

# Socio-Economic and Environmental Outcomes of Street Food Vending and its Sustainability in Selected Urban Areas of Kenya

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**Abstract:-** Street food (SF) vending is a common livelihood activity in many urban areas globally. It is driven by a lack of employment opportunities in the formal sector and by the demand for cheap ready-to-eat food by urban residents. However, the trade is perceived to have adverse impacts on the urban environment and hence authorities seek to eliminate it from urban spaces. The purpose of this study was to assess the sustainability of SF vending in Bungoma, Kakamega and Busia urban areas in Western Kenya by examining its social, economic and environmental outcomes. The research design used was a cross-sectional descriptive survey. Proportionate sampling and simple random sampling were used to select respondents in each urban area. The sample consisted of two hundred and twenty-four respondents. Data was collected through questionnaires, observation checklists and photography. The findings show that SF vending met the food security needs of residents and also provided employment opportunities. However, the earnings were too low to meet the needs of vendors and their employees. Despite the low income, the trade also provided revenue for the county governments through the payment of various levies. Although personal hygiene was relatively good, workplaces were strewn with litter and waste disposal was poorly done. In order for SF vending to be sustainable in the long run, SF vendors need to be empowered through stakeholder engagement to increase their earnings to a level where it can meet their needs. They also need to adopt environmentally friendly waste disposal methods.

**Keywords:-** Street Food; Outcomes of Street Food Vending; Sustainability; Urban Areas.

## I. INTRODUCTION

Street food (SF) vending is an informal economic activity where vendors sell ready-to-eat food or drink on the streets of urban areas usually from a portable stall [1]. The food can be prepared at home or on the streets [2], where it is sold and consumed without further preparation [3]. Street food has always existed wherever societies have settled. Ancient civilizations such as the Aztecs of South America

had developed system of street food [4]. Today it is found in most cities of the world and is consumed by approximately 2.5 billion people [5]. In Africa and by extension Kenya, the trade has grown tremendously in the recent past in most urban areas [6], [7].

SF vending is driven by both the need to earn a living and the need to find food that is cheap and culturally appropriate near one's place of work or residence. The demand for cheap, ready-to-eat food, has particularly become attractive for urban workers who have little time to prepare home cooked meals [8]. Reference [9] found that low barriers to entry, limited startup costs and flexible hours also make SF trade attractive. Reference [10] reports that in South Africa such informal economic activity was attributable to high levels of unemployment and poverty. It is, indeed, a livelihood strategy for many urban poor who cannot get employment in the formal sector.

However, due to its perceived negative impact on the urban environment, most urban authorities have reacted towards it with exclusionary policies. The adverse impacts include obstruction of traffic, risk of foodborne diseases, and poor solid waste management practices [11], [12], [13]. Further, SF vending is seen to affect the attractiveness and beauty of cities and is considered a sign of chaos and disorder [14]. According to [15] informal activities are generally associated with tax evasion, avoidance of regulations and social irresponsibility.

Urban authorities have, therefore, attempted to exclude SF vendors from their cities through exclusionary approaches. These include violent evictions where street vendors are simply removed from public space, relocations to marginal locations with low pedestrian traffic and/or inadequate facilities and lower level, ongoing harassment of vendors by corrupt state officials [16].

The purpose of this study was to assess whether SF vending is sustainable in the urban areas of Bungoma, Kakamega and Busia in Western Kenya. This purpose was arrived at because of recurrent attempts by urban authorities to eliminate this livelihood activity that meets employment and nutrition needs of many urban residents. It is hoped that

the findings of the study will lead to the recognition and acceptance of SF vending as a legitimate livelihood strategy in urban areas. The objectives were to identify specific social, economic and environmental outcomes of the trade and to examine the sustainability of these outcomes in the study area.

**II. RESEARCH METHODOLOGY**

The study was a cross sectional descriptive survey. The target population was SF vendors operating in the urban areas of Bungoma, Kakamega and Busia in Western Kenya, which are also the headquarters of the counties (similarly named), in which they are found. These urban areas were sampled purposively because the population was found to be representative of the attributes being studied. The sample size consisted of 224 respondents who were sampled proportionately from the three urban areas. This yielded 85 (37.9%) respondents in Bungoma, 47 (21.0%) in Kakamega and 92 (41.1%) in Busia respectively. Simple random sampling was used to sample respondents within each urban area using sampling frames developed for the study.

