

Exploring supply chain issues affecting food access and security among urban poor in South Africa

Food security
for urban poor
and SCM

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Abstract

Purpose – Access to food through retail supply chain distribution can vary significantly among the urban poor and leads to household food insecurity. The paper explores this sustainable supply chain phenomenon through a field study among South Africa's urban poor.

Design/methodology/approach – Urban metabolic flows is the theoretical basis in the context of supply chain management (SCM). The field study comprised 59 semi-structured interviews in one South African township. Data were recorded, transcribed and translated, and coded using NVivo 12 to provide an inventory of eight themes categorized and patterned from the analysis.

Findings – Findings indicate societal factors play a significant role affecting food distribution, access and security from a spatial perspective of retail outlet locations and a nutritional standpoint regarding quality and quantity of food.

Research limitations/implications – The study is exploratory in one township, and while rigorously conducted, the generalizability of findings is limited to this context.

Practical implications – The study practically contributes by providing guidance for food retailers and policymakers to include nutritional guidelines in their distribution planning, as well as the dynamics of diverse neighbourhoods that exist in modern urban contexts.

Social implications – New forms of retail food distribution can provide better security and access to food for the urban poor, contributing to Sustainable Development Goals (SDGs) 2 Zero Hunger and 11 Liveable Cities.

Originality/value – The study is interdisciplinary and contributes by linking UN SDGs and SCM through urban metabolic flows from development studies as an overarching framework to enable analysis of relationships between physical, social and economic factors in the urban environment.

Keywords Food access and security, Sustainable Development Goals, Food retail supply chain distribution, Urban metabolic flows

Paper type Research paper

1. Introduction

Food security is defined as all people having physical, social and economic access to sufficient, safe and nutritious food to maintain a healthy and active life (FAO, 2009). Two United Nations' Sustainable Development Goals (SDGs) act as a platform highlighting the complex nature of food security: SDG 2 Zero Hunger and SDG 11 Liveable Cities. SDG 2

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provides objectives related to agricultural production and nutritional levels (Veldhuizen *et al.*, 2020) while SDG 11 contain an urban goal striving for liveable cities, which further strengthens the notion of urban significance in global development (Barnett and Parnell, 2016). However, research on this phenomenon is lacking despite over half the global population residing in urban environments.

The concept of urban is itself very diverse. Social, political and historical factors influence the fabric between different urban contexts as well as within a single city. Access to food supply chains varies significantly within urban areas with some areas marginalized by a lack of formal retail outlets, leading to notable levels of household food insecurity. Juxtaposed with precarious living conditions of many poor urban areas, urban food insecurity is thus tantamount to a humanitarian crisis, but often gets bypassed by other urban concerns (Maxwell, 1999; Haysom, 2015). We therefore approach urban food security in this paper from an interdisciplinary perspective grounded in the notion that urban dwellers are predominately net food buyers and therefore dependant on the retail food supply chain.

Causes of food access and security are ambiguous, man-made and their onset slow (Van Wassenhove, 2006), which makes it a challenging phenomenon to address. Additionally, the complexity of the global food system further exacerbates notions of power in urban food retail (Tuomala, 2020). Local food supply chains are increasingly marginalized due to large global retailers dominating the market (Maertens *et al.*, 2012). Such retailers are managed from a Global North [1] perspective; hence, subtleties of different contexts may be missed.

The sustainable supply chain management (SSCM) literature is expanding to include external stakeholder pressure, diverse contexts and social issues in addition to economic and environmental sustainability (Touboulic and Walker, 2015). Nonetheless, social issues remain under researched in SSCM with the urban poor excluded from regular supply chain activities (Yawar and Seuring, 2017), and such studies, which employ a Global North perspective on sustainability, ignore different nuances of food supply chain dynamics in poor urban neighbourhoods in the Global South (Pagell and Shevchenko, 2009; Touboulic and Ejodame, 2016).

SDG 2 insufficiently addresses much of the supply chain between production and household nutrition or consumption (Das *et al.*, 2018). Reardon (2015) and Veldhuizen *et al.* (2020) refer to this as the “hidden” or “missing” middle, respectively, and these concepts refer to a disconnect between production and nutrition and the array of processes that ensure food reaches the consumer, i.e. the supply chain. Further, research and measurement of SDGs are done largely via quantitative metrics, leaving out social, economic, cultural and historical nuances, which affect diets and vary significantly in urban environment contexts. The notion of “urban” is heterogenous and therefore difficult to define in exact terms. This poses issues in how to measure and assess the progress made by SDG 11 (Caprotti *et al.*, 2017). The SDGs therefore present a unique opportunity and starting point to inform interdisciplinary and “inter-goal” research and practical action to address these shortcomings.

