SUSTAINABLE URBAN DEVELOPMENT IMPLICATIONS OF FOOD VENDORING IN CALABAR, SOUTH-SOUTH NIGERIA

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Abstract
Ready-to-eat food litters most urban places in developing countries. It constitutes a major part of the informal sector in the food industry. Their activities were investigated especially with implications to sustainable urban development. The focus was on morning food vendors, where ten were selected to reflect different parts of the city. The methodology included placement of a GPS in their wheel-drawn cart, an undercover enumerator and personal interview. Average daily distance of 5km was observed to serve average of 95 customers per vendor. It was further revealed that more middle aged (15-45years) men accounts for majority of the customers. Major land uses where most stops were recorded include uncompleted building/construction sites (34.3%); mechanic workshops (27.4%); bus terminals/motor parks (19%); MDAs (7.2%); school/institution gates (4%), market areas (6.1%); and other (3%). The implications of these finding support the argument that most breakfast-related trips are minimized by food vendors. This survey indicates an average of 950 food-based morning trips discouraged by 10 vendors. It is recommended that food vendoring activity be regularized to enhance sanitary dispensing of food and help ascertain estimated number of vendors in the city. Allowing the food vendors stray with their wheel-carts remain a major traffic bottlenecks in some parts of the city and therefore the need for proper regulation.

Keywords:Food vendoring, Mobile food customers, Urban planning, Food-related trips

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1. INTRODUCTION

Cities and towns are products of urbanisation which have become the primary human living space. It has been estimated that more than half of the world's population has been living in urban areas since 2007, and likely to exceed 70 per cent by 2050. Inasmuch as populations previously lived and worked primarily in rural areas, the development above remains a hallmark of the transformation of humans' economic base and social structure. The concentration of people, investments and resources through a process of agglomeration, cities can provide many socioeconomic benefits and heighten the possibilities for economic development, innovation and social interaction. For example, Polèse (2009) and Satterthwaite (2010) revealed that possibility of lower unit costs in public services including water and sanitation, health care, education, electricity, emergency services and public recreational areas. This however depends on the administration of the city to ensure that such benefits are realized, and to adopt a sustainable framework that encourages the city's growth within ecological limits. Cities therefore face challenges along these service lines that often threaten their efforts to achieve sustainability, in terms of improved access to public services, reduction of their ecological footprint and financial fragility, and the building of resilience against the adverse impact of natural hazards.

Planners have traditionally attempted to address all the above challenges with the conspicuous exception of food planning in cities. Urban planners might justify this 'puzzling omission' by mistaking the food system for largely rural issue and therefore beyond the scope of the urban planning agenda. Viljoen, (2005) accounts for two reasons why the above claim remains untenable. First, 'the multifunctional character of the food system means that it has profound effects on a host of other sectors-including public health, social justice, energy, water, land, transport and economic development-and these are all sectors

in which planners are deemed to have a legitimate interest. Second, the notion that food production is an exclusively rural activity fails to appreciate the significance of urban agriculture, an activity that never disappeared in the hungry cities of the global south and one which is re-appearing in the more sustainable cities of the global north, where urban designers are re-imagining 'the city as a farm' (Viljoen, 2005).

The urban basic sector produces goods for export that generates income from elsewhere and remains the mainstay of urban growth, expansion and development and thus receives official recognition with recorded and measured indicators of gross domestic product (GDP). On the other hand, the non-basic, native or people-serving sector is not given formal recognition and includes 'unregulated and unmeasured components' according to Anita & McDade (1998). This activity constitutes part of the informal sector which is sometimes considered as an 'undesirable retarded' sector whose productivity is low and a drag on economic growth (Juma et al., 1993), has also been recognized as central in providing employment, services and goods (Hart, 1973; Cornia et al., 1992) through economic activities that are largely dependent on local selling conditions.