Structured questionnaires were used to collect quantitative data while observation schedules were used to gather information on the behaviour of the vendors such as the disposal of waste and hygiene practices. The questionnaire displayed good internal consistency with a coefficient value of 0.781. Still photography was used to confirm and add value to the observations made. Data analysis was done using SPSS (version 26.0) database. The information derived was then presented in frequency tables, bar graphs and pie charts for ease of interpretation and use.

**III. RESULTS AND DISCUSSION**

The results and discussions are presented in three sections comprising the social outcomes, economic outcomes and environmental outcomes.

*A. Social Outcomes*

The social outcomes considered were mainly how the trade met food security needs as well as health and wellbeing needs of both the vendors and the consumers of street food. The findings are discussed in this section.

➤ *Food Security:*

On the aspect of food security, respondents were asked to identify specific people who bought their food. This was in an effort to determine persons or groups that relied on SF food for part of their daily meals. The responses are presented in Fig. 1 below.

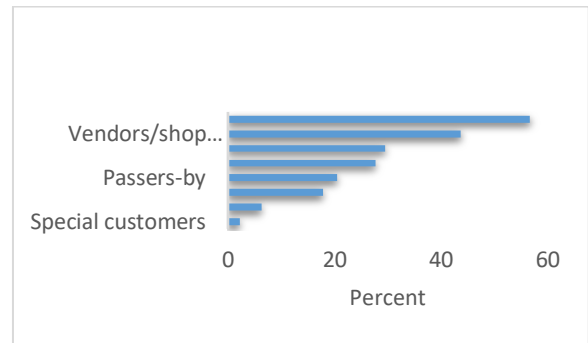


Fig. 1. Street Food Customers

Fig. 1 shows that SF attracted a wide variety of customers. These included public transport operators consisting of PSV drivers and motorbike riders (27.3%), other street vendors and shop attendants (22.7%), travelers (14.2%) and employees of various institutions (13.3%). Mentioned by fewer respondents were passersby (9.9%), school children (8.6%), patrons of nearby institutions (3.0%) and special groups of customers (such as pregnant mothers who asked for unique food items) were mentioned by 1.1%.

These findings show that the trade provided meals for many workers in the study area. This is in agreement with [17] who found that in Harare, SF customers were mostly other informal workers who included artisans, carpenters and motor vehicle mechanics among others. They also support the argument by [18] that SF vending has today become critical in meeting the daily food supply of millions of city residents. Such demand is a major driving force behind SF vending.

➤ *Hygiene Practices:*

Key to the provision of food to urban residents, is the maintenance of hygiene. SF vendors need to maintain both personal hygiene and that of their business premises to help in preventing food contamination and the possible outbreak of foodborne diseases. The study, therefore, sought to find out whether the respondents had any established hygiene practices.

• *Personal Hygiene Practices:*

This variable looked at personal hygiene practices and suitability of the vendors’ work clothes. The information was accessed by the use of observation schedules and results are as presented in tables 1 and 2 below.

TABLE I. PERSONAL HYGIENE PRACTICES

Personal Hygiene Practices	Frequency	Percent
Hand washing	23	10.4
Use of serving tools	17	7.6
Separation of money and food	2	0.9
Multiple hygiene practices	131	59.0
None	49	22.1
<b>Total</b>	<b>222</b>	<b>100.0</b>

TABLE II. WORK CLOTHES

Type of Clothing	Frequency	Percent
Overall/apron/gloves	28	12.6
Cap/headscarf/hair restraint	4	1.8
Closed shoes	27	12.2
Multiple clothing	119	53.6
None	44	19.8
<b>Total</b>	<b>222</b>	<b>100.0</b>

Table 1 above shows that most of the respondents (77.9%) practised some form of personal hygiene as compared to 22.1% who did not. Further, that 18.9% of respondents adopted at least one practice while 59.0% had more than one required hygiene practice.

These findings disagree, to some extent, with [19] who found that most vendors lacked knowledge on hygiene rules for food preparation, processing, servicing and storage. It also disagrees with [20] who found that a majority (67%) of respondents in Brazil hardly washed their hands while preparing food. However, the number of respondents separating food and money when serving food was rather low. This concurs with [20] who found that SF vendors mixed handling of money with food service without cleaning their hands in between the activities.

The results on work clothes (table 2) show that 26.6% of respondents had put on at least one suitable item of clothing while 53.6% had more than one. A sizeable number (19.8%) did not have any of the required items of clothing.

