

VENDING IN THE CITY: UNPROTECTED YET Russei Keo BETTER OFF



Sry Bopharath, Hiev Hokkheang and Benghong Siela Bossba

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CDRI

- 56 Street 315, Tuol Kork
- ☑ PO Box 622, Phnom Penh, Cambodia
- → +855 23 881 384/881 701/881 916/883 603
- @ cdri@cdri.org.kh
- www.cdri.org.kh

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List of abbreviations

ANOVA Analysis of variance

Cambodia Socio-Economic Survey **CSES** ILO International Labour Organisation

KHR Khmer riel

Ministry of Labour and Vocational Training MoLVT

NIS National Institute of Statistics Royal Government of Cambodia **RGC**

United Nations Transitional Authority in Cambodia UNTAC

USD US dollar

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Abstract

Street food vending is a vital part of the urban economy, and the poor, in particular, rely on it to earn their living. We examine their socio-economic dimension, especially their backgrounds and business operations and challenges, as well as the perspectives on life satisfaction among different income earners. Importantly, we looked at the marginalisation and vulnerability of street vendors in Phnom Penh. We mapped 1141 street food vendors in nine districts and we randomly selected 553 respondents in Phnom Penh. The study shows similarities in their background to those in the formal economy. Their perspectives on life are positive despite the business challenges they have faced. The findings show that they are no more marginalised or vulnerable than average workers in the formal sector in Phnom Penh. The study tends to suggest that street vendors are crucial to the informal urban economy, so supporting them while they carry out their business, and providing education regarding microcredit, financial skills, hygiene and sanitation, can benefit the whole city population.

Keywords: informal economy, street vendors, socio-economic, marginality, vulnerability, business challenges, life satisfaction

1. Introduction

The informal economy has contributed hugely to economic growth despite the fact that some of its informal characteristics pose challenges for development, specifically urban development. One among many parts of the informal economy is street vending with a share in employment and economic growth that cannot be ignored (Roever and Skinner 2016). On top of being a part of the informal economy that contributes to economic growth and employment opportunities, street vendors provide a range of products and services from fresh vegetables/ingredients, to cooked foods, to haircuts. Consumers, especially the poor, may benefit from cheaper prices and the closer locations of street vendors when purchasing their products and services (Bhowmik 2005; Roever and Skinner 2016).

However, the fact that street vendors operate their businesses from non-permanent built structures is also a challenge both to the street vendors themselves and to urban development planners. Taking a look at Cambodia, street vending is illegal according to Articles 12 and 13 of the Sub-Decree on Public Order. But they still have to pay an amount that is clearly specified in the Business Operation Tax Book, and there are other non-specified fees they have to pay as well (Kusakabe 2006b). Although the government has now banned tax collection, street vendors must still pay taxes to local officials (Mom 2019). In late 2017, Phnom Penh City Hall recalled the enforcement of the ban on street vendors, who occupy public streets and parks. While such enforcement was in place, alternatives for street vendors were not available (Soth 2017). Attention to street vendors is limited to, among other things, health, public order and congestion issues, directly and indirectly caused by them, while policy and the development masterplan fall short in providing policies and programs to take care of them. As Kusakabe (2006b) commented, "[...] street vendors remain invisible in policy actions". Even the latest Rectangular Strategy Phase IV does not mention street vendors, although there are some emphases on the informal sector which is viewed as a challenge because of the large share of the labour force it accounts for (RGC 2018, p.47-48). Studies on Cambodian street vendors are also scarce and very few of them are in-depth, relying on data obtained from the vendors themselves, while other are basically reviews of previous studies. Notwithstanding, those studies unveil many aspects of Cambodian street vendors.

Realising the rising importance of street vendors and the challenges they face, this paper contributes to the existing but scant knowledge of this sector in Cambodia. This paper looks at this crucial part of the informal urban sector, based on the comprehensive data from the survey. We also take gender into consideration. We used quantitative data from the field survey with street vendors in nine districts in Phnom Penh using tablets. We synthesised the recent literature on the background of street vendors in other countries, then we built our research objectives and elaborated on the theory relating to the informal economy. Our discussions focus on the socio-economic characteristics of street vendors, the vending business operation, and the life perspectives among different income earners on their earnings, their rationalisation for being street vendors, their retirement plans and their household expenditure. We discuss cross-cutting issues on gender. Then we discuss the literature and the theory and link them to our findings. We conclude with a summary of these discussions and draw out the associated policy implications.

2. Background and literature review

2.1 Informal economy

The informal economy is defined in different ways. Basically, it includes all the economic activities that are not covered by formal arrangements and not protected by the state. The concept refers to self-employed and unregistered businesses. In addition, it also covers wage employment that is not protected. Thus, any employment that is outside of the legislation and not included in the tax regime (Studies Development Centre 2019) is counted as part of the informal sector. According to the ILO (2014), there are three components to informal employment—informal employment in the informal sector, informal employment in the formal sector, and informal employment in homes, such as domestic workers, home-based workers, street vendors, and waste pickers (WIEGO n.d.). In this paper we focus on informal employment in the informal sector which is not registered in the tax registration system. Street vending is regarded as one of the occupations in the informal economy.

Over the years, four dominant schools of thought have emerged regarding the informal economy—dualists, structuralists, legalists, and voluntarists. The dualist school of thought focuses on traditional and survival activities, and it was initiated by the ILO World Employment Mission in Kenya in 1972. The autonomous activities, which provide income for the poor and a safety net in times of crisis, are not linked to the rest of the economy. The structuralist school of thought was introduced by Portes, Castells and Benton in 1989 who argued that the informal economy is a segment subordinated to the formal economy and that it helps the formal economy to reduce labour costs and to sustain economic growth. The third school of thought - legalist - was introduced in 1989 by Hernando De Soto. Legalists perceive informality as a rational response to avoid the unnecessary burdens of cost, time and effort, which are regulated and bureaucratised by the state (Portes, Castells and Benton 1989; Bonnet and Venkatesh 2016). The fourth school of thought is voluntarist. This focuses on workers who want to avoid taxation, commercial regulations, electricity and rental fees, and the other costs of operating formally (Perry, Maloney and Arias 2007). It is a choice to participate in this informality because entrepreneurs can take more benefits than they could in formality (Chen 2012).

