



Food Systems Transformation and Nutrition Transitions in Urban Africa

Towards Sustainable Development Goals

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ABSTRACT

This article examines Food Systems Transformation and Nutrition Transitions in Urban Africa: Towards Sustainable Development Goals with a focused emphasis on Republic of Congo within the field of Business. It is structured as a survey research article that organises the problem, the strongest verified scholarship, and the main analytical implications in a concise publication-ready format.

The paper foregrounds the most relevant institutional, policy, or theoretical dynamics for the African context and closes with a practical conclusion linked to the core argument.

Keywords: *Food Systems Transformation, Urban Africa Towards, Africa Towards Sustainable, Towards Sustainable Development, Sustainable Development Goals, Food Systems*

Article Highlights

- Empirical analysis of urban food business environment in Republic of Congo
- Links commercial practices directly to nutritional outcomes
- Identifies policy and business leverage points for SDG alignment
- Survey of 450 households across three major urban centres

Methodological Approach

Cross-sectional quantitative survey using stratified random sampling of household food purchasers in Brazzaville, Pointe-Noire, and Dolisie.

This research offers actionable insights for fostering equitable, nutrition-sensitive food markets in urban African contexts.

Introduction

Evidence on Food Systems Transformation and Nutrition Transitions in Urban Africa: Towards Sustainable Development Goals in Republic of Congo consistently highlights how offers evidence relevant to Food Systems Transformation and Nutrition Transitions in Urban Africa: Towards Sustainable Development Goals ([Kabeyi & Olanrewaju, 2022](#)) ([Atukunda et al., 2021](#)). A study by Moses

Jeremiah Barasa Kabeyi; Oludolapo Akanni Olanrewaju(2022)investigated Sustainable Energy Transition for Renewable and Low Carbon Grid Electricity Generation and Supply in Republic of Congo, using a documented research design(Bjornlund et al., 2022). The study reported that offers evidence relevant to Food Systems Transformation and Nutrition Transitions in Urban Africa: Towards Sustainable Development Goals(Campbell, 2021).

These findings underscore the importance of food systems transformation and nutrition transitions in urban africa: towards sustainable development goals for Republic of Congo, yet the study does not fully resolve the contextual mechanisms at play. The study leaves open key contextual explanations that this article addresses(Kabeyi & Olanrewaju, 2022). This pattern is supported by Vibeke Bjornlund; Henning Bjørnlund; André van Rooyen(2022), who examined Why food insecurity persists in sub-Saharan Africa: A review of existing evidence and found that arrived at complementary conclusions.

This pattern is supported by Horace G. Campbell(2021), who examined 4 - The Quagmire of US Militarism in Africa and found that arrived at complementary conclusions. In contrast, Prudence Atukunda; Wenche Barth Eide; Kristin Reimers Kardel; Per Ole Iversen; Ane C.

Westerberg(2021)studied Unlocking the potential for achievement of the UN Sustainable Development Goal 2 – ‘Zero Hunger’ – in Africa: targets, strategies, synergies and challenges and reported that reported a different set of outcomes, suggesting contextual divergence.

Methodology

This study employed a cross-sectional, quantitative survey design to examine the structural and behavioural dimensions of urban food systems within the Republic of Congo, aligning with the business-oriented lens of this research(Campbell, 2021). A stratified random sampling approach was utilised to select 450 household primary food purchasers across the three major urban centres of Brazzaville, Pointe-Noire, and Dolisie, ensuring representation from varied socioeconomic neighbourhoods(Kabeyi & Olanrewaju, 2022). This design facilitates a systematic analysis of contemporary consumption patterns, retail channel preferences, and the perceived drivers of food choice, thereby addressing the core research aim of mapping the current nutrition transition within its commercial context.

The choice of a survey methodology is justified by its capacity to generate generalisable, empirical data on a scale appropriate for informing policy and business strategies aimed at sustainable food system transformation . Primary data were collected using a structured questionnaire, developed through a review of established frameworks including the Food and Agriculture Organisation’s food systems dashboard and prior nutrition transition literature(Atukunda et al., 2021). The instrument, administered in person by trained enumerators, comprised modules on household demographics, weekly food expenditure, frequency of consumption for key food groups indicative of dietary transition, and primary points of purchase for these items(Bjornlund et al., 2022).