The respondent was considered to be suitably dressed if they had on an overall or apron, a head covering and closed shoes. Such attire is in line with the International Food Hygiene Standards [21] which require food handlers to wear suitable protective clothing including head and beard covering and footwear. About half of the respondents were found to be suitably dressed, an indication that they were doing well in the aspect of personal hygiene.

• *Workplace Hygiene:*

The variable on workplace hygiene sought to determine the presence of dirt or pests at the vending site. The findings obtained from the observation schedules are as contained in table 3.

TABLE III. WORKPLACE HYGIENE

Hygiene Indicators	Frequency	Percent
Mice/rats	2	1.0
Flies	18	8.1
Uncollected Dirt	82	36.9
Multiple Factors	22	9.9
Absence of Pests/Dirt	98	44.1
<b>Total</b>	<b>222</b>	<b>100.0</b>

The findings in table 3 indicate that most (44.1%) respondents' workplaces had none of the indicators of poor hygiene meaning that they had acceptable standards of cleanliness. However, there was some indication of poor hygiene with the most common being the presence of uncollected dirt (36.9%). Others included mice/rats (1.0%), flies (8.1%) and multiples factors (9.9%). This finding is corroborated by photographs (figures 2 and 3) taken at the time of the interview.



Fig. 2. Disorganized Workplace



Fig. 3. Dirty Workplace

The photographs show particularly dirty and untidy premises. This is in agreement with [22] who found that SF vendors tend to sell food under unsafe environmental conditions. Such a situation exposes SF to bacterial contamination and risk of foodborne diseases and need to be addressed by the vendors and other stakeholders.

• *Hygiene of Food Preparation and Serving Utensils*

This variable sought to ascertain the hygiene of utensils used in food preparation and service. It looked at the availability of utensil washing and storage facilities. The findings are contained in tables 4 and 5 below.

The findings (table 4) show that 49.1% of respondents had utensil washing facilities at their workplaces. The most common of these facilities were basins and buckets (45.0%). Others facilities included *Sufurias* (saucepans) (1.8%), washstands (1.3%), multiple facilities (1.0%). Fifty point nine percent (50.9%) of respondents had no utensil washing facility since they sold foods that did not require the use of utensils.

Results in table 5 indicate that 37.9% of the respondents had a utensil storage facility of one kind or another. Plastic and metal racks were the most common (15.3%), followed by basins and buckets (13.1%). The majority (62.2%) did not need the utensil storage facility because they did not use utensils for food service.

It is key that the hygiene of utensils is observed because research has shown that the point of service was the most critical for contamination to occur [20]. Thus, the respondents in the study area were doing well in this regard.

TABLE IV. UTENSIL WASHING FACILITY

Utensil washing facility	Frequency	Percent
Basin/bucket	100	45.0
Sufurias/saucepan	4	1.8
Washstand/sink	3	1.3
Multiple facilities used	2	1.0
No facility used	113	50.9
<b>Total</b>	<b>222</b>	<b>100.0</b>

TABLE V. UTENSIL STORAGE FACILITY

Utensil storage facility	Frequency	Percent
Plastic/metal rack	34	15.3
Wooden/metal box	6	2.7
Paper bag	11	5.0
Basin/bucket	29	13.1
Other	4	1.8
None	138	62.2
<b>Total</b>	<b>222</b>	<b>100.0</b>

**B. Economic Outcomes**

To determine the economic outcomes of SF vending, the study considered various indicators including earnings from the trade and how it was spent; whether it was adequate and what was done to meet the shortfall. It was also of interest to find out whether the trade offered employment opportunities and how much was spent on this.

➤ *Earnings*

This variable sought to determine how much respondents earned in Ksh. from their SF vending businesses in a day. Their responses are presented in figure 4 below.

The findings (figure 4) show that a majority of respondents (61.2%) earned 1,500 and below while 24.6% earned between 1,500 and 3,000. The numbers go down

significantly after this to 6.3% for those earning 3000 to 4000 and 5.8% for those earning 4500 and above.

The earnings were generally low with a majority (61.2%) earning about Ksh. 1,500 per day. According to the 2019 census [23], the average family size in Kenya was 3.9 persons. This means that each family member would get an average of Ksh. 375 (2.5 USD) per day. This is barely above the international poverty line of 1.90 USD per person per day [24] meaning that it is hardly sufficient to meet the respondents needs.