In addition to the brief mention about the informal economy above, further discussion on its general characteristics is needed. In a detailed definition, provided by the ILO, six characteristics of the informal economy are identified: (1) they are operating units that produce goods and services and are very small in scale; (2) the units comprise independent and self-employed producers who are often family members or a few hired workers; (3) little capital or none is used to support the unit's operation; (4) there is utilisation of a low level of technology and skill; (5) operation is at a low level of productivity; and (6) there is the provision of low and irregular income and highly unstable employment for its workers (cited in EIC 2006). Street vendors are a part of this economy. While studies covering the informal economy in Cambodia are scarce, in other countries, especially in Sub-Saharan Africa and in India, they are relatively abundant. In Roever and Skinner (2016), street vending contributes a "substantial share of urban employment". Street vendors generate demand for other formal and informal workers, contribute to local and government revenue through taxes, fees and levies, and offer affordable goods and services to the poor (Bhowmik and Saha 2012; Roever 2014; Roever and Skinner 2016).

For ease of understanding, we will differentiate between micro vendors, market vendors and street vendors. While the term "micro vendors" covers all types of vendors, the "market vendors" we refer to are those vendors who operate inside or outside of markets, but in the general vicinity. Street vendors, on the other hand, will be exclusively those who sell in public spaces other than markets.

2.2 Street vendors

This subsection presents the socio-economic characteristic of street vendors in other countries, especially in the global south, as well as in Cambodia. Such characteristics might vary from country to country. In terms of gender representation in this sector, studies produce varying evidence. A study conducted in 2006 in Bangkok, Thailand, revealed that the percentage of male and female street food mobile vendors was almost on par, although, in the case of fixed vendors, the percentage of males was slightly higher than that of females (Nirathron 2006). A similar finding was reported in Mongolia, as both genders, without one dominating the other, were operating as vendors (Kusakabe 2006b). On the other hand, a study of 10 cities in India reported a higher representation of men (Bhowmik and Saha 2012). Contrastingly, Cambodia has witnessed female domination in this sector (Kusakabe 2006b). Also, in the studies of Martínez, Short and Estrada (2017) and Roever (2014), women's share of this labour market is significant.

The age of street vendors is another important characteristic for analysis, as it is one of the factors determining productivity. A study by Bhowmik and Saha (2012) has shown that most of the vendors in India are aged between 22 and 55 years, indicating a productive age group. This corresponds to another study conducted in 2016 in which 41.9 percent of the respondents were aged between 21 and 30 years (McKay et al. 2016). Similarly, in Zimbabwe, the over 18-year-old and less than 20-year-old age group was the modal age of respondents (Mazhambe 2017). Meanwhile, the street vendors in Indonesia and Colombia were considerably older, with a mean of 40 years and an average of 41 years, respectively (Martínez, Short and Estrada 2017; Brata 2010). In the case of Thailand and Cambodia, the street vendors are in a similar age range as most were aged between 30 and 50 years (Kusakabe 2006a and Nirathron 2006).

With regard to family structure, there seems to be a common pattern in which most of the street vendors have more than one child. In the study of McKay et al. (2016), 90.3 percent of respondents were married, and 71.1 percent had two or more dependent children. This outstandingly high percentage is probably justified by the fact that most of the respondents are from either nuclear or joint families (McKay et al. 2016). Whereas 52 percent of respondents in the study conducted in Colombia held the civil status of marriage and cohabitation, the data also revealed that the number of children, on average, belonging to each was three (Martínez, Short and Estrada 2017). Although the study in Zimbabwe did not explicitly touch on this subject, it did report that 44.6 percent of the respondents had three to five dependents on their income (Mazhambe 2017). This is also similar to the case in Cambodia, where the micro-vendors usually have an average of four children and two dependents to one income earner in the family (Agnello and Moller 2006). Banwell (2001) found that around 90 percent of street vendors contributed half or more to the household income. Fifty-two percent of his respondents, and 26.9 percent of those in the study by Kusakabe et al. (2001), were the sole income earners in their families.

Another characteristic that deserves attention is educational level. Across regions, such as in Colombia, Ghana, India, South Africa, Peru and Kenya, the educational level of street vendors was found to be still low compared with that of other working populations (Martínez, Short and Estrada 2017; Roever 2014). In Cambodia, street vendors are also in this bracket. In Banwell (2001), only 12.3 percent of the Cambodian respondents had completed primary education or higher, while 34.8 percent had never gone to school. According to the data from the census of 2019, 76.7 percent of women in Phnom Penh had completed primary education or higher; hence, street vendors in Phnom Penh have a lower level of education than "the average of Phnom Penh". Agnello and Moller (2006) further confirmed this characteristic, by finding that 75 percent of their respondents had attended school, although those who had completed primary school accounted for only 18 percent.

In this study, educational attainment is particularly important as, in many of the papers reviewed in this study, it is linked with changes in the amount of income. Wage income has been used as a function of schooling and experience to estimate returns on investment in education. This means that a person's level of education and their work experience affect their labour market earnings. According to the review by Patrinos and Psacharopoulos (2018), the return in respect of education is highest in low-income and middle-income countries. Primary education also has a higher rate of return compared with other levels of education. In the case of Cambodia, with an average of 7.4 years of schooling and 1.7 percent of students undertaking tertiary education, the average return on education was 38.3 percent, much higher than the figure in neighbouring countries (Patrinos, Ridao-Cano and Sakellariou 2006). This study used data from the Cambodia Socio-Economic Survey 2003 to 2005 focusing on wage earners aged 25 to 65 years and employed in the formal sector. By further looking at the differences between the top and bottom quintiles, the returns were higher for Cambodians in the bottom quintile, which suggested that earnings would be equalised for workers in formal and informal sectors (Patrinos, Ridao-Cano and Sakellariou 2006). A recent study of returns on investment in education, based on human capital theory, shows a positive correlation between education and years of schooling over decades and that women continuously benefit from average rates of return on schooling (Psacharopoulos and Patrinos 2018). In addition, a study by Lall and Sakellariou (2010) found the return on education is higher for women. Although education may be a factor contributing to higher income, some studies also take into account the endogeneity and measurement error problems. As Wang (2013) suggests, a third variable may cause a positive relationship between education and income. This third variable is ability, meaning that a more capable individual may acquire more education and earn more in the labour market (Wang 2013).

