In some cases (such as broccoli/cauliflower, melon vegetables, fish, fruits, chicken, and drinks), the proportion was closer to or exceeded 60% of vendors. Around one-quarter to one-third of the vendors acquired some produce from formal markets (including leafy greens, tubers, and duck). Most products were acquired directly from farms and factories by at least some vendors, but the proportion was consistently less than 20%. The main exceptions were pork (32% of vendors), offal (29%), and noodles/rice/rice noodles (24%) bought directly from the factory by 32%, 29% and 24% of vendors respectively.

Very few purchased from small shops and other vendors and none bought from supermarkets.

TABLE 9: Locations Where Vendors Sourced Food Items for Sale in the Previous Month

Food items	No.	Places to source food (% of vendors)							
		Wholesaler	Formal markets	Directly from farms	Make them myself	Directly from factory	Informal sector producer/ retailer	Small shops/ retailers	Other
Leafy greens	246	50.0	25.0	15.3	15.3	1.6	1.2	0.8	2.8
Tubers	204	52.5	28.9	13.7	10.3	2.9	1.5		2.0
Broccoli/ cauliflower	189	57.1	28.0	10.1	6.9	3.2	2.1	0.5	1.6
Fruit vegetables	176	57.6	29.4	11.9	5.1	1.7	0.6		1.1
Processed food	168	48.2	17.1	4.1	8.8	15.9	4.1	5.3	4.1
Melon vegetables	151	60.5	30.9	10.5	2.6	1.3	1.3	0.7	
Pork	100	38.0	8.0	10.0	5.0	32.0	5.0		4.0
Fish and aquatic products/ sea food	64	58.5	15.4	13.8	4.6	7.7	3.1		3.1
Fruits	59	68.3	18.3	3.3	5.0			1.7	3.3
Eggs	51	52.9	15.7	9.8	9.8	9.8	7.8		2.0
Other vegetables	50	52.0	36.0	6.0	6.0	4.0	2.0		2.0
Noodles/ rice/rice noodles	43	51.1	11.1	2.2	4.4	24.4		2.2	
Chicken	41	56.8	13.6	9.1	2.3	11.4			
Duck	39	46.3	22.0	9.8	4.9	9.8	2.4		
Other grains/ beans	29	55.2	27.6	6.9		13.8			
Offal	28	35.7	7.1	3.6	10.7	28.6	10.7		3.6
Beef	20	50.0	15.0	5.0		25.0	5.0		
Alcohol	19	45.0	15.0	0.0		20.0	10.0		10.0
Mutton/ lamb	15	50.0	18.8	12.5		18.8			
Milk/milk tea/pop drinks/juice	14	64.3	14.3	0.0		21.4			14.3
Cooked meat	12	41.7	8.3	16.7	33.3		8.3		

Note: Multiple-response question

4.5 Business Expenditures and Net Profit

About 90% of the vendors said that the food enterprise was their only income-generating activity or employment. Of the rest, 30% had income from another informal business (different activity), 28% had income from another informal business (same activity), and 24% had income from a formal business. Only 5% generated income from formal employment, indicating that there is little participation by vendors in the formal labour market.

More than 80% of the enterprises incurred expenses on purchasing food to sell, rental fees, and utilities (Table 10). Telecommunication costs were reported by 30%. Other expenses were rare, especially insurance and financial services. This is understandable given the small-scale nature of these businesses. The highest expense was on food to be sold, which averaged CNY42,023 (USD6,224) in the previous month. This was followed by rental fees with an average of CNY10,135 (USD1,501), and CNY6,557 (USD971) on employment costs and expenses. The amounts spent on telecommunications, business taxes, licences, and permits were minimal.

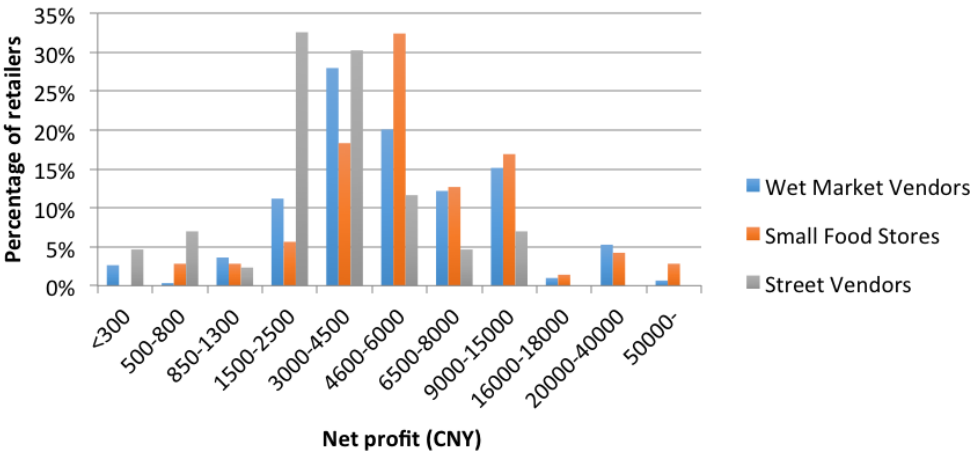
TABLE 10: Types of Expenditure in Previous Month