Food vendoring is an important component of the informal economy in Calabar, just as many other cities in Nigeria. It is family-based trade that is undertaken in either makeshift temporal structures on street or carried around on wheel-barrows (wheel-drawn carts) by isolated, self-reliant individuals who meet the nutritional needs of the urban middle and low classes. Home-prepared food is carried around the streets and sold to customers at designated points or along the road as they wheeled along. In Calabar Metropolis, food vendoring service system enjoys a wide spatial distribution and patronage. Their concentration is highest around the CBD, major streets adjoining the CBD as well as around new development sites.This study broadly examines the sustainable urban development implications of food vendoring with special focus on basic characteristics of the mobile food vendoring service, its impacts on the quality of urban life and the environmental consequences of this activity in Calabar metropolis. Calabar is the capital city of Cross River State, south-south Nigeria. It lies between longitude 8^0 19^1 30^{11} and 8^0 25^1 30^{11} east of the Greenwich Meridian and latitude 4^0 57^1 55^{11} and 5^0 40^1 30^{11} north of the Equator. It comprises of Calabar Municipality and Calabar South Local Government Area, which occupy an area of about 406 square kilometers (figure 1). The National Population Commission in 2018 projection estimates the current population of Calabar at about 449,880 using a growth rate of 2.8 percent (NPC, 2018).

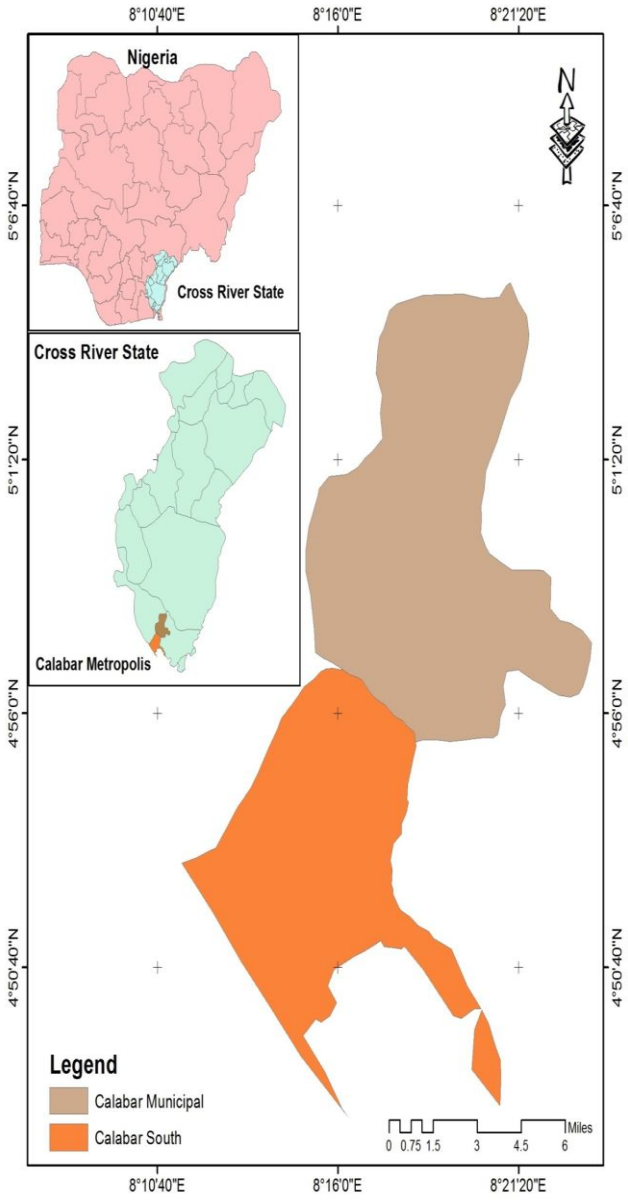

Fig 1. Calabar Metropolis showing Nigeria and Cross River State (inserts)