The income of street vendors is crucial for their survival and that of their families. In Martinez and Rivera-Acevedo (2018), street vendors in Cali, Colombia, were found to have a higher income compared with average citizens. But they still found it hard to escape poverty and to improve their living conditions because of their lack of access to formal banking systems and their reliance on payday loans. In addition, women were considered to be in a "low economic class" compared with the general population. There are around six thousand unregistered vending businesses in Cambodia according to IDEA (Independent Democracy of Informal Economy Association - Oxfam 2019). The average daily profit in 2006 was KHR6,000 (Agnello and Moller 2006), which is equivalent to around KHR12,000 at the 2017 price level¹. That average daily profit could not really improve the living standards of street vendors who live at subsistence level. They have to support an average of two other family members with that profit which, after sharing, would be less than the one US dollar per day poverty line (Agnello and Moller 2006). The most recent study in Cambodia by Hirohata and Fukuyo (2016) discovered that the average annual profit rate per street business establishment was

¹ The calculation is based on the Consumer Price Index in 2006=71.9 and 2017=124.6; base year 2010=100 (World Bank 2021).

USD1,881. The average annual profit per person in street businesses was USD1,251, which is found to be higher than it is in other establishments. Women are also revealed to have a large share and significant roles owing to their 76 percent representation in this occupation (Hirohata and Fukuyo 2016).

Despite earning very little from vending activities, working in this sector requires a lot of hard work. Around 44 percent of mobile vendors in Thailand are considered to be family-operated (Nirathron 2006) and 51.52 percent of respondents in the Zimbabwean study of Mazhambe (2017) also reported that other household members had been engaged in their street vending activities. In contrast, 86 percent of vendors in Cali, Colombia, were the sole owners of the unit and the profit it generated (Martínez, Short and Estrada 2017). Yet, regardless of whether it was an individual or family-operated vending operation, it was usually the case that they had to work long hours. A majority of respondents from the studies in India, Colombia and Cambodia all claimed that they worked at least eight, and up to 12, hours per day, without many days off or even none at all (Bhowmik and Saha 2012; McKay et al. 2016; Martínez, Short and Estrada 2017; Agnello and Moller 2006). Furthermore, most of them had also operated their businesses for more than five years - reported by 45.36 percent of respondents in Zimbabwe, 69 percent in Colombia, and 26 percent in Thailand (Mazhambe 2017; Martínez, Short and Estrada 2017; Nirathron 2006). Nevertheless, this literature review uncovered the interesting fact that a high percentage of these street vendors were satisfied with their occupation (Nirathron 2006; Martínez, Short and Estrada 2017). Independence or autonomy in operating their businesses was also cited as one of the reasons for this satisfaction.

The definition of street vending is given by various authors, for instance, Bhowmik (2005), Hirohata and Fukuyo (2016), and Kaushik and Rahman (2015). They suggest that street vendors are those who sell products or provide services from a non-permanent built-up structure which may be a temporary static structure—occupying space on the pavements or other public/private spaces—or a mobile stall—selling from push carts or in baskets while moving from place to place. In this paper, we focus on street vendors who sell food and operate their businesses along the street without a proper stall or a permanent structure. We limit the study to focus only on those selling from a proper mobile or static but movable stall at a place for at least four hours and operating both day- and night-time shifts.

2.3 Other types of vending business

Figure 1 presents a picture of employment status in Cambodia. As reported in 2019, paid employees take up 47.1 percent of the total, while own account workers are at 37.8 percent, and unpaid family workers at 14.6 percent (NIS 2020). These numbers show that self-employment is quite high compared with employment in the formal sector.

The occupation of vending is not new. It has been growing since the fall of the Khmer Rouge Regime when public markets re-emerged in Phnom Penh. The space in front of the railway station soon became a large market for barter trade, along with other old public marketplaces (Kusakabe et al. 2001). After the designation of the public markets, vendors who had come to Phnom Penh and occupied a stall earlier "could get the rights for the stalls they had been occupying" (Kusakabe 1999 as cited in Kusakabe et al. 2001).

Interestingly, Kusakabe (2001, 2006a) and Pou (2005) found that economic growth and crisis were the times when the number of vendors increased: micro-vending was an option among limited employment opportunities during times of both economic growth and crisis. The period after the Khmer Rouge Regime fell was the first peak. The second peak was the economic growth period during the deployment of the United Nations Transitional Authority in Cambodia (UNTAC) for the first general election. The third peak was during the crisis after 1997, a time that included the Asian Financial Crisis, the political crisis, and natural disasters.

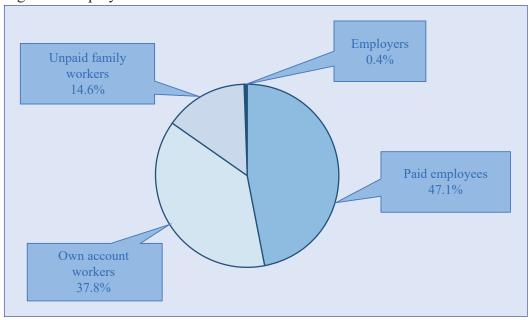


Figure 1: Employment status of workers in Cambodia

Source: (Cambodia Socio-Economic Survey 2019/20)

Micro-vendors were many among those who migrated to Phnom Penh in the 1990s. They could not occupy a stall in the marketplace, so they sold their products in free spaces inside or outside of the markets. Many, if not most, of the studies on micro-vendors in Phnom Penh took place in the early 2000s with a focus on market-vendors and other micro-vendors around the market (Agnello and Moller 2006; Banwell 2001; Kusakabe 2001; Kusakabe et al. 2001; Pou 2005). Although some studies, such as that of Kusakabe (2006a), acknowledged the existence of street vendors on the streets outside of the marketplaces in Phnom Penh, those vendors have not yet been fully studied.

Table A1 in the Appendix presents a summary of the characteristics of market vendors studied in the early 2000s. Most of them were women, aged around 40 years. They sold a wide range of products. Banwell (2001) found that 83 percent of respondents were selling vegetables or fruit. The study of Agnello and Moller (2006) revealed that 44 percent were selling vegetables. That same study also suggested that those market vendors earned approximately USD1.5 per day in 2003, which was equivalent to USD3.12 in 2018 based on the World Bank (2018) figures.