Our objective is to extend research on these issues to understand factors impacting food access and security among the urban poor. To achieve that objective, we explore this phenomenon through three research questions pertaining to how spatial and financial factors influence urban food shopping dynamics, which aspects of the triple burden of malnourishment (TBM) are challenging factors, and how these two sets of factors affect food retail supply chain management (SCM) in an urban poor township neighbourhood in South Africa. Following is a literature review discussing these factors before presenting urban metabolic flows from development studies as a theoretical framework for our exploratory investigation. Then, the method for the empirical study is presented before reporting findings from our analysis. Lastly, we conclude the paper with contributions.

2. Literature review

2.1 *Spatial and financial factors*

Urban dwellers generally access their nourishment needs through the market (Kimani-Murage *et al.*, 2014). Household food insecurity therefore stems from financial or spatial constraints (Battersby and Crush, 2014). Financial constraints refer to inadequate entitlements, where malnourishment is caused by a lack of the means to acquire food and not insufficient availability (Sen, 1981). Spatial constraints are linked to financial prowess as limited entitlements can force people to live in marginalized neighbourhoods, characterized, for example, by precarious housing structures, inadequate access to basic services and overcrowding (Fox, 2014). As urban populations continue to grow, so do poor and informal neighbourhoods in cities. SCM's contribution could be valuable in determining inclusive distribution networks and retail configurations.

An important debate in sustainable urban development across the globe is the standardization of cities and how that can be achieved. Many actors promote an urban agenda, but do not all share the same vision and understanding of the city's role on the one hand nor acknowledge context dependency of urban development on the other (Barnett and Parnell, 2016). For example, megacities with populations of tens of millions have different needs than smaller towns and rural regions.

2.2 *The triple burden of malnutrition*

Consumption of fresh and nutritious food is driven by supply and demand but their relationship and/or causality are not always apparent, as in the concept of a "food desert" (Weatherspoon *et al.*, 2015). A food desert is an area where fresh and healthy food is unavailable for purchase for residents due to spatial constraints (Wrigley, 2002). Whether these deserts form due to lack of demand, i.e. people would not buy fresh produce even if it was available, or supply, i.e. retailers do not include fresh produce in their selection, is a complex and context dependant question. In the Global North, high rates of "over nourishment" are considered a part of the food desert definition owing to low consumption of nutritious produce and a high prevalence of processed, energy dense foods, resulting in non-communicable diseases, such as obesity and diabetes (Weatherspoon *et al.*, 2015).

In the Global South, residents in a food desert are more likely to suffer from TBM, which encompasses undernourishment, micronutrient deficiency and over nourishment (Gómez and Ricketts, 2013). The TBM highlights the importance of widening the food desert focus from spatial factors of availability and lack of outlets to include access and utilization factors as well (Battersby, 2012). The production and agriculture-oriented approach is more focused on large-scale instances of famine where entire communities suffer from simultaneous food insecurity, whereas in urban areas the occurrences are subtle and affect households and even individuals in different ways (Maxwell, 1999). Access and utilization do not pertain solely to the fundamental availability of food, but rather the unique spatial and financial constraints households may be facing. Additionally, demographic aspects, such as education level and social class, influence utilization of available food (Weatherspoon *et al.*, 2015). Therefore, poor urban communities are more likely to suffer from any of the three burdens than their wealthier counterparts (Gómez and Ricketts, 2013).

2.3 *SSCM in a food security context*

Various calls have been made for SCM research to extend beyond its corporate and technical roots into more holistic contexts (Touboulis and McCarthy, 2020; Van Wassenhove, 2019). Further, SSCM has been growing as a research theme over the past decade, but this work has largely been focused on environmental and economic sustainability, especially in an SCM context (Grant *et al.*, 2017), as opposed to social sustainability.

Yawar and Seuring (2017) indicate that social issues only affecting firms' short-term performance are of managerial concern, while larger underlying issues with potential long-term societal repercussions are overlooked. Short-term concerns include factors related to health and safety of employees, as well as labour conditions of individual companies. The SCM community could thus have a pivotal role through including more of the urban poor and informal economies in mainstream research, thus improving social sustainability for all parties involved. For example, Duarte *et al.* (2019) explore the challenges of last mile delivery in a Brazilian slum, touching upon accessibility issues in an informal context. Their study is a precursor for more interdisciplinary research where SCM and development literature address both the practical problem, i.e. access difficulties, as well as some of the deeper societal issues, such as marginalization and food insecurity.