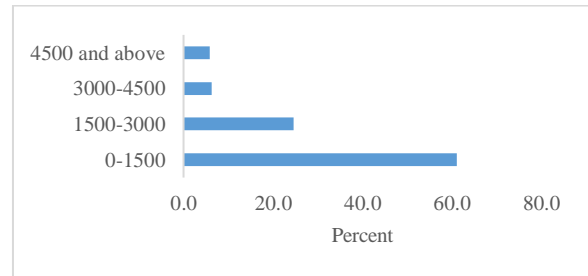


Fig. 4. Earnings

➤ *Needs met*

Respondents were required to state the needs they met with their earnings. Their responses are as captured in figure 5.

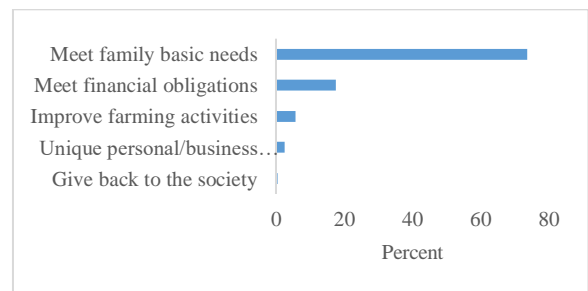


Fig. 5. Needs met with earnings

The earnings were used to meet basic family needs such as meals, clothing and school fees as stated by 73.7% of the respondents (figure 5). Meeting financial obligations such as repaying loans as well as contributing to rotating credit associations (*chamas*) was also important (17.6%). The rest (8.7%) gave a variety of uses including one (0.4%) who gave back to society (specifically helping needy widows in the community).

This finding is in agreement with [9] who found that SF vendor earnings were used to buy food and pay school fees. It also agrees with [25] who found that the income from SF vending contributed to health care among other family needs. Thus SF vending plays a critical role as a livelihood strategy among the urban poor.

➤ *Adequacy of Earnings:*

The respondents were further asked whether the amount they earned was sufficient to meet their needs. Their responses were as presented in figure 6.

Results contained in Figure 6 show that a majority of the respondents (78.6%) stated that the earnings were inadequate while only 21.4% stated that it was sufficient, to meet their needs.

The finding that earnings were inadequate can be attributed to uncertainty of SF vendors’ work on a day-to-day basis given their marginalized status as well as general economic recession faced by society. It reflects findings by [9] that vendors were vulnerable to economic downturns when they experience a drop in consumer demand and increase in competition from new entrants in the trade.

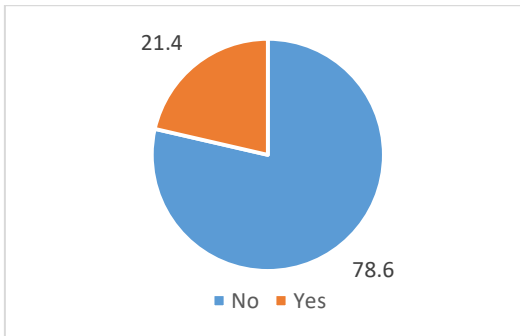


Fig. 6. Adequacy of Earnings

➤ *Meeting the Shortfall in Earnings*

Respondents were further asked what they did to meet the shortfall in their earnings. Their responses are as contained in figure 7 below.

Most of the respondents cut down on family expenditure (25.0%) while 21.9 % took loans to meet some needs (figure 7). Farming and alternative business were also practiced by 13.3 % and 11.3% respectively. Twenty-two point seven percent (22.7%) did not undertake any other activity to make ends meet but survived on whatever little they earned. The remaining 17.1% got support from family and well-wishers, took short term jobs or used savings from the rotating credit associations. This shows that a majority of respondents (88.6%) had to have other hustles in order to meet their financial needs. SF vending alone was not enough.

➤ *Workers Employed*

In order to find out whether the trade offered employment opportunities, respondents were asked to state the number of employees they had at their premises and how much they paid their them per month.. Their responses are as presented in table 6 and 7 respectively.

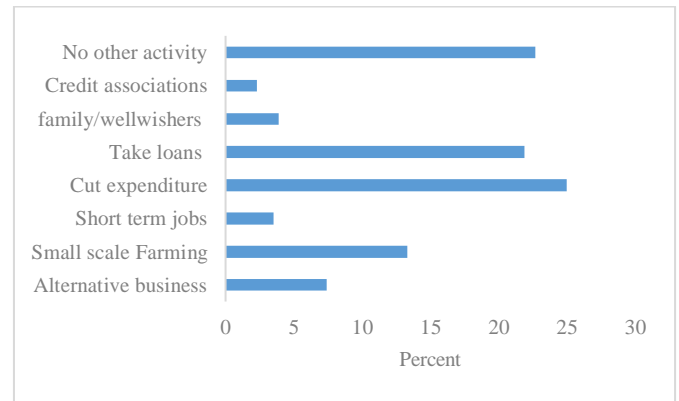


Fig. 7. Meeting the shortfall in earnings

TABLE VI. NUMBER OF EMPLOYEES

Number of employees	Frequency	Percent
1 – 3	59	26.3
3 – 5	4	1.8
5 - 7	2	0.9
None	159	71.0
<b>Total</b>	<b>224</b>	<b>100.0</b>