In addition to the three studies by Agnello and Moller (2004), Kusakabe et al. (2001), and Banwell (2001), there are other pieces of literature on micro-vendors in Cambodia. These include studies by Rao (1996), Kusakabe (2001 and 2006a, b), Pou (2005), and Bhowmik (2005). The three studies by Bhowmik (2005) and Kusakabe (2006a, b) were reviews based on previous studies. Despite the research conducted in the last decade, the topic of street vendors has been only superficially explored in Cambodia. The latest study was completed by Sekhania, Mohan, and Medipally in 2019, but their focus was, again, on market vendors. Therefore, the literature on street vendors is still limited. This paper is significant, therefore, in filling this void.

3. Data and method

Our study was conducted in Phnom Penh, a centre of economic activity. NIS (2019) estimated that 2.1 million people migrated to the city during the last decade, and Phnom Penh city is the place where the majority of street vendors are to be found. There are no specific numbers recorded in terms of formal registration. In our study, we included nine districts out of the city's 12: the other three districts were not included because very few street vendors operate there. We targeted vendors in areas located along main streets next to schools, hospitals, office buildings, and recreation sites. They mainly sell food and drink. The interview was conducted when they were at their stalls and we explained the purpose of our study, ensuring that the answers were confidential. The vendors could also stop whenever they wished, and their participation was voluntary. Among the interviewees, nobody rejected our request to talk to them, and the duration of the interview was between one to one-and-a-half hours including customer interruptions. Most of the interviewees answered most of the questions. We used Kobo toolbox to collect data.

The data collection was conducted by 10 enumerators over a period of 12 days. Prior to the survey fieldwork, all enumerators were trained for two days with the questionnaire and other technical issues since we used tablets to collect the data. Then each enumerator had the chance to pilot their questionnaire before the actual fieldwork. Wordings in Khmer were simplified so that the questions were easily understood, and any technical issues were addressed at this stage. To guarantee quality, all enumerators needed to have a good understanding of the questionnaire. There were three days of training and piloting right before the fieldwork.

For the first stage mapping, the purposive technique was used for stratified sampling. Each of the street vendors located on the sites was given a sticker by enumerators. The stickers were placed in front of their carts with unique numbers to be used for random sample selection for the second stage. We asked them to keep the stickers until our next visit and they agreed. However, some stickers did not stay put because of the nature of the carts which were under sun and rain. Fortunately, we were able to reach them by using their phone numbers. The information we collected during the first stage included location, information about the owner, the type of stall, and their income. We also took pictures of their stall. Pictures and geographic coordinates (latitudes and longitudes) were also taken for the next visit if they were selected for this. Although they were moving from one place to another, we managed to collect their site information, and phone numbers for the next visit. Each street vendor who was given a sticker had the chance of an interview in the next round. The total number of carts that received stickers was 1141 (Table A2 in the Appendix shows the number of street vendors in each selected district). The second stage involved random sample selection, based on the sticker numbers the street vendors were given in stage one: we randomly selected 553 samples from each of the nine strata. Because street vendors are regularly moving around the sites, and the designated contact could not always be reached, some of them were replaced in our sample – a few by their relatives. The sample size in the second stage was determined by the margin of error (confidence interval) of ±5 percent and confidence interval of 3 and is based on formula of the sample size as below.

Sample size =
$$\frac{\frac{z^2 x P(1-P)}{e^2}}{1 + \left(\frac{z^2 x P(1-P)}{e^2 N}\right)}$$

Where: N=population size; e=margin of error; z= z-score

The questionnaire at the first stage included information on a coordination plane, type of stall or cart, phone numbers, gender, marital status, education, type of goods on sale, people involved in the business, their income and the reason for being street food vendors, as well as pictures of the stall or cart for reference in the following round. The questionnaire for the second phase aimed to elicit more information on socio-economic backgrounds, family composition, how the business operated, the respondents' satisfaction with their lives, family spending, and their readiness for retirement.

This study explored the livelihood conditions of street vendors, and the links between their socio-economic backgrounds and their life satisfaction, and their business operations. We used descriptive statistics, t-test, and one-way ANOVA.

4. Results and discussions

4.1 Socio-economic status

Table 1 shows the socio-economic background of street vendors in Phnom Penh. Their median age was 36 years, and 87 percent of them were between the ages of 25 and 54. It also reinforced the previous study showing that female street vendors accounted for a major proportion - 62 percent - of street vendors in Phnom Penh (Banwell 2001), showing the importance of women in this field. There was no concentration of different age groups or gender in any specific locations – for example, there was no significant proportion of younger street vendors located in any particular area. This contrasts with the study by Maneepong and Walsh (2012) showing that the younger generation tended to target high-income people in Bangkok, while low-cost business was the domain of older street vendors. Around half of the vendors were household heads. Eighty-one percent of them were married, 27 percent had one child, 39 percent had two children, and 20 percent three children. Around two-thirds of them were sending their children to school. Their backgrounds were quite similar to those identified in previous studies of informal street vendors and the working population in the city.

The share of street vendors who had received education at primary school was also similar to that of previous studies. Approximately 35 percent had not completed primary education and 20 percent of them had not completed education at lower-secondary level. Only 7.4 percent had completed upper-secondary education; however, there was a new phenomenon of younger street vendors from middle-class families who had achieved a higher level of education than the previous generation. This may be because of the opportunity street vending presented for profit. For instance, 3.6 percent of the street vendors had undergraduate degrees including bachelor and vocational training degrees. Almost all were full-time street vendors and did not choose to return to work related to the subjects of their education. Three of the vendors who were interviewed were still pursuing their education and they were aged between 20 and 24 years.

Only one-fifth of them were originally from the capital city of Phnom Penh, and many had migrated from other provinces. Half had been street food vendors for approximately three years, while the longest-serving had clocked up more than 20 years. Thus, there are always new entrants to this business market. For most of the respondents (95 percent), street vending was their sole source of income, while only 5 percent had a second job; however, only 67 percent said that their jobs as street vendors provided sufficient income for their family.