SCM research is largely undertaken in a Global North context (Gupta and Gupta, 2019) that also dominates the SSCM discourse even though supply chains are global and include extremely diverse stakeholders (Silvestre, 2015; Touboulic and Ejdame, 2016; Yawar and Seuring, 2017). Global South economies represent new markets for multinational corporations but entering these markets can be challenging (Amine and Tanfous, 2012) as dynamics in them differ significantly from the Global North, where multinational corporations are more accustomed to functioning (Nandonde and Kuada, 2016).

Food retail and distribution systems have been modernizing over the last four decades, shifting from small independently owned outlets to a landscape dominated by large retail chains (Lu and Reardon, 2018), causing an imbalance in the power relationships within the supply chain (Hingley, 2005). Reardon and Timmer (2014) suggest "interlinked transformations" are also taking place in the Global South that contribute to the grocery retail shift. Diets are shifting more towards the Global North model in the Global South with increased consumption of processed food and higher demand for meat (Gómez and Ricketts, 2013; Reardon and Timmer, 2014). Supermarkets may inadvertently decrease the consumption of traditional healthy foods as they make processed food more available financially and spatially (Wertheim-Heck *et al.*, 2019). The urban context exacerbates the significance of access, as urban dwellers are net food buyers (Kimani-Murage *et al.*, 2014). Financial capability and the spatial distribution of food retail outlets are therefore deciding factors in who is food secure and who is not.

Urbanization also changes the dynamic as people shift from subsistence farming and lower food expenditure in rural areas to market dependency in cities (Smit, 2016). The post-farm segment of the supply chain, i.e. the middle between production and consumption that includes logistics and retail, has been transformed due to liberalization of trade and globalization. This ties in closely with urbanization, as the supply chains in the Global South are generally rural-urban, and many activities in the middle take place in urban areas, as well as incur 50–70% of costs for urban consumers. Modernization and centralization of food supply chains can reduce these costs and decrease instability of supply (Reardon and Timmer, 2014). On the one hand, this has improved product selection for urban consumers, provided higher standards of food safety and hygiene, and offered lower prices for the same goods as micro or independent retailers (Reardon and Minten, 2011). On the other hand, due to customer segmentation on a demographic and supply basis (Hollywood *et al.*, 2007), the urban poor are often left under served by the supermarket sector, while the traditional micro-retailers are being pushed out of their businesses (Berger and van Helvoirt, 2018).

Supermarkets are focussing in areas where the demographic is wealthier, and the few outlets that are spatially accessible to poorer urbanites have limited selections of produce (Battersby and Peyton, 2014). Therefore, informal retail sector and micro-retailers are still a relevant part of food shopping in the Global South and poor urban neighbourhoods and fill gaps left by supermarkets (Nandonde and Kuada, 2016). Micro-retailers are located within easy reach, provide a social backdrop for purchasing with for example credit systems and

enable people to purchase food in smaller quantities than formal supermarkets might (Minten *et al.*, 2010; Nandonde and Kuada, 2016).

Large global retailers have been able to penetrate the Global South largely due to foreign direct investment and liberalization of trade (Nguyen *et al.*, 2013). However, they are not adapting to local grocery shopping habits and dynamics, which can lead to business failure (Amine and Tanfous, 2012). Further, there are distribution issues from large retailers to consumers in marginal or poor neighbourhoods. Food retailers in the Global North streamlined their supply chains in the 1980s to improve operational efficiencies. They centralized distribution, which has led to them controlling the retail food supply chain (Fernie and Grant, 2008). However, this power shift to supermarkets also created an imbalance in food supply chains affecting sources of supply and thus availability of choice for consumers (Hingley, 2005).

Solutions in the Global North proposed and implemented for consumer markets and the formal and informal retail sector include consumer-owned co-operatives, who offer differentiation and “*socially embedded local food supply and marketing that [large retailers] do not, or cannot fill*” (Hingley, 2010, p. 111), and “super middlemen”, who can be “*at the hub of triadic links between primary producer, middleman [or wholesaler] and retailer*” (Hingley, 2005, p. 71), including micro-retailers. Such solutions engender better food distribution not only for all forms of retailers but consumers as well; however, their applications in the Global South have been limited.