Expenditures	No.	%	Average (CNY)	Average (USD)
Food for sale at this business	714	89.9	42,023	6,224
Rental fees (for the land, building, cart, etc. used in this business)	680	85.6	10,135	1,501
Utilities (water, electricity, heating, etc.)	635	80.0	352	52
Telecommunications (internet, mobile phone, etc.)	238	30.0	126	19
Employment costs and expenses (salaries, wages and benefits)	33	4.2	6,557	971
Business taxes, licences and permit	27	3.4	50	7
Other expenses	17	2.1	3,929	582
Subcontracts (services of other businesses)	10	1.3	3,000	444
Insurance	2	0.3	2,600	385
Financial services (account fees, tax brokerage, investment management, etc.)	1	0.1		

About half of the respondents reported their net revenue in the previous month. The numbers varied widely, ranging from a loss of CNY1,000 (USD148) to a profit of CNY50,000 (USD7,405). On average, the net revenue was CNY8,036 (USD1,190). However, the largest share of retailers (27%) reported a profit between CNY3,000 and CNY4,500 (USD444-666). This is roughly the same as the average income (CNY4,500 or USD666) of urban residents in Nanjing in

2017. Small food stores were the most profitable and street vendors the least profitable (Figure 7). Our analyses also show that, in general, enterprises in urban districts make more profit than those in peri-urban districts. Vendors' profits are influenced by their demographic character (gender, age, and educational level), business expenses, and payment schemes (Qi et al 2019).

FIGURE 7: Net Profit of Three Types of Small Food Enterprises



In total, only 188 respondents provided information on both the amount of startup capital they invested and the estimated value of their business at the time of the survey. The current values of surveyed businesses were generally more than their start-up capital (Figure 8). The average estimated value for this group of vendors (CNY73,200, or USD10,842) was nearly double the average startup capital (CNY107,324 or USD15,896). The number of businesses with an estimated current value above CNY120,000 is significantly higher than that of businesses with that amount of start-up capital.

Daily earnings were mainly used by the vendors to purchase stock or supplies for the business (Table 11). Just over half keep their earnings on the premises while 47% deposit them in a bank. Just over 20% said they transferred earnings (remittances) to their homes.

FIGURE 8: Business Start-up Capital and Current Net Worth

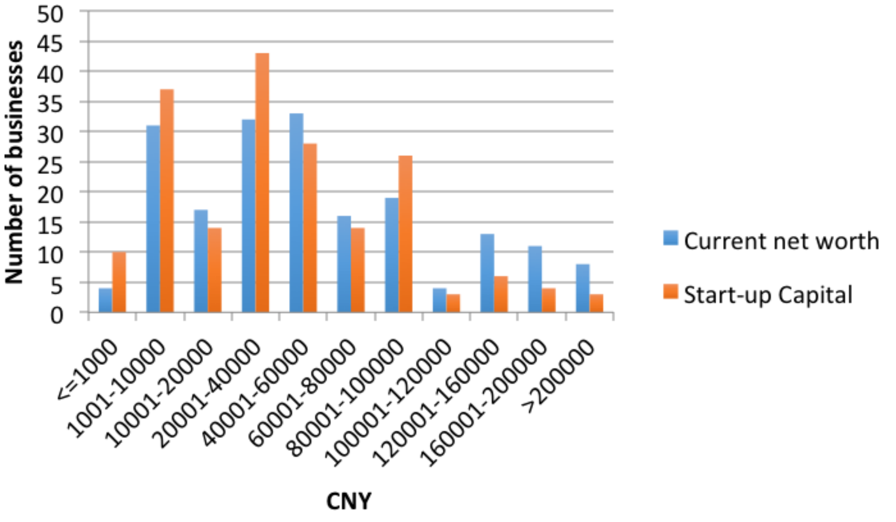


TABLE 11: Disposal of Daily Earnings

	No.	%
Purchase stock/supplies	537	68.1
Keep on business premises	417	52.9
Deposit earnings in a bank	368	46.7
Transfer earnings to my home	178	22.6
Transfer earnings to other people	57	7.2