Table 1: Socio-economic information about the street vendors

	Details	N=533	Frequency (%)
Age of the street vendors	15-24	46	8%
	25-54	482	87%
	55-64	21	4%
	Above 50 years	4	1%
Gender	Female	344	62%
	Male	209	38%
Marital status	Married	448	81%
	Divorce	25	5%
	Single	63	11%
	Widowed	17	3%
Education attainment	Illiterate	61	11%
	Up to primary	221	40%
	Primary to secondary	253	46%
	Graduate	18	4%
Place of origins	Phnom Penh	110	20%
_	Svay Rieng	26	5%
	Takeo	63	11%
	Kampong Cham	64	12%
	Kandal	87	16%
	Prey Veng	93	17%
	Other provinces	110	20%
Number of children*	No children	3	1%
	1	121	27%
	2	172	39%
	3	90	20%
	4+	58	13%
Household head	Yes	297	54%
	No	256	46%
Duration of being a street vendor	Nil	16	3%
	Up to 3 years	293	53%
	Up to 6 years	103	19%
	Up to 9 years	37	7%
	Up to 20 years	93	17%
	Above 20 years	11	2%
Number of households contributing to the	Nil	89	16%
family economy	1	319	58%
	2	74	13%
	3	41	7%
	3+	30	5%

Note: *Sample size 444 due to missing answers. (Percentages may not add up to 100 due to rounding.)

4.2 Business operation and challenges

Street vendors spend an average of 6.8 days a week working, which is longer than that of workers in formal employment (Table 2). Their average income ranges from USD10 per day to a significantly higher USD225. Table 4 shows the groups of street food vendors according to income. A majority of them earn between USD10 and USD20. However, some barely survive, and some earn a lot from their businesses. Street vendors whose businesses sell roast chicken and duck, fresh fruit, noodles, meatballs, pickled fruit (M'chu), beverages, insects, and coffee earn the higher incomes (Table 3). This is an interesting finding, which can be explained by two reasons. First, these businesses usually depend on a large number of sales and, second, our interviewees were located in areas of high commercial opportunities, such as schools, public hospitals and prominent boulevards. This result shows a wide variation of income; however, it might mirror results in the formal sector.

Table 2: Business operations

	Details	N=533	Number/Frequency (%)
Days worked per week (days)			6.8
Number of people they work with			0.7
Average income (USD)* per day			22.7
Been a street vendors (years)			5.1
Been a street vendor at the interview site (year	s)		4.3
Payment for raw materials	On credit	78	14%
	Immediate	463	84%
	Others	12	2%
Faced challenges	Yes	430	78%
	No	122	22%
Prospect of changing business in next 3 years	Yes	73	13%
	No	344	63%
	Do not know	136	24%

Note: *Exchange rate USD1=KHR4,000

Table 3: Income by type of business

Types of sale	Average daily sale* Types of sale		Average daily sale*
Khmer cakes	17.5	Cookies	22.5
Sandwiches, bread and pizza	18.5	Noodles	22.6
Juice	19.2	Soup	25.5
Beverages	19.4	Desserts	26.1
Rice	20.0	Meatballs	28.9
Coffee	20.3	Chicken and duck	29.4
Insects and clams	21.2	Fresh fruits	31.4
Sliced fruits	21.7	Others	34.8

*USD

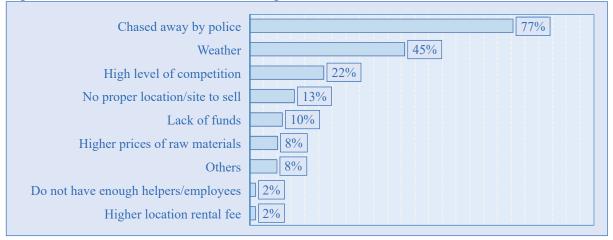
Their cash flow is generally stressed, and they need to pay for raw materials for their business immediately (84 percent): only 14 percent can pay on credit. Despite facing challenges in their businesses (78 percent), only 13 percent would like to change in the next three years, the majority of these wishing to change to selling groceries and noodles, which can earn more income than their current businesses. On average, the respondents had been street vendors for 5.1 years, and at the sites where they were interviewed for 4.3 years. They also earned a daily average of USD22.7.

Table 4: Groups of income per day

Income in USD	Freq.	Percent	Income in USD	Freq.	Percent
00.0-10.0	115	21.9	30.1-40.0	39	7.4
10.1-20.0	211	40.2	40.1-50.0	28	5.3
20.1-30.0	105	20.0	50.1-225	27	5.1

Figure 2 shows the main challenges street vendors face including being chased by police (77 percent), inclement weather (45 percent), and a high level of competition (22 percent). The rental is free for most vendors, and only 2 percent reported they need to pay a fee. While street vendors in Bangkok need to pay for their pitches monthly - between USD9 and USD30 (Maneepong and Walsh 2012) - and are given some protection by local officers and pay a monthly cleaning fee, that is not the case for Phnom Penh street vendors. Since there is no formal fee charge, street vendors are not protected by local officers, but no cases of violence were reported. Weather is the second challenge, followed by a high level of competition. Only 10 percent reported that they lacked funds for their business, although our literature review showed this to be the major challenge for street vendors who wished to expand their businesses in Colombia (Martinez and Rivera-Acevedo 2018).

Figure 2: Street vendors' business challenges



4.3 Income

4.3.1 Income and gender

We conducted a t-test for income and gender, and the result explains the normal distribution of incomes across males and females. The earnings of males are higher than those of females by USD5.57; and the statistical power is significant - with a t-value of 2.71 and a 95 percent confidence interval. Thus, the earnings between males and females can be confirmed as different by an average of USD5.57 per day.

Table 5: Differences in earnings between females and males in USD per day

Income	Female	Male	t-value
	20.60	26.17	2.71

4.3.2 Relationship between education and income

Figure 3 suggests that there is no significant relationship between education and higher income. The middle line in the boxplots indicates the median of income in each category of education. Street vendors with an undergraduate education earn more than any other groups by around USD35.6 a day, followed by those with secondary-level education at around USD28.8. To discover the statistical power of the correlation between income and education, we conducted a one-way ANOVA test.