Literature review

Single individuals usually female, couples or families with no employee constitute street food vendoring enterprises in many cities of the developing world. There are characteristic of considerable unpaid family labour according to Acho-Chi (2002). Equity Policy Center (EPOC), a small think tank in Washington, D.C. was founded by Irene Tinker in 1978 to address the specific needs and concerns of women in international development circles. Her book, 'Street Foods: Urban Food and Development in Developing Countries' provided a detailed analysis of those who make, sell and consume street foods, based on 15 years of research in the Philippines, Thailand, Indonesia, Bangladesh, Egypt, Nigeria and Senegal (Tinker, 1997). Her book revealed the influence of cultural attitudes on what foods are sold and eaten, by whom and when. Furthermore, Tinker refers to development theory and practice in relation to the economics of street foods, including nutritional safety aspects, and the implications for research, planning and policy. The easy comparisons of similarities and differences among street vendors, including demographic and gender variations, like other feminist investigations offered by the robustness of the respective country data sets an action agenda in food vendoring. Carr and Chen (2002) revealed that the International Labour Organization is in support of informal-sector activities arguing that its inevitability has been recognized.

The study of Njaya (2014) investigated the nature and operations of street food vendors including socio-economic features influencing their spatial distribution, local environmental impacts and urban life in high density suburbs of Harare, Zimbabwe. It revealed that street food vending provides 'an alternative street economy which is people friendly and with the necessary institutional and infrastructural support could be both environmental-sensitive and energy conscious'. Despite being an illegal activity, street food vending offers operators an employment opportunity with the consequence of improved income for vendors and thus provide urban dwellers with 'inexpensive and varied indigenous meals'.

Writing on the 'spatial implications of street trading in Osogbo traditional city centre, Nigeria', Adedeji, Fadamiro, and Adeoye (2014) identified street trading as one of the misuses plaguing the public open spaces in third-world cities. The effects of the activity on accessibility in city centres have transformed them into contested places for incompatible functions. Their results further showed that street trading activity has serious negative impacts on 'accessibility, erection of illegal structures, traffic congestion, solid waste generation, auto-accidents and deface of urban aesthetics' and therefore recommended urban renewal actions for its control.

In his paper on the urban implication for sustainable food security, health and nutritional nexus in developing economies, Ekpenyong (2015) remarked that the rapid increase in urbanization in developing countries such as Nigeria poses new and different challenges for food security in the country. He therefore observed the reliance on purchased food as a leading factor in household food insecurity of poor urban dwellers that lacked a fixed income. The availability of a wider variety of food he further notes, notwithstanding, the food consumed in urban areas is not necessarily of superior nutritional quality with growing concerns of food safety in many urban environments.

The study of Acho-Chi (2002) looked at the basic characteristics, the locational factors influencing the socio-spatial distribution, the critical success factors determining customer choices, and impacts on the local environmental resources and quality of urban life of mobile food service practice in Kumba, Cameroon. He observed that 'mobile food service practice creates employment, generates income, and acts as a food energy-support instrument to the urban poor and local economic activities operating in Kumba'. The vendors, who are mostly women, according to him, can make incomes that are 405 per cent of the national minimum wage and, thus,

contribute financially towards the education, health and survival of their families.

Adeyinka et al (2006) also recognized the important role of the urban informal sector activities in providing jobs for the teeming unemployed populace in Nigeria. Simon and Anders (1999) identified the informal sector as "the process of enhancing individual and collective quality of life in a manner that satisfies basic needs, is environmentally, socially and economically sustainable, and is empowering in the sense that people concerned have a substantial degree of control over the process through access to the means of accumulating social power". In the same vein, Manuh (1998) argued that the informal sector is a "safe haven" in view of its low capital requirement and ease of entry just as de Soto (1989) criticized the formal rules as unreasonably excessive, bureaucratically cumbersome and increases transaction costs.