4.6 Family Dependence on Food Vending

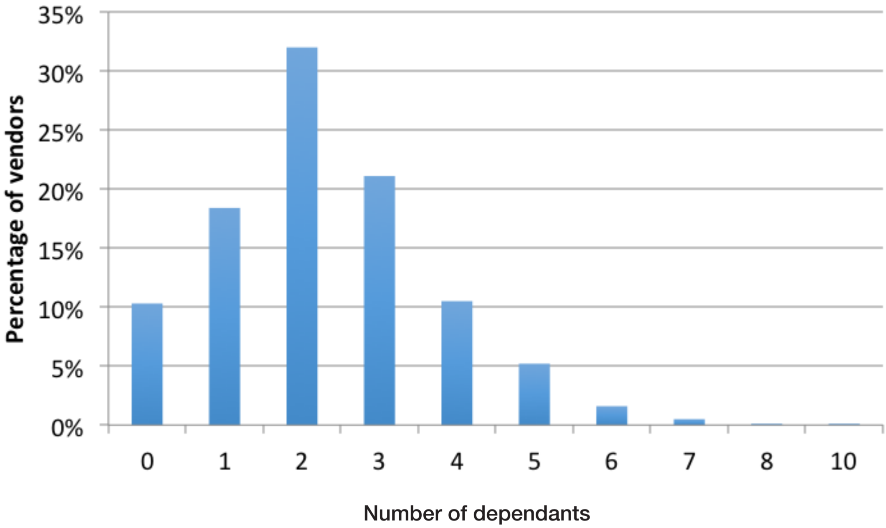
Profits from the food vending business are used to support their households by 684 vendors (79%). On average, 82% of household income was made up of the profits from running the food business. As many as two-thirds of the vendors come from households that are almost completely reliant on income from the enterprise (more than 80% of household income comes from this source).

TABLE 12: Household Income from Running Food Business

% of income	% of vendors
0-20	4.9
21-40	8.7
41-60	13.2
61-80	6.4
81-100	66.4

Figure 9 shows the number of family members, in addition to the owner, dependent on income from the business. Only 10% of the businesses had no additional dependants. The rest had varied numbers, with 32% having two additional dependants, 21% having three and 18% one. Very few retailers had more than five people dependent on their business, reflecting the relatively small size of families in Nanjing.

FIGURE 9: Number of People Dependent on the Food Business



5. Vendor Business Strategies

5.1 Reasons for Business Location

In some cities, food vendors sell in more than one location to maximize profit and spread risk. However, in Nanjing, 95% were selling food only at the location where they were interviewed. The most common reason provided for the choice of location was that it was "close to home" (cited by 52%) (Table 13). Over one-third (39%) of vendors selected "place with greatest number of customers" as a primary reason, followed by "always done business there" (24%). These responses suggest that easy access to the place of business and to customers are the main driving forces in locational decisions. Proximity to public transportation was relatively unimportant. A few vendors (about 10%) chose their location because of rental costs, access to services, and having the required permits. Distance from competitors was not an influencing factor since location in or near a wet market means that, by definition, competitors will be close by. Safety concerns and the presence or absence of by-laws were also unimportant factors.

TABLE 13: Main Reasons for Business Location

	No.	%
Close to home	438	51.7
Place with greatest number of customers	332	39.2
Always done business there	199	23.5
Have a permit to operate there	160	18.9
Rents are cheaper	151	17.8
Own/rent the land	115	13.6
Access to services such as water/electricity	102	12.0
Due to passing traffic	86	10.2
Close to other enterprises	41	4.8
Close to public transport	34	4.0
Safer than other locations	23	2.7
Distant from other competitors	23	2.7
Few or no bylaw officers	22	2.6
Cheap land	19	2.2
Note: Multiple-response question		

5.2 Setting Food Prices

Retailers used various approaches to setting the prices for the food they sold, although price was heavily determined by their purchasing costs (Table 14). Nearly 90% added a standard markup. Other strategies included giving discounts to regular customers (23%) and keeping prices cheaper than their competitors (11%). Very few (less than 10%) were willing to negotiate prices with their customers, which may be because wet markets are formal vending environments and prices are as advertised and non-negotiable. Willingness to negotiate prices may be more common among street vendors.