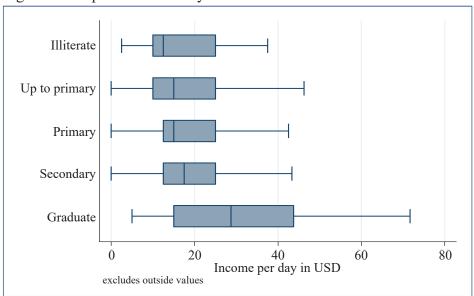


Figure 3: Boxplot of income by education levels

Table 6 shows the one-way ANOVA test of education and average income per day. In this context, our hypothesis is that there is a positive relationship between their education and income. For instance, the study by Patrinos, Ridao-Cano and Sakellariou (2006) found a positive relationship between years of schooling and income among white-collar workers in Cambodia. This one-way ANOVA test compares the effect of education on different income earner groups. An analysis of variance shows that the effect of education on income is significant, F (4, 514) =2.5, p=.04. Those who had received more education could earn more: the one-way ANOVA test shows that the statistical power of the result is significant. The results suggest that high levels of education do have an effect on earnings. This finding supports the arguments of Martínez, Short and Estrada (2017), who found that, as respondents' education level rose, so, too, did their income. In order to ascertain which level of education has the greatest effect on income earning, we performed a pairwise comparison of means with equal variances - a Tukey post-hoc test - to determine which groups differed from the others. The results revealed that the level of income was higher to a statistically significant degree in those who had undertaken higher education – graduate vs. up to primary (14.6±5.4, p=0.05). However, there was no statistically significant difference among other groups (Table 7).

Table 6: One-way ANOVA test on education and average income per day

Average income	Mean	s.d.	Freq
Illiterate	20.0	19.7	63
Up to primary	21.1	20.6	211
Primary	22.8	24.0	148
Secondary	26.2	26.7	77
Graduate	35.6	30.7	20

Source	Sum of squares	Df	Mean square	F	Prob > F
Between groups	5328.0	4.0	1329.5	2.5	0.04
Within groups	269949.7	514.0	525.2		
Total	275267.7	518.0	531.4		

Bartlett's test for equal variances: chi2(9) = 215.4 Prob>chi2 = 0.004

Table 7: Pairwise comparisons result from the Tukey post-hoc test

Income	Tukey				Tukey	
meome	Contrast	Std. Err.	t-value	P>t	[95% Con	f. Interval]
Up to primary vs illiterate	1.04	3.29	0.32	1.00	-7.97	10.05
Primary vs up to primary	1.78	2.46	0.72	0.95	-4.95	8.50
Primary vs illiterate	2.82	3.45	0.82	0.93	-6.62	12.26
Secondary vs primary	3.39	3.22	1.05	0.83	-5.42	12.21
Secondary vs up to primary	5.17	3.05	1.69	0.44	-3.18	13.52
Secondary vs illiterate	6.21	3.89	1.60	0.50	-4.45	16.87
Graduate vs secondary	9.39	5.75	1.63	0.48	-6.36	25.13
Graduate vs primary	12.78	5.46	2.34	0.13	-2.17	27.73
Graduate vs up to primary	14.56	5.36	2.72	0.05	-0.12	29.24
Graduate vs illiterate	15.60	5.88	2.65	0.06	-0.50	31.70

4.4 Life satisfaction

4.4.1 Optimism about life

Around 88 percent of street food vendors reported that they were satisfied with their lives, while only around 11 percent felt the opposite (Figure 4). We examined their perceptions about income, and the challenges they faced in their businesses. A majority did not want to change their business, although they faced challenges (78 percent), and 67 percent reported that their income was sufficient for their families. We cross-checked their income and levels of satisfaction and found similar results among the different income earners. Around 88 percent of vendors who were earning a high income, or were in the fifth quintile, stated that they were satisfied with their life. Similarly, around 82 percent in the first quintile, who earned the least, were also satisfied with their life. A breakdown of income into five quintiles (Table 8), indicates that there is no significant difference in life satisfaction among the street vendors who were surveyed. Since our data is normally distributed, and to enhance our analysis of crosstabulation, we have a chi-square statistic (p0.8) that is not statistically significant by classifying five income quintiles. The value of gamma shows that there is no positive correlation between being high- or low-income earners and their perspectives of life satisfaction.

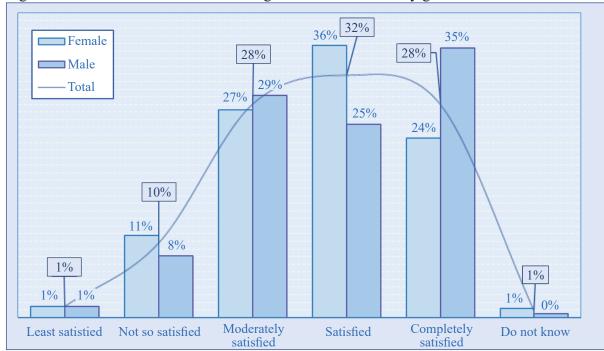


Figure 4: Level of life satisfaction among street food vendors by gender

Table 8: Life satisfaction by income quintiles

Income	1 Quintile	2 Quintile	3 Quintile	4 Quintile	5 Quintile	Total
Least satisfied	2	3	1	0	2	8
	1.7%	1.5%	2.2%	0.0%	2.0%	1.5%
Not so satisfied	12	18	7	6	11	54
	10.3%	9.2%	15.6%	6.1%	11.2%	9.8%
Moderately satisfied	34	57	7	33	24	155
	29.3%	29.2%	15.6%	33.3%	24.5%	28.0%
Satisfied	38	57	13	33	35	176
	32.8%	29.2%	28.9%	33.3%	35.7%	31.8%
Completely satisfied	28	59	17	26	25	155
	24.1%	30.3%	37.8%	26.3%	25.5%	28.0%
Do not know	2	1	0	1	1	5
	1.7%	0.5%	0.0%	1.0%	1.0%	0.9%
Total					98	
	116	195	45	99	553	
	100	100	100	100	100	100

Pearson chi2(20) = 14.8357 Pr = 0.786 gamma = 0.0166 ASE = 0.047

4.4.2 Rationalisation for being street vendors

Figure 5 shows street vendors who chose this particular occupation did so mainly due to their wish for "independence" (43 percent) followed by "not knowing what else to do" (35 percent). Around 30 percent could not find a job in the formal sector. Improving their income and believing that street vending would earn them more money than working for others are the fourth and fifth reasons, respectively. This supports our findings in relation to their average income of USD560 per month. It seems that only a few people became street vendors to seek shorter working hours (2 percent) or as a secondary source of income (1 percent). Female and male preferences towards being street vendors are similar. As Table 2 shows, the average number of days they work per week is 6.8, meaning that most street vendors spend most of their time on this job and it is likely to be their main source of income.