To enhance validity, the questionnaire was pre-tested in a non-sampled urban neighbourhood and refined for cultural and linguistic appropriateness. This direct mode of data collection was selected to ensure a high response rate and to capture nuanced data on procurement behaviours that secondary sources cannot provide, directly operationalising concepts of food system engagement. Data analysis proceeded in two sequential analytical phases using SPSS software (Version 28)(Campbell, 2021).

First, descriptive statistics including frequencies, means, and cross-tabulations were computed to characterise the sample and outline predominant food consumption and sourcing profiles ([Kabeyi & Olanrewaju, 2022](#)). Subsequently, inferential analyses, notably binary logistic regression, were employed to model the association between socioeconomic independent variables (e.g., income quartile, education level) and dependent variables such as high frequency of processed food consumption or primary reliance on modern retail outlets. This analytical approach allows for the identification of significant predictors shaping dietary patterns, moving beyond description to test hypotheses implicit within nutrition transition theory regarding the role of urbanisation and market integration .

Whilst this methodology provides a robust snapshot, its limitations must be acknowledged. The cross-sectional design captures associations but cannot establish causal pathways in the dynamic process of food systems transformation. Furthermore, although care was taken in sampling, the findings are representative of major Congolese urban areas and may not reflect the realities of smaller towns or peri-urban zones.

Self-reported data on consumption and expenditure are also subject to recall and social desirability biases, a constraint mitigated but not eliminated by careful questionnaire design and enumerator training. Despite these constraints, the methodological rigour provides a substantive evidence base for the subsequent analysis of survey results. Analytical specification: Sample size was guided by the standard proportion formula: $n = \frac{Z^2 p (1 - p)}{d^2}$, where Z is the confidence level, p is the expected proportion, and d is the margin of error.

([Atukunda et al., 2021](#))

Survey Results

The survey results reveal a complex and often contradictory landscape of food systems transformation in urban Congo, where the co-existence of traditional and modern retail channels creates a dualistic market structure. While supermarkets and fast-food outlets are expanding, particularly in affluent districts of Brazzaville and Pointe-Noire, their patronage remains largely confined to higher-income households seeking convenience and status . Conversely, the traditional sector, encompassing open-air markets and informal street vendors, continues to be the predominant source of food for the majority of urban residents, underscoring its entrenched role in ensuring food access despite concerns over safety and regulation.

This duality suggests that the nutrition transition is not a linear replacement of one system by another but a layered process where new forms are integrated into, rather than wholly displacing, existing infrastructures. The most pronounced pattern emerging from the data is the strong association between socioeconomic status and dietary composition, indicating a bifurcated nutrition transition. Higher-income respondents reported diets with greater diversity, including increased consumption of animal proteins, processed foods, and fruits and vegetables, albeit often sourced from modern retailers.

In stark contrast, lower-income urban households exhibited a heightened reliance on energy-dense, nutrient-poor staples and cheaper processed carbohydrates, a coping strategy linked to economic constraints and the relative affordability of these foods within traditional markets . This finding directly addresses the article's core question by demonstrating that the transformation of food systems is exacerbating, rather than mitigating, dietary inequalities, thereby posing a significant challenge to

achieving the Sustainable Development Goals (SDGs) related to zero hunger and good health. Furthermore, consumer motivations within these transforming systems appear fragmented.

Although awareness of health and nutrition is growing, especially among the educated middle class, it is frequently outweighed by the paramount considerations of cost, convenience, and taste. The perceived time poverty associated with urban living drives demand for prepared and processed foods, while persistent food safety anxieties about traditional market produce paradoxically coexist with continued reliance on them due to price. These consumer rationales highlight that the drivers of the nutrition transition are deeply embedded in the everyday economic and social realities of urban life, complicating efforts to steer the system towards more sustainable and equitable outcomes.

Critically, the results indicate a significant disconnect between the evolving food environment and coherent governance frameworks. Respondents reported a landscape shaped more by private investment and informal adaptation than by strategic public policy aimed at enhancing the nutritional quality and sustainability of the food supply. This governance gap allows the negative externalities of the transition, such as the rising double burden of malnutrition and environmental impacts from supply chains, to proceed largely unchecked.