TABLE VII. WAGES PAID PER MONTH

Wages (Ksh.)	Frequency	Percent
0 - 3000	6	9.2
3000 - 6000	30	46.2
6000 - 9000	10	15.4
9000 - 12000	6	9.2
12000 - 15000	1	1.5
15000 and above	12	7.8
<b>Total</b>	<b>65</b>	<b>100.0</b>

The majority (71.0%) of respondents did not employ any workers and either worked alone or with family members (table 6). A fair number (26.3%) employed 1-3 workers and very few (2.7%) employed more than 3 workers.

The finding on employees (table 6) is similar to those by [26] that 62.5% of SF vendors in India worked alone while 22.5% engaged family members and only 10% employed outside help. It is also in agreement with [27] who found that in Harare, Zimbabwe, 45% of vendor operated enterprises employed between 1-8 workers. The fact that few respondents employed workers could be a reflection on the low earnings from the trade and therefore, the need to cut overhead cost.

The results on wages (table 7) indicate that 46.2% of respondents paid their workers between Ksh. 3,000 and 6,000 per month. A similar percentage of employers (9.2%) paid between Ksh. 0 and 3,000 and between Ksh. 9,000 and 12,000 respectively. One (1.5%) employer paid between Ksh. 12,000 and 15,000 while 7.8% paid Ksh. 15,000 and above.

Wages were generally low with the highest paid workers getting Ksh. 300 per day (2 USD) which translates to slightly less than Ksh. 10,000 per month. Although this figure is above the poverty line of 1.90 USD per day [24], it is still fairly low given the high living standards in urban areas.

➤ *Levies Paid:*

The respondents also spent their earnings on levies charged by the county governments. They were therefore required to state the levies that they paid to the county government as well as the amounts paid. Their responses are captured in tables 8 below.

TABLE VIII. LEVIES PAID

Levy	Amount paid	Frequency	Percent
Licenses and permits (annual)	3000 and below	11	4.9
	3000 – 6000	8	3.6
	6000 – 9000	4	1.8
	9000 and above	1	0.4
	None paid	198	88.4
	<b>Total</b>	<b>224</b>	<b>100.0</b>
Fees and fines (occasional)	3000 and below	6	2.7
	3000 – 6000	1	0.4
	6000 – 9000	1	0.4
	9000 and above	1	0.4
	None paid	215	95.5
	<b>Total</b>	<b>224</b>	<b>100.0</b>
Tax (daily)	10	5	2.2
	20	56	25.0
	30	111	49.6
	40	10	4.5
	50	10	4.5
	50 and above	2	0.9
	None paid	29	12.9
<b>Total</b>	<b>224</b>	<b>100.0</b>	

The results (table 8) indicate that 10.7% paid for licenses and permits with a majority of them (4.9%) paying Ksh. 3000 and below. Fees and fines were paid for by 3.9% most of whom (2.7%) paid 3000 and below while the bulk of respondents (86.7%) paid taxes. Out of those who paid taxes, 49.6% paid Ksh. 30/= while 25% paid 20/= per day. The rest paid varying amounts as indicated in the table above.

This finding agrees with that of Roever [28] who found that vendors generated revenue for cities through payments for licenses and permits, fees and fines as well as value added tax on some of their purchases. Thus, SF vending can be useful to the county governments as a source of revenue.

C. *Environmental Outcomes*

The environmental outcome considered was mainly the management of waste during operations and at the end of the working day. The aim of this variable was establish whether the SF vendors had proper waste management practices.

➤ *Waste Disposal Receptacles:*

Structured observation was used determine the characteristics of waste disposal facilities at the respondents' premises. The results are as contained in table 9 below.