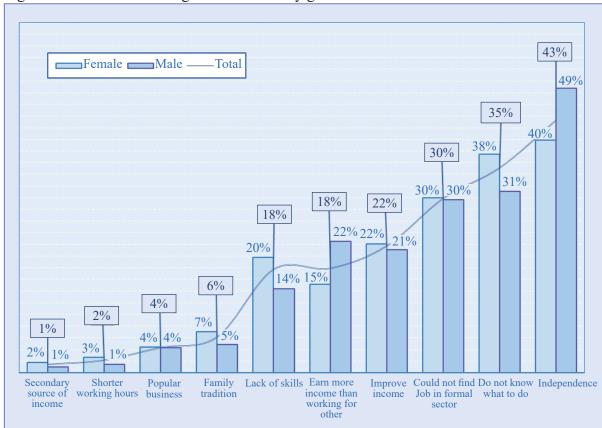


Figure 5: Rationale for being street vendors by gender

Figure 6 shows the criteria that are necessary for them to feel fulfilled with their life. Approximately 64 percent think money is the first priority, good health is ranked second followed by owning a house. The fourth and fifth most selected criteria represented a tie between having a job and achieving better family relationships (both at 26 percent). Health again stands out because 14 percent and 13 percent of street vendors consider their family's health and their physical health, respectively, are crucial for them to be satisfied with their life. However, not many street vendors believe that studying would grant them life satisfaction since only 1 percent selected study as a factor. Interestingly, they also do not want to have free time; almost none of the street vendors think free time is a criterion for a life full of satisfaction. In a comparison between female and male respondents' requirements for life satisfaction, females chose owning a house 8 percentage points more than their male counterparts did, and having good health 9 percentage points more: males cited money as more like to give satisfaction to their lives than females did (by 4 percentage points).

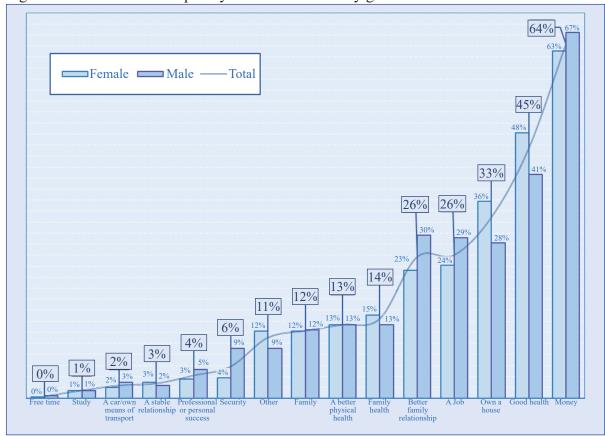


Figure 6: Criteria to be completely satisfied with life by gender

Figure 7 shows retirement plans. Street vendors do not have the same retirement plans and healthcare as employees in the formal sector, thus we asked about their individual plans. From the survey results, around 41 percent of street food vendors have no plan for their retirement, while 30 percent do save money for future use. One-fifth of them expect financial support from children when they get old. They do not have plans to save through life insurance for their retirement. This may be because of the limited availability of life insurance companies in the city. Comparing female and male plans for their retirement, males chose to carry out some preparation and were more ready for retirement than females: 33 percent of males were saving money for the future, compared with only 28 percent of females. In addition, male respondents had less expectation of support from their children than their female counterparts did.

Figure 8 shows the main household expenditure among street vendors according to multiple categories. The major priorities include food, water and electricity, house rental fees, and children's education. Health expenditure is the fifth. The results show that the street vendors are mainly spending their income on basic consumption: around 96 percent on food, 76 percent on water and electricity, 63 percent on house rental fees, and 53 percent on the education of their children. They spend 5 percent or less on items such as cosmetics or skin care, entertainment and other social activities, and their own education. The educational background of those who spend some money on their own education is not particular concentrated among the highly educated street vendors.

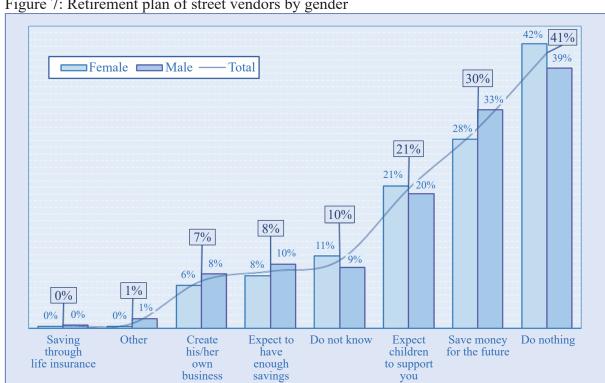
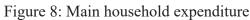
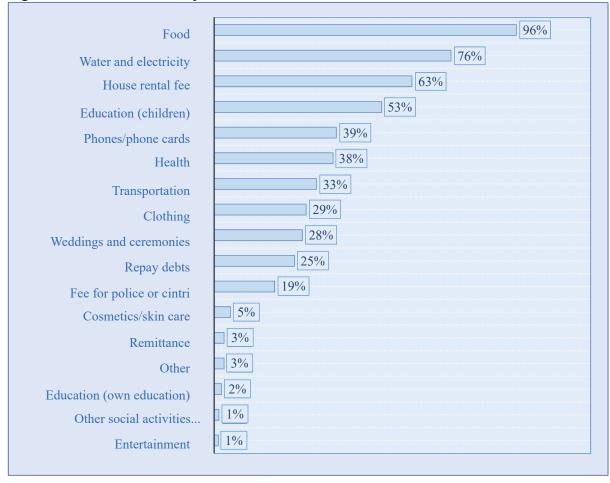


Figure 7: Retirement plan of street vendors by gender





5. Conclusion and policy implications

The results from this study give a more detailed picture of street food vendors in major areas of Phnom Penh. It examines their socio-economic background, business operation, and the optimism they feel about life. This has led to four main findings:

First, street food vendors are similar to the average population and the view of them as marginalised and vulnerable is no longer valid (Bromley 1978). Their average wages are even better than those of some formal workers. For instance, Prakas No. 389/19 issued by the Ministry of Labour and Vocational Training on the Determination of the Minimum Wage for Workers/Employees in the Textile, Garment and Footwear Industries for 2020, cited a minimum monthly wage of USD190 for workers in garment factories. Their age and marital status are also similar to the findings of previous studies on street vending businesses and the formal working population. The majority of them have achieved only a low level of education and they work long hours. However, there is a small, but new, generation of street vendors entering the business who are well educated and still pursuing their studies. A majority of the street vendors who were surveyed tend to be satisfied with their life because it means that they are independent. So, it has become their primary job.