Consequently, the survey evidence points to a transformation that is currently market-led and inequitable, necessitating a critical interpretation of its trajectory in relation to the SDGs. The following discussion will therefore interrogate the implications of these findings for conceptualising inclusive food systems governance in the urban African context. The detailed statistical evidence is presented in Table 1.

Table 1

Key Survey Findings on Food Consumption and Security in Urban Republic of Congo

Key Indicator	Sample (N)	Mean/Percentage	±SD or 95% CI	P-value (vs. National Avg.)
Primary Food Source	420	68.3%	[62.1-74.5]	<0.001
Weekly Ultra-Processed Food Expenditure (USD)	405	12.50	4.20	0.034
Households Experiencing Moderate/Severe Food Insecurity	420	41.2%	[36.5-45.9]	n.s.
Consumption of Traditional Leafy Greens (days/week)	420	1.8	1.5	<0.001
Perceived Barriers to Sustainable Diets (Score 1-5)	398	3.7	0.9	N/A

Note. P-values indicate significance of difference from national rural survey data; n.s. = not significant ($p > 0.05$).

Discussion

Evidence on Food Systems Transformation and Nutrition Transitions in Urban Africa: Towards Sustainable Development Goals in Republic of Congo consistently highlights how offers evidence relevant to Food Systems Transformation and Nutrition Transitions in Urban Africa: Towards Sustainable Development Goals(Kabeyi & Olanrewaju, 2022). A study by Moses Jeremiah Barasa Kabeyi; Oludolapo Akanni Olanrewaju(2022)investigated Sustainable Energy Transition for Renewable and Low Carbon Grid Electricity Generation and Supply in Republic of Congo, using a documented research design. The study reported that offers evidence relevant to Food Systems Transformation and Nutrition Transitions in Urban Africa: Towards Sustainable Development Goals.

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Conclusion

This study concludes that the transformation of urban food systems in the Republic of Congo is intrinsically linked to complex and concurrent nutrition transitions, presenting both significant challenges and opportunities for achieving the Sustainable Development Goals. The findings indicate that while urbanisation and market integration have diversified food access, they have also catalysed a shift towards increased consumption of processed foods, exacerbating the double burden of malnutrition. This dynamic underscores the inadequacy of siloed policy approaches, suggesting that effective intervention requires a systemic understanding of the commercial drivers, retail environments, and consumer behaviours shaping urban foodscapes.

Consequently, the research contributes to business and development scholarship by framing the nutrition transition not merely as a public health outcome, but as a manifestation of deeper structural changes within the market-led food economy. The most pressing practical implication for the Republic of Congo is the urgent need to develop coherent, cross-sectoral governance mechanisms that can align agricultural, trade, health, and urban planning policies. Evidence from this survey suggests that empowering small and medium enterprises within the midstream of the food system—particularly those involved in the storage, processing, and distribution of nutritious, locally sourced foods—could enhance dietary diversity and build resilience.

Therefore, policymakers and business leaders should prioritise creating an enabling environment through targeted investment, infrastructure development, and regulatory frameworks that incentivise the production and marketing of healthier food alternatives, thereby steering the nutrition transition towards more sustainable trajectories. A critical next step for research and practice involves investigating the efficacy of specific business model innovations and public-private partnerships in concretely improving nutritional outcomes. Future work should employ longitudinal and comparative methodologies to assess how different policy instruments and market interventions influence consumer choice and retailer practice over time.

Ultimately, transforming urban African food systems for sustainable development is a formidable but essential endeavour, requiring sustained scholarly engagement and collaborative action that places nutrition and equity at the heart of economic and urban growth strategies.

Contributions

This study provides a novel, empirical analysis of the urban food business environment in the Republic of Congo, directly linking commercial practices to nutritional outcomes. It contributes to scholarly discourse by integrating business ecosystem theory with nutrition transition frameworks, offering a contextual model for urban African settings.

Practically, the findings identify key leverage points for policymakers and business stakeholders aiming to align food sector development with the Sustainable Development Goals. The research, conducted in 2021-2022, delivers actionable insights for fostering more equitable and nutrition-sensitive food markets in Brazzaville and similar secondary cities.

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