Kalkanci *et al.* (2019) refer to “inclusive innovation” in SCM as a way to increase social sustainability in an operational context. They specifically discuss food retail as an example of a field that would benefit from more inclusive SCM, distribution and retail networks, especially in terms of which customers to serve. However, the main hindrance to serving urban poor neighbourhoods is the perceived trade-off it presents with making a reasonable profit. In some contexts, operating in lower income neighbourhoods could in fact prove to be quite lucrative if the grocery dynamics of a neighbourhood are known well enough.

2.4 Context of South Africa

South Africa has a well-developed agribusiness sector, which provides a significant number of jobs and is the largest exporter in Africa (USDA, 2018). However, while South Africa produces enough food to feed all its citizens, it has high levels of household food insecurity (Mushunje *et al.*, 2015). Food retail in South Africa is highly concentrated; five large chains (both domestic and international) dominate the market with some independent companies challenging in certain areas (Competition Commission, 2019). The USDA (2018), using Euromonitor data, estimated the food retail market to be worth almost \$45 bn in 2017. They divide the sector into “modern food retail”, which consists of supermarkets of different sizes and convenience stores, and “informal” or “traditional” retail, which consists of “spaza” shops (neighbourhood tuck shops discussed further in section 4.3) and other independent food retailers. While grocery retail modernization has been ongoing in South Africa for some time (Battersby and Peyton, 2014), traditional retail still holds its ground with 38% market share (USDA, 2018). Greenberg (2017) indicates that estimates of the number of traditional outlets run anywhere between 80,000 and 400,000, depending on which data one is looking at, which is a fivefold difference, exemplifying the heterogeneity and complexity of the sector.

Grocery retail in South Africa is highly divided among demographic segments, including township dwellers as a separate segment. The townships are a remnant of South Africa’s apartheid and represent one of the most prolific examples of racially based residential segregation in recent history. Despite formal abolishment of apartheid, urban areas remain segregated according to race (McLennan *et al.*, 2016). Townships mostly inhabited by Black Africans dominate the outskirts of cities and pockets within them; shanty towns juxtaposed

with gated communities symbolize the levels of inequality in a relatively small geographical area. Racial factors underlie inequality in South Africa, especially in urban areas where different groups live in proximity to one other (McLennan *et al.*, 2016).

While a food desert is a useful conceptualization of the spatial nature of food insecurity, it is insufficient for a context as dynamic and complex as South Africa. Battersby and Crush (2014) suggest the concept be updated to reflect the complexity of the foodscapes people face in these contexts, where a supermarket is not a primary source of food, and daily life is not confined to a single neighbourhood but encompasses long commutes and food shopping done enroute. As well, in urban South Africa, TBM and related non-communicable diseases are increasing rapidly, particularly in areas where financial and spatial access to healthy food is limited (Battersby and McLachlan, 2013). However, food security agendas mostly focus on ensuring fundamental availability through increased agricultural production rather than strengthening distribution networks or supply chains (Battersby and Crush, 2014).

2.5 Research questions

The background above highlights the complex- and context-dependant nature of urban food security research. SDGs 2 and 11 provide a broad platform to approach such issues from several angles and juxtaposing them with SCM is a novel approach to investigate food security. Our study thus has three specific research questions to address our objective to understand determinants impacting food access and security among South Africa's urban poor.

- (1) How do spatial and financial constraints influence consumer food shopping dynamics in an urban poor context?
- (2) Which aspects of the TBM represent the biggest challenges in this context?
- (3) How do these factors affect food retail SCM in this context and what are some potential solutions?

Figure 1 provides a conceptual framework for the exploratory empirical study undertaken. The inter-disciplinary concepts of the SDGs and food retail SCM related to food access and security are investigated through the theoretical lens of urban metabolic flows in the context of South Africa. Due to little previous research in these areas for our investigation, we selected an inductive, exploratory approach using a qualitative case study. We discuss our methodology and research methods in the next section.

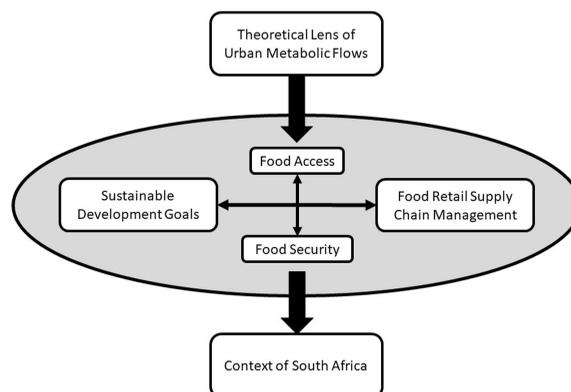


Figure 1.
Conceptual framework
for this study

3. Research methodology and methods

3.1 *Urban metabolic flows as a theoretical framework*

Holland (2014) suggests that an interdisciplinarity approach is better able to synthesize or integrate knowledge from different domains. We do so here with SCM as our recipient discipline for synthesis and development studies, specifically urban metabolic flows, as our referent discipline.