TABLE IX. WASTE DISPOSAL RECEPTACLES

Waste disposal receptacle	Frequency	Percent
Commercial bin	35	15.8
Bucket/basin	72	32.4
Paper bag	28	12.6
Sack	18	8.1
Carton box	2	0.9
Multiple containers	17	7.7
None	50	22.5
<b>Total</b>	<b>222</b>	<b>100.0</b>

The results (table 9) indicate that a higher percentage (76.7%) of the respondents had a waste receptacle of some kind compared to 22.5% who did not have any. Two respondents did not address this item and were therefore left out of the analysis. The single most used receptacles were buckets or basins (32.1%) as compared to other types of containers. The remaining receptacles included bins (15.8%), paper bags (12.6%), sacks (8.1%), carton (0.9%) and multiple receptacles (7.7%). However, some of the waste was not well collected or managed on site (fig. 8).

➤ *Methods of Waste Disposal*

The respondents were further required to state what they did with the accumulated waste at the end of their working day. Responses are captured in fig. 9.



Fig. 8. Poorly Managed Waste On Site

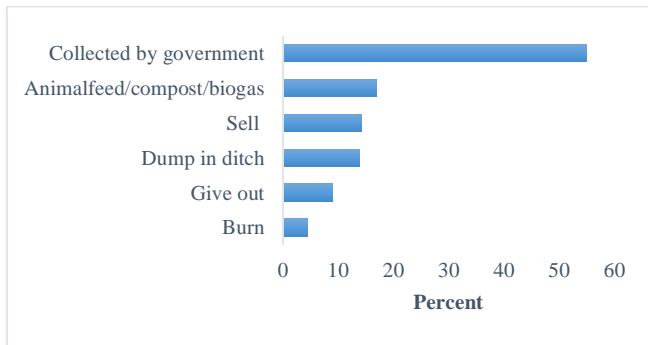


Fig. 9. Methods of Waste Disposal

A majority (46.8%) of respondents disposed of waste in government provided bins which were later emptied by county government workers (figure 5). Other strategies included making compost manure or animal feed (17.0%), selling (14.3%), giving to interested persons (8.9%), dumping in nearby ditches (13.8%) and burning (4.5%). The rest (4.0%) did not generate any waste at the point of sale.

The results show that most respondents disposed waste in government provided bins with very few using methods like reuse, recycling or as animal feed. This corroborates [15] who found that 60 % of the waste in the Thu Duc District of Ho Chi Minh City, Vietnam was picked by the Municipal collectors. However, vendors in the study area displayed an attitude of carelessness by throwing the waste on the ground around the bins (figure 10).



Fig. 10. Improper Use of Waste Receptacle

**IV. CONCLUSION AND RECOMMENDATIONS**

The study found that SF vending met the food security needs of many workers in the study area. Demand for food is, therefore, a major driver of SF vending and is key to its sustainability in urban spaces. It is recommended that the SF vendors be empowered to continue offering this important food security function.

On hygiene practices, it was found that personal hygiene was relatively good and the required cleaning and storage facilities for utensils were available. However, workplaces were not all clean as many were strewn with litter and uncollected dirt. It is, therefore, recommended that the county governments, state agencies and vendor organizations, among other stakeholders, come in to give the necessary education and training on waste management.

The trade offered employment opportunities for the SF vendors and their employees. However, their earnings were rather low and could not sufficiently meet their needs. This forced many of them to get into side hustles to make ends meet. This implies that this livelihood strategy may not be sustainable in the long run. It is a recommendation of this study that SF vendors be supported through credit facilities, social security schemes and the provision of adequate infrastructure to make it economically viable.

The trade was also found to be a source of revenue for the county governments through taxes and other levies paid by the SF vendors. These levies, and especially the daily tax, ate into their already meagre earnings and they could, therefore, not save or increase their assets. This demotivated the traders. It is recommended that a renewable registration fee, paid monthly or annually, be charged instead of the many levies currently charged. This will enable the county governments continue earning revenue form the traders while traders can also get time to recover monies paid towards levies.

In general, the trade has both positive and negative outcomes that have different impacts on various stakeholders. To ensure the sustainability of this livelihood activity, the SF vendors need to be empowered in areas of waste management, financial management and in culinary skills.

**COMPLIANCE WITH ETHICAL STANDARDS**

- *Acknowledgements*  
Much gratitude to all who contributed to the success of this study.
- *Disclosure of Conflict of Interest*  
No conflict of interest to be disclosed.
- *Statement of Ethical Approval*  
The present research work does not contain any studies performed on animal/humans subjects by any of the authors.
- *Statement of Informed Consent*  
Informed consent was obtained from all individual participants included in the study.