TABLE 14: Approaches Used to Set Prices

	No.	%
Add a standard markup to the cost of the food	737	88.3
Give discounts to regular customers	193	23.1
Keep prices cheaper than competitors	95	11.4
Negotiate with customers	70	8.4
Offer prices based on the apparent wealth of the customer	30	3.6
Note: Multiple-response question		

Most vendors (over 90%) have regular customers. This very high percentage demonstrates that Nanjing residents prefer to buy food from certain retailers, which adds an important social layer to the interactions between them and their customers. Over half of these vendors stock items especially for those regular customers. Street vendors were less likely to have regular customers (only 56%), compared to 98% of small food stores and 92% of wet market vendors. This may be due to the greater mobility of street vendors.

In the previous year, nearly 40% of the vendors had noticed a change in the availability of the food they sold. To cope with the change, 67% of vendors changed their prices, 57% changed the type of food they sold, and 47% changed the amount of food they stocked (Figure 10). Regarding price, most vendors (78%) reported a change in the cost of the food stock they had bought in the previous year. To cope with the price changes, 89% changed the prices of the food they sold, 33% changed the amount of food they stocked, and 29% changed the type of food they sold (Figure 11).

FIGURE 10: Strategies to Cope with the Changing Availability of Food

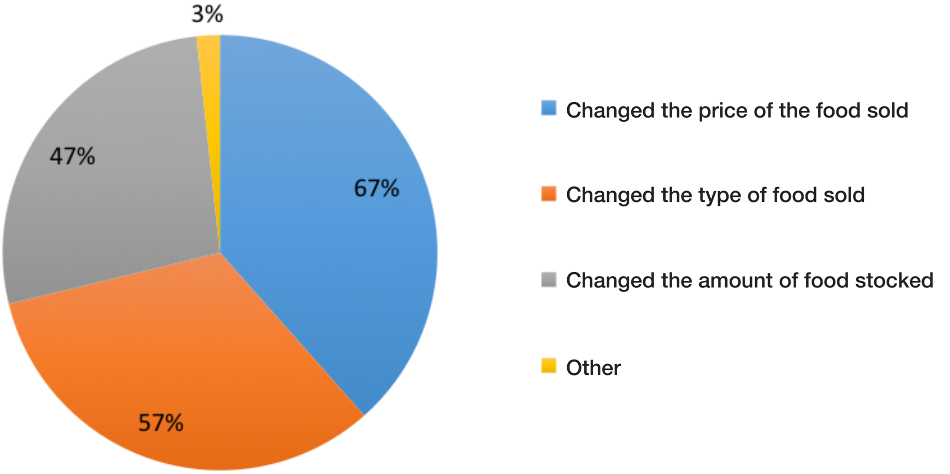
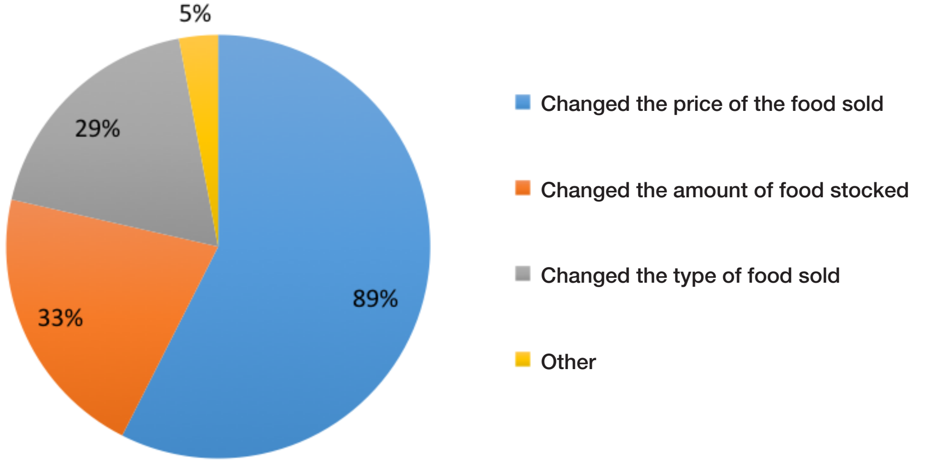


FIGURE 11: Strategies to Cope with the Changing Price of Food



5.3 Other Business Strategies

Table 15 shows the most common strategies adopted by vendors and divides them into several categories. First, in relation to purchasing behaviour, over 40% purchase in bulk from suppliers and 36% negotiate prices with their suppliers. Comparison shopping is relatively uncommon, which might suggest that vendors tend to patronize the same suppliers. Combining with other vendors to purchase stock in bulk is also rare. Second, in terms of good customer relations, extended operating hours and offering credit are the most common strategies. Third, with regard to operating strategies, the use of ICTs is relatively common and growing in importance with one-third of the vendors accepting payment by mobile phone and 20% accepting phone orders. As Table 16 shows, the usage of mobile phones varies among the three types of vendors. Small food stores have the highest percentage, while street vendors have the lowest. Less than 20% of the vendors keep business records.