World-systems analysis divides global society into a “core” and a “periphery” based on their stage of development, power dynamics and dependence on one another for resources (Wallerstein, 1974). Within a food retail context, corporate retailers are the “core”, wielding centralized economic and political power and therefore dominating the market. The “periphery”, i.e. informal and traditional retailers that are abundant in an urban poor context, is fragmented and not organized around a central entity (Greenberg, 2017). This dynamic prevents the “periphery” from developing to their full potential; thus, traditional retailers are considered a backwards system, but at the same time, the “core” views them as a threat to their business model. Adapting this perspective to the urban context brings forward socioeconomic flows that make up the urban environment by forming “metabolisms” to contextualize the underlying factors that come together to form the urban context (Swyngedouw and Heynen, 2003).

Examining this context through these flows requires an interdisciplinary perspective and doing so for urban food security provides insight into why some neighbourhoods are marginalized as well as the parallel systems that form alongside formal supply chains to improve food access. From this perspective, the formal and informal, or “core” and “periphery”, retailers are parallel metabolisms of the same resource, food (Castán Broto *et al.*, 2012). As well, hunger and food insecurity are socially produced from the “core” wielding perceived financial and social power over the “periphery”, dictating who gets to eat and what (Heynen, 2006). A lack of urban food security stems from unequal distribution and governance of resources (Agyeman and McEntee, 2014) and requires reorganizing relationships within a city to achieve equal opportunity for all (Castán Broto *et al.*, 2012). Hence, we use urban metabolism and its flows as a theoretical lens to better understand food access and security in food retail supply chains of the urban poor.

3.2 *Field study method*

The data for this paper were collected in a city in the Western Cape of South Africa following a qualitative field study design (Burgess, 1984). Field studies use observational approaches to conduct social research in a circumscribed environment and are primarily used to understand phenomena and why certain processes occur or do not occur. This is usually achieved through multiple data sources such as primary data comprising interviews and observations and secondary data from desk research or documents (Burgess, 1984).

South Africa is an appropriate context for urban food security research as townships dominate the urban landscape and give inequalities a concrete spatialization. Sampling of interviewees was a combination of purposive and convenience. Township residents were the purposive core of data, but convenience dictated which township and residents were able to participate. Access to the township was gained through collaboration with a non-governmental organization (NGO), which was invaluable as moving around the neighbourhood would have been impossible without local knowledge and guidance due to security issues and high crime rates. Language was another issue as interviews were conducted in English by the research team, but many interviewees spoke Xhosa (the number two language in South Africa after Zulu), and a translator, also an academic, was present to ensure translation rigour.

There are four different types of grocery outlets used by interviewees in the township. First, the small independent and mostly informal neighbourhood tuck shops, or spazas, were a significant source. According to observations during the transit walks through the neighbourhood and as stated by the interviewees, there are numerous spazas in the neighbourhood, which makes accessing them easy as they are located near residential clusters. Second, a formal supermarket is located at the edge of the township in a small shopping centre. The store is a low-income targeted branch of a large grocery retail group, which must remain anonymous for confidentiality reasons. The retailer describes these branches as offering bare-bones necessities for extremely competitive prices. It offers mostly dry, frozen and canned goods, as well as household items, such as cleaning supplies. Its location is convenient in the sense that it is located near transport links and walking distance from a lot of the township. However, as the neighbourhood is on a hill, those living at the top have a long climb. There are no internal public transport systems in the neighbourhood, only into nearby towns via the taxis and the train.

Third, the shopping centre also consists of a separate butcher shop, which is widely used. The butcher shop is part of a meat wholesaler chain and enables people to purchase smaller quantities of fresh meat rather than larger bags of frozen meat. We were unable to interview a representative of the butcher shop. Finally, the larger supermarkets owned by the same group in the nearby town are used to some degree, especially by those who work there. The town is about 2 kilometres from the township, making it a long walk there and back. Many interviewees carefully consider when it is worth it to make the trip and incur related transport costs.