## REFERENCES

- [1]. Marras, S. R. & Bendeck, A. M. (Eds.). (2016). Street food in Urban Ghana: A desktop review and analysis of findings and recommendations from existing literature. FAO. 2016. Retrieved from [www.fao.org/3/a-i5804e.pdf](http://www.fao.org/3/a-i5804e.pdf)
- [2]. FAO. Street vending in West African cities: Potential and challenges. FAO Regional Office for Africa. Accra, Ghana. 2012. Available from [www.fao.org/.../africa/.../3.\\_Streetf\\_food\\_Vending\\_We st\\_Africa\\_F](http://www.fao.org/.../africa/.../3._Streetf_food_Vending_We st_Africa_F)
- [3]. FAO. Informal food distribution sector in Africa (street foods): Importance and challenges. (Paper prepared by Zimbabwe). Proceedings of the FAO/ WHO Regional conference on food safety for Africa. 3-6 October, 2005, Harare, Zimbabwe. Food and Agricultural Organization of the UN, Rome. Retrieved from [www.fao.org](http://www.fao.org)
- [4]. Resnick, P. Essay: History of street food [Blog post]. 2018. NewYorkStreetFood.com. retrieved on 19/03/2019 at 5.30 p.m. from <https://www.newyorkstreetfood.com/street-food/essay-history-of-street-food/>
- [5]. Pilato, M., Seraphin, H. & Yallop, A. C. Exploring the potential of street food as a sustainable livelihood tourism strategy for developing destinations. University of Sydney Business School. 2016. Retrieved from [www.repository.winchester.ac.uk/.../Pilato\\_Exploring\\_ThePotentialofStreetFood...%20Item...](http://www.repository.winchester.ac.uk/.../Pilato_Exploring_ThePotentialofStreetFood...%20Item...)
- [6]. Buguzi, S. Why street food vendors must be empowered not brutalized. The Citizen. 2018, August, 19 Retrieved from [www.thecitizen.co.tz/...street-food-vendors...empowered.../index.h..](http://www.thecitizen.co.tz/...street-food-vendors...empowered.../index.h..)
- [7]. Maroko, R.A. Dynamics of cooked food vending in Kayole Location, Nairobi County, Kenya. Master of Arts Thesis. Kenyatta University. Nairobi. 2016; Retrieved from [www.irlibrary.ku.ac.ke/.../handle/.../Dyanamics20of%20cooked%20food%20vending%20](http://www.irlibrary.ku.ac.ke/.../handle/.../Dyanamics20of%20cooked%20food%20vending%20)
- [8]. Winarno, F. G. & Allain, A. Street food in developing countries: Lessons from Asia. *Food, Nutrition and Agriculture – 1 – Food for the future* No. 1 of 1991. J. L. Albert (Ed.). Retrieved from [www.fao.org/docrep/u3550t/u3550t08.htm](http://www.fao.org/docrep/u3550t/u3550t08.htm)
- [9]. WIEGO. About street vendors: Significance, size, policies and organizations. Manchester, UK: WIEGO. 2019a. Retrieved from [www.wiego.org/informal-economy/occupational-groups/streets-vendors](http://www.wiego.org/informal-economy/occupational-groups/streets-vendors)
- [10]. Social Law Project. Street vendors' laws and legal issues in South Africa. WIEGO Law and Informality Resources. 2014. Manchester, UK: WIEGO. Retrieved from [www.wiego.org/sites/default/.../street-vendors-laws-andlegal-issues-S-Africa.pdf](http://www.wiego.org/sites/default/.../street-vendors-laws-andlegal-issues-S-Africa.pdf)
- [11]. Cabaltica AD, Nguyen HD, Pham HN. Solid waste management practices in the street food sector in Thu Duc District, Ho Chi Minh city. *Civ Env'tal Res*. Vol.8, No.10, 2016. Ho Chi Ming City: Department of Civil Engineering, International University. Retrieved from [www.iiste.org/Journals/index.php/CER/article/viewfile/33344/34827](http://www.iiste.org/Journals/index.php/CER/article/viewfile/33344/34827)
- [12]. Dau K. The Role of facilities in supporting the sustainable street food scene in Finland. 2015. Retrieved from [https://www.theseus.fi/bitstream/handle/10024/96297/Kim\\_Dau\\_Bachelor\\_Thesis.pdf](https://www.theseus.fi/bitstream/handle/10024/96297/Kim_Dau_Bachelor_Thesis.pdf)
- [13]. Nguyen L. Capability approach to street vendors in Vietnam: Evaluation of current situation. University of Maryland, USA. 2012. Retrieved from [https://hd-ca.org/?s2member...Capability\\_Approach...Street\\_Ven dors](https://hd-ca.org/?s2member...Capability_Approach...Street_Ven dors)
- [14]. Forkuor, J. B., Akuoko, K. O. & Yeboah E. H. Negotiation and management strategies of street vendors in developing countries: A narrative review. 2017. Sage journals. Retrieved from [www.journals.sagepub.com/doi/full/10.../](http://www.journals.sagepub.com/doi/full/10.../)
- [15]. Floridi, A. & Wagner, N. Beyond formalization: Towards an inclusive approach to the informal economy. 2016. Blog. Downloaded on 13/5/2020 at 10.00 p.m. from <https://includeplatform.net>Blog>
- [16]. Steyn N, Mchiza Z, Hill Y, Venter I, Hinrich E, Opperman M et al., Nutritional contribution of street foods to the diet of people in developing countries: A systematic review. *Pub Health Nutr*. 2013. Vol 17, No 6. Pages 1363-1374. Retrieved from <https://www.ncbi.nlm.nih.gov>pmc>
- [17]. Njaya, T. Coping with informality and illegality: The case of street entrepreneurs of Harare Metropolitan, Zimbabwe. *Asian Journal of Economic Modelling*, 2014b, 2(2): 93-102. Retrieved from [www.aessweb.com/pdf-files/ajem-2014-2](http://www.aessweb.com/pdf-files/ajem-2014-2)
- [18]. Sezgin C A, Sanlier N. Street food consumption in terms of the food safety and health. *J Hum Scies*, 2016; 13 (3), 4072 083.doi.10.14687/jhs. v13i3.3925. Retrieved from [https://www.researchgate.net/publication/309198074\\_s treet](https://www.researchgate.net/publication/309198074_s treet)
- [19]. Cortese RPM, Vieros MB, Feldman C, Cavalli CB. Food safety and hygiene practices of vendors during the chain of food production in Florianopolis, Brazil: A Cross Sectional Study. In *Fd Cont*. 2015; 62 (2016) 178-186. Retrieved from <https://doi.org/10.1016/j.foodcont.2015.10.027>.
- [20]. Codex Alimentarius Commission. Codex Alimentarius: International Food Standards: General principles of food hygiene, Food hygiene Practices. Rome: Food and Agricultural Organization of the UN. 1969. Accessed on 11/03/2022 at 9.45a.m. from <https://www.fao.org/fao-who-codexalimentarius/>