TABLE 15: Business Strategies Employed by Food Enterprises

	No.	%
Purchasing strategies		
I purchase stock in bulk myself	350	42.6
I negotiate prices with my suppliers	296	36.1
I look for the cheapest prices for goods by calling suppliers	57	6.9
I look for the cheapest prices for goods by asking other entrepreneurs	42	5.1
I purchase stock in bulk together with others	41	5.0
I look for the cheapest prices for goods by consulting the media	15	1.8
Customer relations		
I extend my hours of operation	306	37.3
I offer credit for customers	172	21.0
I open my business only during the periods of the day when I have the most customers	123	15.0
I charge different prices for different customers	86	10.5
Operating strategies		
I use mobile phones to receive payments from customers	281	34.2
I use mobile phones to take orders from customers	165	20.1
I keep records of my business accounts	146	17.8
I change what I sell at different times of the year	112	13.6
I use mobile phones to coordinate with suppliers/other vendors	78	9.5
I sell goods more cheaply than my competitors	62	7.6

TABLE 16: Use of ICT by Vendor Type

	Wet market vendors (%)		Small food stores (%)		Street vendors (%)	
	Yes	No	Yes	No	Yes	No
Use mobile phones to receive payments	35.6	64.4	37.6	62.4	16.4	83.6
Use mobile phones to take orders	20.9	79.1	23.4	76.6	6.8	93.2
Use mobile phones to coordinate with suppliers/other vendors	9.2	90.8	12.1	87.9	6.8	93.2

5.4 Access to Ongoing Financial Support

Only 6% of the vendors had borrowed money for their operations in the previous 12 months. This could be because of limited sources or difficulty in borrowing money, but it might also be due to limited demand for capital on the part of these enterprises. Only four vendors had a loan from a bank and, despite the availability of government support, only one had a loan from a government agency. None had accessed money from a micro-finance institution, informal financial institution, religious institution, or non-governmental organization. Only 12 vendors had ever accessed a government support scheme.

6. Business Challenges

The main challenges facing small food retailers related to competition with other vendors (42% often and 41% sometimes) (Table 17). Other problems relating to or arising from vendor competition included insufficient sales (80% often/sometimes) and too few customers (80% often/sometimes). The only operating challenge identified by most vendors (72% often/sometimes) was suppliers charging too much for stock. Less than one-quarter of vendors experienced significant problems with other operating issues, safety and security, and social issues.

Competition from other food retailers such as supermarkets and large stores was less significant (55% often/sometimes) but by no means non-existent. To investigate the relationship between these small food businesses and supermarkets, respondents identified the ways their businesses were affected by supermarkets. Table 18 shows that 38% viewed supermarkets as direct competitors and 22% believed that supermarkets targeted the same customers. The price of food in supermarkets had minimal impact on the price of food sold by these small food businesses.

TABLE 17: Challenges Facing Small Food Enterprises

	Often (%)	Sometimes (%)	Never (%)
Competition			
Too many competitors	41.9	41.3	16.8
Insufficient sales	23.2	67.0	9.8
Too few customers	22.1	68.1	9.8
Competition from supermarkets/large stores	17.9	36.6	45.5
Operating			
Suppliers charge too much	12.0	60.2	27.9
No refrigeration	5.8	6.7	87.5
Storage problems	2.0	19.5	78.5
Restricted by lack of relevant training in accounting, marketing, other business skills	1.4	21.1	77.5
Customers don't pay their debts	1.1	22.9	76.0
Lack of access to credit	0.4	5.9	93.7
Safety and security			
Crime/theft of goods/stock	1.4	17.8	80.8
Conflict with Chinese entrepreneurs	2.2	18.1	79.7
Crime/theft of money/income	0.3	6.2	93.5
Conflict with entrepreneurs from other countries	0.1	0.4	99.5
Arrest/detention of yourself/employees	0.0	0.5	99.5
Physical attacks/assaults by citizens of this country	0.0	4.7	95.3
Social			
Prejudice against me because I am not a local	1.6	11.8	86.6
Verbal insults against your business	0.3	10.4	89.4
Prejudice against my ethnicity	0.0	0.3	99.7

TABLE 18: Ways that Small Food Enterprises are Affected by Supermarkets

	No.	%
Supermarkets are competitors with my business	309	37.9
Supermarkets target the same customers as my business	181	22.2
Supermarket prices cause me to change the price of the food I sell	79	9.7
Supermarkets assist my business	10	1.2

7. Employment Creation

Unlike many other cities in the HCP network, in Nanjing small and informal food enterprises are not a significant generator of jobs. In total, only 7% of the vendors had employees and two-thirds of these had only one employee. Combined, these 864 vendors employed only 68 people, indicating that small-scale food vending in Nanjing tends to be single-person operations. Of the 68 employees, most were women, young (under 35 years old) and were not family members.