Other specific researches on the street food vendoring which include Winarno (1990), Wood (1990), Saito (1991), Bapat (1992), Mosse (1993), Downing (1995), Atkinson (1995), Solo (1998), Winarno and Allain (1991), Dixon et. al. (2009), Morgan (2010), Morgan and Sonnino (2010) pull together the current benefits of the street food trade to demonstrate that street food entrepreneurial activities use local resources and markets, provide vendors with satisfactory earnings and customers access to inexpensive, varied and nutritious foods. There however did not establish their implications to urban mobility in terms of the number of trips that are avoided in lieu of these activities thereby contributing to reduced transport-related climate change impacts. This study examined the role of street food vendoring on sustainable urban development in Calabar Metropolis.

2.METHODOLOGY

A descriptive research design which involves observation, measurement and description of the behavior of both food vendors as well as their customers was adopted for this study. Both discrete and continuous data was used for this study. Discrete data with definite value include enumeration and socio-economic characteristics of clients who patronises the food vendors while on the other hand, continuous data is the distances the vendors cover in executing their trade. Instruments were developed based on extensive review of literature on mobile food market in both developed and developing countries. This led to the development of a survey questionnaire tools with pre coded responses that explored the mobile food industry in the study area. Both qualitative and quantitative variables including demographic characteristics of clients and factors for patronage were acquired. These instruments, 100 of which were given to each of the 10 vendors were administered to willing respondents after been served by the vendors. About 494 successfully returned instruments were used for analysis. An initial descriptive analysis of rating of factors patronage of mobile food vendors revealed an overwhelming agreement of cheapness of food as the most important factor (97.2 per cent of strongly agreed) and therefore attention was narrowed on it (see variable description in Table 1). This is compared to no transport cost (48.9 per cent), no trip (11.9 per cent), niceness of food (2.8 per cent), credit allowed (4.0 per cent) and variety of food (88.1 per cent). Ordinal logistic regression was used to predict an ordinal dependent variable, cheapness of sold by vendors using three independent variables-monthly income, employment type and marital status using the PLUM method in SPSS.

Furthermore, individual interview of mobile food vendors was also carried out to examine start-up capital acquisition, the market size, sources of inputs, food service sites, effects of distance on delivery prices, costs and revenues, daily working hours, consumer behaviour and patronage, and inherent dangers of the trade. The methodology further included placement of a GPS in ten (10) food vendor's wheel-drawn carts (five for each local government) to

Table 1. Variables description

Variable	Variable description
Dependent variable	factors of patronage of mobile food vendors has four ordered categories:"Strongly Disagree", "Disagree", "Agree" and "Strongly Agree" (4-1)
Participant's personal characteristics	Gender Age Marital status Education Employment type Monthly income (N000)
Independent variables	Employment type Monthly income (N000) Age
Other variables	time of food purchase frequency of patronage average value of food purchased

record movement trajectory (see figure 2). An undercover enumerator basically recorded patronage while the vendor simply administered questionnaire after service to clients willing to respond. The method adopted is purposive sampling of clients of the respective food vendors.

3. RESULTS AND DISCUSSION

Socio-demographic characteristics of respondents

This section reveals all demographic indicators of research participants in the study area. Information on age and sex composition is very important especially for the evaluation of the quality of the enumeration, and for the description and analysis of several types of socioeconomic and demographic data. Age and sex are important demographic variables and are the primary basis of demographic classification. Generalizations on gender are made from the distribution of respondents during the survey. It is revealed from Table 2 that 60.3 and 39.7 per cent respectively accounts for male and female respondents but not necessarily a reflection of gender composition in the study area. This is because the 2006 population data reveals a 50.7 per cent and 49.3 per cent for females and males respectively in Calabar metropolis. However, a cross tabulation of the data shows more male respondents engaged in artisan occupation, civil/public servant and other informal sectors, a true reflection of what obtains in Calabar. In

Table 2, the different age group of respondents include, <14years (1.0 per cent), 15-18years (15.2 per cent), 19-25years (46.6 per cent) and 26-35years (24.7 per cent). Others such as 36-45years and >45years accounting for 8.5 per cent and 4 per cent respectively, also formed different classes of age groups of research participants in the study. Therefore, it can be deduced from the data that the main clients of these vendors are young people under 25years of age (62.8 per cent) or below 35years (87.5 per cent) suggesting an active population in the city. Furthermore, 94.2 per cent of this population is either not married (48.2 per cent), divorced (31 per cent) or widowed (15 per cent).