- [21]. Imathiu S. Street vended food: Potential for improving food and nutrition security or a risk factor for foodborne diseases in developing countries? *Curr Res Nut Fd Sci.* 2017; 5(2). Retrieved from <http://dx.doi.org/10.12944/CRNFSJ.5.2.02>
- [22]. Kenya National Bureau of Statistics. 2019 Kenya Population and Housing Census Vol. 1: Population by County and Sub-County. 2019. Retrieved from <https://www.knbs.or.ke>
- [23]. World Bank. What a Waste: A global review of solid waste management. 2012. Retrieved from [www.documents.worldbank.org/68135-REVISED-What-a-waste-2012-Final-updated.pdf..](http://www.documents.worldbank.org/68135-REVISED-What-a-waste-2012-Final-updated.pdf..)
- [24]. Adhikari, D. B. Informal street food trade: A source of income generation in urban Nepal. *Economic J of Dev't Issues.* 2018. Vol. 23 & 24 No. 1-2 (2070) Combined Issue. Retrieved from <https://www.researchgate.net>
- [25]. Assan, J. K. & Chambers, T. "India's street vendors and the struggle to sustain their livelihoods and informal enterprises: Unionization, political action and sustainable development". *Int'l J of Dev't and Sustainability*, 2014. Vol. 3 No. 11, pp 2140-2161. Retrieved from <https://isdsc.com/ijds-v3n11-7.pdf>
- [26]. Njaya T. Operations of street food vendors and their impact on sustainable urban life in high density suburbs of Harare in Zimbabwe. *Asian J of Econ Model.*, 2014a, 2(1): 18-31 <http://www.aessweb.com/journals/5009>
- [28]. Roever, S. Informal Economy Monitoring Study Sector Report: Street Vendors. Manchester, UK: WIEGO; 2014. Retrieved from <https://www.wiego.org/informal-economy/occupational-groups/street-vendors>