8. Food Hazard Risks

8.1 Strategies to Determine Spoiled Food

The most common approach to determining if unsold food should be discarded is based on its appearance. With fruit, 97% of respondents decided by its look if it should be disposed of (Table 19). The percentages are higher than 80% for different vegetable groups, tubers, and mutton. Other common practices are examining the smell and feel of the food. Seventy-five percent of vendors judge the freshness of mutton/lamb by its smell. The smell of fruit is used by 70% of vendors to determine if it should be thrown away and the percentage for meat is more than 50%. Food such as mutton/lamb and fruit is also felt by more than 60% of vendors to determine its freshness. The freshness of pork is determined by its smell, look, and feel. For different vegetable items, the feel of the food is used by around 40% of vendors. In general, vendors rely mostly on personal experience of the appearance, smell, and feel to determine if they should discard vegetables, mutton/lamb and fruit. For vegetables and fruit, appearance is most significant.

Given that most food items sold by small food vendors are not packaged or processed, it is difficult to determine expiry or "best-before" dates. Also, most Chinese packaged food has an expiry date but no best-before date. The least common approach to determining when to dispose of unsold food was the best-before date, except for some packaged food items. For milk, milk tea, soft drinks, juice, alcohol, and noodles, the most commonly used indicator was the expiry date.

TABLE 19: Strategies to Determine When an Unsold Food Item Should be Discarded

	Best-before date (%)	Expiry date (%)	Look of the food (%)	Smell of the food (%)	Feel of the food (%)	Other (%)
Leafy greens	9.3	8.1	85.0	41.1	41.5	3.7
Broccoli/ cauliflower	9.0	7.4	84.7	42.3	40.2	4.2
Fruit vegetables	9.0	9.0	84.7	38.4	40.7	4.0
Melon vegetables	7.2	8.6	84.9	43.4	40.8	3.9
Tubers	9.3	5.9	84.8	39.2	46.1	3.9
Pork	7.1	13.1	49.5	50.5	43.4	22.2
Beef	14.3	14.3	61.9	57.1	42.9	14.3
Mutton/ lamb	6.3	12.5	87.5	75.0	62.5	6.3
Chicken	11.1	20.0	53.3	53.3	33.3	15.6
Duck	12.2	19.5	43.9	39.0	26.8	22.0
Fish and aquatic products/ sea food	9.5	14.3	61.9	38.1	41.3	15.9
Offal	10.7	14.3	35.7	42.9	32.1	7.1
Cooked meat	15.4	7.7	61.5	61.5	53.8	7.7
Eggs	15.7	17.6	45.1	35.3	35.3	17.6
Processed food	15.9	31.2	38.2	35.9	26.5	16.5
Noodles/ rice/rice noodles	11.1	48.9	20.0	15.6	17.8	17.8
Fruit	11.7	10.0	96.7	70.0	60.0	3.3
Alcohol	5.3	52.6	0.0	5.3	0.0	26.3
Other vegetables	6.0	12.0	64.0	44.0	42.0	12.0
Other grains/ beans	10.3	34.5	44.8	34.5	34.5	6.9
Milk/milk tea/soft drinks/juice	0.0	78.6	0.0	0.0	0.0	21.4

Note: Multiple-response question

8.2 Disposing of Spoiled Food

Small food enterprises dispose of spoiled products in various ways (Table 20). The most important methods are disposing of the food at the business premises where management companies take care of the waste (37%), at a dump site away from the retail outlet (36%), and selling it to customers at a reduced price (21%).

TABLE 20: Small Food Enterprises' Approaches to Discarding Spoiled Food

	No.	%
I dispose of the food products at this retail outlet	303	36.5
I dispose of the food products at a dump site away from this retail outlet	295	35.5
I sell the products to customers at a reduced price	176	21.2

8.3 Food Storage

About half of the vendors said they stored food at the food enterprise. On average, 56% of those who stored food at their business location had refrigerators. Twenty-two percent had locked boxes and a few had coolers or freezers to store food on site. It was more common for wet market vendors and small food stores to have refrigerators but street vendors were more likely to use locked boxes to store their food (Table 21). As many as 84% of the vendors had access to electricity for their businesses.