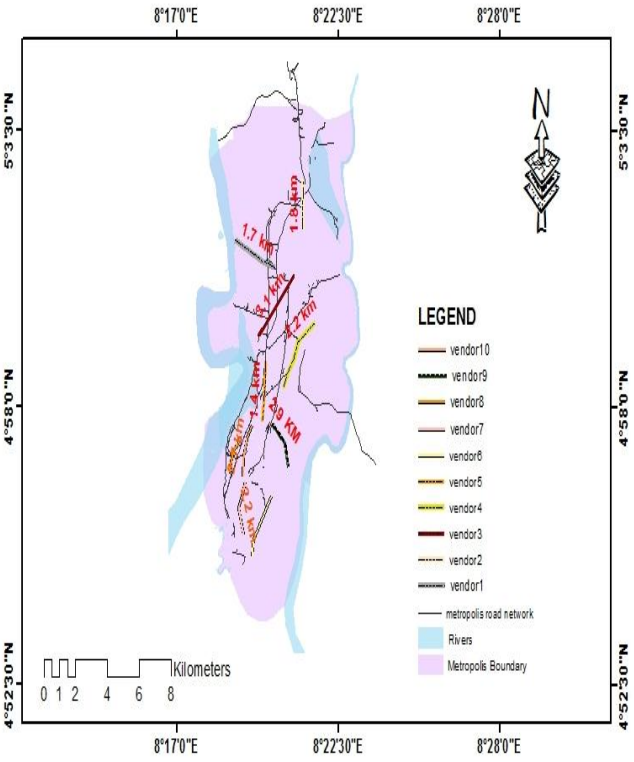

Fig 2. Trajectory of sampled mobile food vendors in Calabar Metropolis

However, education is a key determinant of the lifestyle and societal status that an individual enjoys. It has been consistently shown that educational attainment has a strong effect on wellbeing, health behaviours and attitudes.
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Education in Nigeria has evolved over a long period of time, with a series of policy changes. As a result, there have been increases in the enrolment of children and in the number of educational institutions both in the public and private sectors. The socioeconomic survey analysis revealed that a large proportion of the sampled population has received some formal educational training, indicating a sufficiently literate society although this may not be a scientific judgement since the administered questionnaire are in English Language with a tendency for illiterate clients to refuse to participate. However, 82 per cent have primary (40.7 per cent), secondary (27.9 per cent) or tertiary education 914.2 per cent). This has serious implications on employment types where majority of the respondents are revealed to be 28.7 per cent are traders, 25.3 per cent students, 24.7 per cent artisans, 15.2 per cent civil/public servants. In Nigeria, educational attainment has a strong relationship with one's level of income. In the study area, 9.7 per cent of respondents indicated earning N20 ($55), 55.1 per cent earn N20-50 ($137), 33.2 per cent earn N51-100 ($273), while only 2.0 per cent earn N101-200 ($546) (see Table 2). This has serious implications on the standard of living of residents in this area especially in terms of disposable income on feeding.