Second, street vending provides an important income for the poor. As mentioned above, their average monthly income is more than the minimum wage of workers in the formal sector - for instance, it is higher than that of the garment and food services sectors in Phnom Penh. There are some specific types of sales, such as roast chicken and duck, fresh fruit, noodles, meatballs, pickled fruit (M'chu), beverages and insects, that are popular and can earn more income than others. Only a small proportion of street vendors wanted to change their businesses to pursue one where earnings were better. The earnings of the various street vendors show similarities and reveal no statistical difference based on their educational background.

Third, a majority of the vendors who were surveyed are satisfied with their lives. Regarding their business challenges, many of them do not want to change their business. Results from our analysis show there is no link between income and life satisfaction from statistical analyses. In addition, there is no positive correlation between high income earning and life satisfaction perspectives. These results show life satisfaction may not depend on income alone.

Fourth, our empirical results confirm that the voluntarist and dualist schools of thought are common in relation to street vending in Phnom Penh. Street food vendors perceive street vending as a business that is easy to operate, in which they can avoid tax, commercial regulations, electricity charges, and especially rental fees. In addition, it is independent, provides income for the poor, and is also an important part of the informal urban economy. The legalist and structuralist schools of thought are not relevant to the case in Phnom Penh. The state does not impose regulations on informality, so this does not apply to the case of street vendors in Phnom Penh (legalists); and there is not much evidence relating to the structuralists, where the informal sector is subordinate and helps the formal economy: further study is needed to explore this.

The results have policy implications in that street food vendors are not marginalised among the urban poor, as argued by Bhowmik and Saha (2012). City planners should understand street vending as a crucial part of the urban economy. Street vending businesses should be legalised, which would, for instance, provide registration and support. There are examples from two countries - Singapore and Thailand - where street food vendors are registered and have access to support including the designation of some pavement areas (Maneepong and Walsh 2012), the provision of credit, and training in skills, hygiene and sanitation. Such support might not cause them to lose their independence and freedom of movement. If they were registered, they would be protected and could avoid paying any unofficial fees. Supporting the street food vendors to be a part of the urban formal economy might not only lead to the healthy development of Phnom Penh and safety for its citizens, but also generate revenues for the city through tax collection, licences and fines (WIEGO, 2021).

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Appendix

Table A1 Summary of previous studies on market vendors in Phnom Penh

Study	Description	Age	Educational attainment	Characteristics of their family
Agnello and Moller (2004)	The study examined the needs, constraints and opportunities of 288 micro-vendors from six markets.	30-50 years old	75 percent had attended school, although only 18 percent had successfully completed grade 6	60 percent were married, 30 percent were widows/ divorcees and 10 percent were single
	97 percent of them were women			Average number of children was four
Kusakabe et al. (2001)	The study investigated the differences in social capital between members and nonmembers of vendors' associations. There were 182 respondents	Average age was 40.14	Average years of schooling was 3.34	62 percent were married, 35 percent were widows/ divorcees and 8 percent were single Average number of children was 3
Banwell (2001)	The report detailed the findings of the Asia Foundation's Women's Economic and Legal Rights Program in Cambodia. All surveyed micro- vendors were women	46 percent of the respondents were less than 40 years old 54 percent were older than 40 years	35 percent had never been to school while 53 percent did not complete primary school. The remaining 12 percent had completed primary education or higher	57 percent were married. The other 43 percent were not 46 percent had more than four children

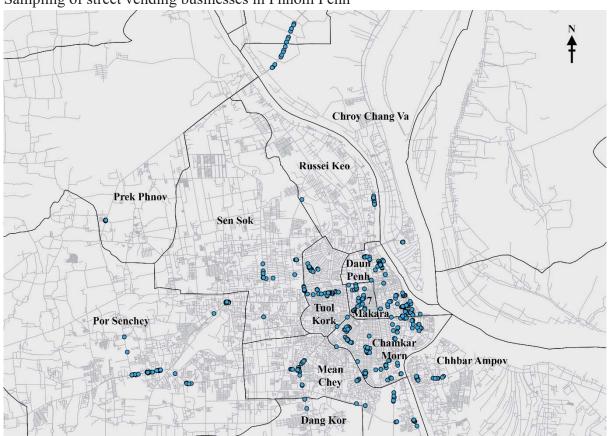
Adopted from Kusakabe (2006a)

Table A2 Number of street vendors in each selected district

Sites	# vendors	Sites	# vendors
Beoung Trabek high school	4	Naga World and near Australian Embassy	15
Bun Rany Hun Sen Phsar Derm Thkov high school	8	Near Himawari	
Chak Ong Rae school	20	Riverside Park	10
Chey Ta Vy school	l 2 Street 1986		3
Chhbar Ampov high school	10	The National Olympic Stadium	10
Chhbar Ampov 2 primary school	9	Veng Sreng Blvd	19
Hun Neang Beoung Trabek Tboung primary school	4	Vealman area	12
Indradevi high school	28	Wat Botum Park	14
National University of Management	2	Kampuchea Krom Blvd	25
Norton University	5	Street 371	2
Royal University of Law and Economics	9	Chamkar Doung 271	24
Royal University of Phnom Penh	13	Monireth Blvd	2
Vanda Institute	14	Pasteur Road	7
Westline School Chhbar Ampov	5	Samdach Pan ave	3

Callemet Hospital	24	Win Win Tower	18
Kuntha Bopha Hospital I	3	Western Phnom Penh Thmey	7
Kuntha Bopha Hospital II	19	Hun Neang Toul Tompong II school	1
Preah Keto Mealea Hospital	21	Sonsom Kosal primary school	3
Soviet Hospital	1	Chompou Voan high school and primary school	27
Bale Bridge	14	Tomnub Kob Srov Road and TVET school	11
Bak Touk	11	Toul Tompong primary school, high school and pagoda	19
Camko City	1	Toul Svay Prey high school	15
Century Plaza children's park	19	Norodom Blvd	13
Hanoi street	8	Northbridge Road	2
Ministry of Labour and Vocational Training	8	Kdan 2 area	8
Toul Sleng Genocide Museum	1	Total	553

Figure A2
Sampling of street vending businesses in Phnom Penh



Visualised by the authors using geographic coordinates (longitude and latitude) from the first survey

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