TABLE 21: Storage Used by Type of Enterprise

Kind of storage	Wet market vendors (%)	Small food stores (%)	Street vendors (%)
Refrigerator	62.2	58.4	30.0
Locked box	22.9	27.0	40.0
Cooler	6.3	2.2	0.0
Freezer	4.8	1.1	0.0
Other	13.7	15.7	20.0

9. Business Aspirations

All vendors were asked whether they had any of the more common business aspirations for their operations over the next three years (Table 22). Only 16% said they intended to expand their operations and own several businesses and only 4% wanted to expand to other areas of the city. On the other hand, less than 10% wanted to move their business into the formal economy or be in formal employment. Only 8% intended to retire. The overwhelming sense from these responses is that vendors are generally satisfied with the status quo and do not intend to make dramatic changes. This may be due to the various identified challenges, such as the competitive business environment and the lack of capital for expansion.

TABLE 22: Future Aspirations of Small Food Vendors

	No.	%
I intend to expand my business operations and own several businesses	126	16.0
I intend to retire from running a business	62	7.9
I intend to move my business into the formal economy	48	6.1
I intend to expand my business to other locations in the city/area	28	3.6
I intend to be working in formal employment instead	19	2.4
I intend to return to my home area to live	8	1.0
I intend to relocate my business to another city	1	0.1
I intend to move to another country to live	1	0.1

10. Conclusion

Key findings of the Nanjing food vendor survey are:

- Most vendors started operations comparatively recently (after 2000), which is related to the broader restructuring of state-owned enterprises, the rise of the private sector, the growth of wet markets, and rapid rural-to-urban migration. Nearly two-thirds of the surveyed vendors were migrants to Nanjing.
- The small-scale food-retailing sector in Nanjing provides important self-employment opportunities, especially for women, middle-aged people, and rural-urban migrants, often with low levels of education.
- Two-thirds of the small food vendors had other occupations before starting their business. They were commonly working in the agricultural sector, as skilled or unskilled manual workers, or in the informal sector.
- Most vendors work full time in their food business.
- Economic survival and providing income for the family were the most

important personal motivations for entering the sector, followed by a desire to manage their own time and be their own boss. Provision of employment or a service to others was the least important motivation.

- Economic and entrepreneurial motivations were more important for male than female food vendors in Nanjing. Female vendors demonstrated a stronger desire to manage their own time and help others.
- Most small food vendors invested less than CNY50,000 (USD7,405) as start-up capital, mainly from their own savings. Very few borrowed from banks to start or run their business. Only 12 vendors had accessed government support schemes. Respondents thought that banks were reluctant to grant them loans for reasons including that they could not provide sufficient guarantees or collateral, had insufficient capital, and because banks believe informal enterprises are not viable.
- Wholesale markets were the major source of food sold by these small enterprises. Most commonly sold items were vegetables. Pork was the most commonly sold meat.
- Vendors determined their food prices largely by the cost of their stock with a standard markup. Although most have regular customers, only 23% give discounts to regular customers. However, stocking particular items for regular customers and offering them credit were strategies used to retain their patronage.
- Vendors use various business strategies including purchasing stock in bulk, extending their hours of operation, negotiating prices with suppliers, and using mobile phones to receive payments.
- The average net monthly profit of these vendors was CNY8,036 (USD1,190), although the amount varied considerably from vendor to vendor. This average is roughly equal to the average income of urban residents in Nanjing. In general, small food stores were the most profitable and street vendors were the least profitable among the three types of vendors. The average estimated value of these food enterprises in 2017 was about 47% higher than the average startup capital.
- For most vendors, the business was their only source of household income. Besides the vendor, there were typically up to three other people dependent on this income.
- The most common challenges facing vendors include too many competitors, insufficient sales, too few customers, competition from supermarkets or large stores, and suppliers charging too much.
- Small-scale food vending provides significant opportunities for self-employment but does not generate many jobs for others. Only a very small proportion (7%) of vendors had staff and those who did usually had only one employee.

In sum, the survey results provide new and, in China's context, unprecedented insights into the operation of the small-scale food sector in a Chinese city. The results demonstrate that small food enterprises, particularly wet market vendors, provide important economic opportunities for middle-aged residents, women, and rural-urban migrants with relatively low levels of education who are disadvantaged in finding formal sector employment. The small-scale food-retailing sector provides livelihoods for these individuals and their families, and enhances the inclusiveness of the development of the local economy.