Factors of mobile food vendor patronage

A multinomial logistic regression analysis was run to determine if there were differences in the cheapness of food as sold by mobile food vendors between income level, employment status, marital status and age characteristics. There were no outliers in the data, as assessed by inspection of a boxplot. The chi-square statistics for each of the steps are highly significant, indicating that these interactions have a significant effect on predicting whether cheapness of food was significant even as this fact remains self-evident since these terms would not have been entered into the model had they not been significant

Table 2. Socio-demographic characteristics of respondents

Variable	Frequency	Per cent
Gender		
Male	298	60.3
Female	196	39.7
Age		
<14yrs	5	1.0
15-18yrs	75	15.2
19-25yrs	230	46.6
26-35yrs	122	24.7
36-45yrs	42	8.5
>45yrs	20	4.0
Marital status		
Married	29	5.9
Not married	238	48.2
Divorced	153	31.0
Widowed	74	15.0
Education		
No formal education	85	17.2
Primary	201	40.7
Secondary	138	27.9
Tertiary	70	14.2
Employment type		
Artisan	122	24.7
Student	125	25.3
Civil/public servant	75	15.2
Farmer/fisherman	10	2.0
Trader	142	28.7
Professional	5	1.0
Other	15	3.0
Monthly income (N000)		
<N20 ($55)	48	9.7
N20-50 ($137)	272	55.1
N51-100 ($273)	164	33.2
N101-200 ($546)	10	2.0

Source: Author's field survey, 2019

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The model-fitting criteria produces a likelihood ratio test of the overall model from an intercept only indicating a measure of how much unexplained variability there is in the data and therefore, the difference or change in log-likelihood indicates how much new variance has been explained by the model. The chi-square test tests the decrease in unexplained variance from the baseline model (106.6) to the final model (57.6), which is a difference of 106.6 – 57.6 = 49. This change is significant, which means that our final model explains a significant amount of the original variability (in other words, it's a better fit than the original model). There is contrasting results on the Deviance statistic and Pearson statistics that tests whether the predicted values from the model differ significantly from the observed values. While Pearson indicates that the model is a good fit of the data (p = .55, much higher than .05), the Pearson test indicates the opposite, namely that predicted values are significantly different from the observed values (p < .001). Empty cells as indicated by SPSS warning are responsible and not really a major cause of worry.

The odds of different income levels of income considering cheapness of food to patronise mobile food vendors was 101010626.5 (95% CI, 22473254.2 to 45401287.9) times that of higher income class, a statistically significant effect, Wald $\chi^2(1) = 577.7$, p = .000 (Table 3).

The hypothesis that there is strong statistical relationship between income level and mobile food patronage is upheld at 95% confidence interval.

Furthermore, the odds of student and trader's employment class of respondents considering cheapness of food to patronise mobile food vendors was more significant than other employment classes. For example, the odds of student's patronage is .150 (95% CI, .022 to 1.03) and trader employment which is .089 (95% CI, .013 to .613) times that of artisans, farmers/fishermen, civil/public servants and professionals. This shows a statistically significant effect for student employment Wald $\chi2(1) = 6.038$, $p = .014$, then for artisan, Wald $\chi2(1) = 3.714$, $p = .054$. However, noteworthy is the fact that different employment class revealed different level of patronage and thus a statistical significance at 95% confidence level.

Additionally, the odds of marital status of respondents considering cheapness of food to patronise mobile food vendors did not reveal statistical significance even though there are differentials between them. For example, 'not married' and 'divorced' marital status shows more significance with odds of 3776264.3 and 2419689.5 respectively compared to .251 for married and 1.00 for widowed.

Table 3. Multinomial logistic regression results

Variable	B (SE)	95% CI for Odds Ratio Lower	Odds Ratio	Upper
[Cheapness food = 1.00]	34.2 (1526.5)	-2957.6	737384363770248.0	3026.1
Age	.39 (.39)	-.4	1.483	1.2
[monthly income=1.00]	18.4 (.77)	16.9	101010626.6	19.9
[monthly income=2.00]	1.6 (953.5)	-1867.2	4.772	1870.3
[monthly income=3.00]	17.5 (.00)	17.5	39947940.7	17.5
[monthly income=4.00]	0a	.	1.000	.
[employment type=1.00]	-17.3 (1267.8)	-2502.1	.000	2467.5
[employment type=2.00]	-1.9 (.98)	-3.8	.152	.03
[employment type=3.00]	-18.4 (1720.3)	-3390.2	.000	3353.4
[employment type=4.00]	-3.4 (5704.8)	-11184.5	.034	11177.7
[employment type=5.00]	-2.4 (.98)	-4.3	.089	-.5
[employment type=6.00]	-3.2 (8025.2)	-15732.4	.040	15725.9
[employment type=7.00]	0a	.	1.000	.
[marital status=1.00]	-1.4 (3122.6)	-6121.6	.251	6118.8
[marital status=2.00]	15.1 (1526.5)	-2976.7	3776264.3	3006.9
[marital status=3.00]	14.7 (1526.5)	-2977.1	2419689.5	3006.5
[marital status=4.00]	0a		1.000	