At the same time, the surveyed vendors identified major challenges that deserve attention from policy makers in Nanjing and more broadly. The first concerns the expenses of their enterprises, particularly the high cost of renting wet market premises. This report shows that rental fees and utilities were the most common costs after expenses on purchasing food to sell. Nanjing's municipal government has implemented various policies to encourage the development of wet markets. To ensure that small food business is an attractive option, policies should place more emphasis on reducing the cost of rental fees of wet market vendors.

A second concern relates to government support schemes, which very few of the surveyed vendors had accessed. Those who did benefitted from the wet market direct-selling subsidy. Other government supports, such as the professional skills training program, the "new affordable agricultural products store subsidy" and the "affordable direct selling subsidy" reported by the public media, have not benefitted these small-scale food businesses. While the local government has certainly invested large sums in boosting the development of wet markets, more attention needs to be paid to these support schemes to make sure that they are more widely accessed by small food enterprises. Vendors also said they lacked training in accounting, marketing, and other business skills and only a few kept business records. This suggests government could provide more support for small food business training programs.

A third issue that this report highlights is the difficulty of accessing financial support. The survey shows that vendors believe that banks are reluctant to make loans to businesses such as theirs. Most vendors therefore rely on personal savings to support their business development, with a few borrowing from relatives. The lack of access to outside financing partially accounts for the limited aspiration of vendors to expand their businesses. To foster the entrepreneurship of small-scale food vendors, policies should aim at improving their ability to get bank loans and other financial support. This could potentially involve encouraging banks to operate microfinance programs specifically for small food enterprises.

A fourth issue concerns operating challenges facing small food enterprises. The most important relate to competition from other vendors and supermarkets. Competition from other vendors within the same wet market is not an issue that policy can address. However, nearly 40% of respondents viewed supermarkets as competitors and 22% believed that supermarkets targeted the same customers as their businesses. With major supermarket chains expanding, urban planning regarding the spatial distribution of wet markets should consider supermarket location and priority for new wet markets should be given to areas without major supermarkets.

A fifth issue relates to the use of ICTs by small food enterprises. One-third of the surveyed enterprises use mobile phones to take payments. This reduces much of the effort involved in receiving cash, finding change, and depositing at banks. One in five vendors used mobile phones to take orders. These strategies should be more widely promoted to reduce the cost of small food businesses. Wet market management companies could offer workshops to train vendors on using mobile devices to take payments and orders.

A sixth issue concerns access to refrigerators and electricity. Although access to electricity is not a problem in Nanjing, the survey found that 16% of the vendors did not have access to electricity on their business premises. Lack of refrigeration was a more significant problem, given that 44% of vendors did not have refrigerators to store food at their premises. The government could certainly provide more support for market management companies to improve these conditions.

While this survey provides unprecedented insights into the small-scale food vending sector in Nanjing, there are still questions that need to be answered. Many demand more qualitative research. For example, how and to what extent does socioeconomic status affect the operation of a food business? How does gender shape business strategies? How do vendors cope with the various identified challenges? What are the impacts of the widespread food safety concerns, in terms of the types of food vendors sell and quality-control measures? What are the factors that prevent these vendors from having strong business aspirations for the future? The data presented in this report provides a platform and rich information for future research.

Endnote

1 All currency conversion is based on the annual average exchange rate in 2017 when the survey was conducted. In 2017, USD1 = CNY6.7518.

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In cities of the Global South, the informal food economy comprises a dense network of markets, suppliers, transporters, mobile traders, hawkers, retailers, and street food vendors making food more accessible and affordable to consumers. The informal food sector represents an "urban laboratory" for examining how inclusive growth strategies can have a positive impact in encouraging entrepreneurship, alleviating poverty, and mitigating food insecurity. This report summarizes the results of a survey in Nanjing, China, of small food vendors including wet market vendors, street vendors, and small food shops. It describes the demographic and socioeconomic features of these retailers, their enterprise structure, business strategies, challenges, employee characteristics, food hazard risks, and aspirations. Among the survey's key findings are that most vendors started operating after 2000, which is related to the broader restructuring of state-owned enterprises, the rise of the private sector, the growth of wet markets, and rapid rural-to-urban migration; most vendors work full time in their food business; and economic survival and providing income for the family are the most important motivations for entering the sector. For the informal food sector to grow and thrive, an enabling policy environment is essential. The survey results in this report add significantly to the evidence base on which supportive and workable policies can be constructed.

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