Note: $R^2 = .095$ (Cox & Snell), .42 (Nagelkerke). Model $\chi^2(13) = 49.08$, $p < .05$,

The null hypothesis that there is no statistical significance between marital status and mobile food patronage is upheld at 95% CI, Wald $\chi^2(1) = .000$, $p = .992$. An increase in age (expressed in years) was not associated with an increase in the odds of considering mobile food cheap, with an odds ratio of 1.483 (95% CI, .690 to 3.186), Wald $\chi^2(1) = 1.021$, $p > .001$. Therefore, the null that there is no statistical effect of age on considering cheapness of mobile food is upheld at 95% confidence interval.

Mobile food vendoring characteristics

Basic characteristics of mobile food vendoring were acquired from personal interview of operators. All interviewed operators are female members; however, there are exceptional cases where men exist especially stationary carts which show larger scope of food sale. Average age of operators is 30years of mostly married women and a few widowed or unmarried women (Table 4). About 60 per cent of the operators have attained secondary school level while 20 per cent are educated at primary and diploma level. This level of educational attainment is believed to have a strong relationship with this trade largely considered as informal and un-professional. All operators are mobile with small start-up capital ranging from N5,000 ($15) to N20,000 ($60) whose value has grown over an overage period of 6months of operation to about N20,000 to N100,000 ($60 to $300). The operators are quite aware of the average distances though in 'poles' they cover in a day which was reconciled with their trajectories and found to be very close upon conversion. Furthermore, vendors asserted that the average cost of food sold to maximum customers ranges between N200-400 during mostly all days of the week except Sundays.

Major land uses where most stops were recorded include uncompleted building/construction sites (34.3 per cent); mechanic workshops (27.4 per cent); bus terminals/motor parks (19 per cent); MDAs (7.2 per cent); school/institution gates (4 per cent), market areas (6.1 per cent); and other (3 per cent). The implications of these finding support the argument that most breakfast-related trips are minimised by food vendors. This survey indicates an average of 950 food-based morning trips discouraged by 10 vendors.

Earlier result revealed that most patronage is from students and artisans, however, with more stops at building/construction sites, it can be speculated that most young people in building sites are actually students who supports their living cost with such menial jobs. Operators indicated trade-inherent dangers to include harassment, debt, accidents, weather conditions especially rainfall, and sanitary conditions in many of their stops as major operational challenges confronting them.

Sustainable-city policy implications of mobile food, conclusions and recommendations

The Brundtland Commission in 1987 defined sustainable development as 'development that meets the needs of the present, without compromising the ability of future generations to meet their own needs'. In 1991, the United Nations Centre for Human Settlements (UNCHS) Sustainable Cities Programme in 1991 further attempted to define a sustainable city as one "where achievements in social, economic and physical development are made to last" (United Nations Human Settlements Programme (UN-Habitat, 1991). This definition is often thought of as neglecting the fact that a sustainable city must have a low ecological footprint and reduce risk transfer, economic, social and environmental, to other locations and into the future (Rees, 1992). Sustainable cities should therefore meet their "inhabitants' development needs without imposing unsustainable demands on local or global natural resources and systems" (Satterthwaite, 1992). Sustainable development should focus on better living and working conditions for the poor, including affordable access to, and improvement of access to quality and affordable food, housing, health care, water and sanitation, and electricity.

Table 4. Characteristics of mobile food operators

S/n	Gender	Age	Marital status	Education	Operation mode	Start-up capital	Value of invest	Average dist/day (km)
1	Female	28	Married	Secondary	Mobile	5,000	20,000	2.7
2	Female	29	Married	Secondary	Mobile	10,000	50,000	2.9
3	Female	24	Divorced	Secondary	Mobile	10,000	50,000	3.2
4	Female	37	Widowed	Secondary	Mobile	5,000	30,000	3.1
5	Female	40	Widowed	Primary	Mobile	15,000	60,000	3.3
6	Female	36	Married	Secondary	Mobile	20,000	100,00	1.9
7	Female	24	Unmarried	Diploma	Mobile	10,000	50,000	2.2
8	Female	27	Married	Diploma	Mobile	15,000	100,000	3.1
9	Female	34	Married	Secondary	Mobile	20,000	70,000	1.8
10	Female	29	Married	Primary	Mobile	10,000	50,000	1.7

One of the key issues in contemporary urban planning in the Third World is the food planning debate where basic questions such as, who are the food planners, where is food located in the city, what is the role of mobile food market in the sustainability of the urban environment, among others, are raised. The food planning community is becoming profoundly diverse and multidimensional in nature, made of as it is of every profession which has a food-related interest, as well as NGOs that focus on social justice, public health, food security and ecological causes, all of whom are striving to make food policy-making a more open and democratic process according to Lang et al., (2009). Just like urban agriculture that was once confined to a narrow range of producer interests, food planning policy is slowly but surely being prised open by food planners in the broadest sense of the term. Many interest groups like non-governmental organisations, consumer protection groups and citizen-based organizations exist in food planning. Notwithstanding, social justice, ecological integrity and public health, appears to dominate as principal concerns of the new food planners. The fundamental argument remains whether locally produced food is the most ecologically sustainable due to its lower food miles and assumed to be an index of a product's carbon footprint or not. Another argument has often been the 'variety is the spice of life' concept wherein the food vendors are observed to sell 'orishi rishi-everything' and at rates that are unbelievably affordable. This is apart from the freshness of the food which they sell mostly in the morning and the overwhelming patronage they enjoy with implication to food-related trip making the city. The reality has often been the fact that 'that product lifecycle analysis is the only rigorous way to measure the carbon footprint of a product, and transport is just one factor in the total carbon count', according to Morgan (2010). Food planning efforts therefore needs to embrace a cosmopolitan conception of sustainability in which highly affordable locally-produced food is given a pride of planning place and not relegated to a low-income earner's affair.

In particular, there is an acknowledgement of the fact that the urbanization process in least developed countries especially of sub- Saharan Africa such as Nigeria may have occurred with negative or almost no economic growth, which

ultimately implies an increased precariousness of urban life. The findings in this paper supports the argument that there should be a concerted effort to plan and regulate the informal food market as a source of livelihood for the urban low-income earners, while guaranteeing safety of mobile food users. The argument for sustainability of urban carbon footprint is also supported by this paper in lieu of the high number of mobile food vendors in existence in the city and the number of users they serve at neighbourhood or on-site proximity, thus reducing trip making with overall impact of reduced carbon emission from traffic congestion.

Since cities are constantly evolving as a result of dynamic processes heightened by population mobility, natural population growth, socioeconomic development, environmental changes and local and national policies, it is concluded that a well-regulated food industry holds that capacity for urban sustainability. It is further recommended that the variety of food sold by mobile food vendors be investigated to examine the nutritional adequacy of this so called 'variety' as the second most important reason for mobile food patronage. A deliberate effort to regularise the mobile food industry will guarantee operational safety for vendors harassment, debt, accidents, weather conditions especially rainfall and restore the needed dignity of labour in the industry. The fact that most clients are students and artisans further suggest a strengthening of this industry to enhance the quality of wellbeing for maximum productivity.

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