3.3 Data collection

In total, 59 interviews were conducted among residents (RES), NGO beneficiaries (BEN), retail experts (RET) and social workers (SOC) in a small township about an hour outside of Cape Town. For confidentiality and anonymity reasons, we cannot name the specific township. [Table 1](#) provides summary details of the interviewees.

All interviewees had relevant tacit knowledge and practical experience, and each interview lasted between 30 min and over an hour, but in some instances, additional time was used for observations in the township, retail outlet or distribution centre. [Robinson \(2014\)](#) suggests a four-point approach to qualitative sampling, which was followed in this research. First, it was imperative to define criteria on whom to include and exclude in the sampling, followed by establishing a sample size. Sample size was determined through what is ideal, and what is feasible or practical ([Robinson, 2014](#)). Third, the inclusion criteria, i.e. BEN, RES, RET and SOC, were established. The goal was to interview as many representatives for each

| Interviewee group | Acronym | Characteristics |
|-------------------------|-----------|----------------------------------|
| Township residents | RES 1–24 | Living in township, with income |
| NGO beneficiaries | BEN 1–25 | Unemployed women |
| Retail experts | RET 1–3 | Corporate manager, grocery chain |
| | RET 4 | Store manager, grocery chain |
| | RET 5 | Grocery supply chain expert |
| | RET 6 | Spaza owner in township |
| Social workers | SOC 1 | Dietician |
| | SOC 2 | Health worker |
| | SOC 3 | Livelihoods consultant |
| | SOC 4 | Independent social worker |
| <i>Total interviews</i> | <i>59</i> | |

Table 1.
Summary of
interviewees

group as possible within the available resources; hence, a convenience sampling approach was used. Finally, the recruitment of the interviewees took place with sourcing done through the NGO and other local contacts. This process ensured a rigorous and robust approach to sampling, and while the sample consists of individuals in one township, it is appropriate for this exploratory study, and respondents are considered quite representative of residents in all townships.

Out of the six retail (RET) interviewees, four were employed in the same retail group, one of the largest in South Africa with operations across the African Continent. Three (RET1-3) worked in managerial positions while the fourth (RET4) was a store manager in one of the outlets. RET5 is employed elsewhere in retail but has extensive knowledge of food retail supply chains in South Africa.

The sixth (RET6) was a spaza shop owner in the township. The spaza owners were a challenging group to gain access to, as many of them were from outside of South Africa and unwilling to talk to an outside researcher. RET6 is local and familiar with the representatives of the NGO and was therefore approachable. Many attempts were made to engage with other spaza owners but to no avail. This is a shortcoming in the study, but within the time frame and resources available during data collection, it proved infeasible to obtain additional interviewees.

Resident (RES) interviews took place during walks in the township. The NGO staff always approached the residents to ask for interviews regardless of whether they spoke English or not, as an outside researcher would not have had much success doing so. The township was also a challenging backdrop for an outside researcher to gather data due to cultural differences and racial tensions in South Africa. Thus, many resident interviews came from chance encounters on the streets, which is a convenience sample that adds diversity to the interviews.

The BEN group comprised beneficiaries of the collaborating NGO and all unemployed women. The NGO conducts semi-annual check-ups in the schools around the area, weighing and measuring children for signs of malnourishment. They then meet with the families and invite them to their programs. The BEN interviews were done during such programs at the NGO premises. Social workers (SOC1–3) work for the NGO in the township to assist people with food parcels, job searches and different educational workshops. The NGO's core is the school food program to assist children in primary schools who exhibit signs of malnourishment. SOC4 is an independent social worker with various projects around the township.

3.4 Data analysis and validity

Data analysis was conducted following the iterative cycle of [Miles et al. \(2014\)](#) for qualitative data. Data were transcribed and coded into categories using NVivo 12 software. The categories were then analysed and discussed among the research team to identify any discrepancies. This process enhanced inter-rater reliability and data credibility and enabled development of a refined set of categories around issues of food security and access, health and poverty. Finally, selective coding cross-referenced and combined codes to yield eight emergent themes that informed findings. We assessed qualitative research quality in SCM using “trustworthiness” criteria consisting of credibility, transferability, dependability and confirmability ([Halldórsson and Aastrup, 2003](#)). [Table 2](#) summarizes the actions taken to address them, and as a result, we believe the analysis and findings are trustworthy.

4. Findings

This section has five subsections: the first consists of a discussion and table of eight emerging themes. The second relates those themes to SDGs 2 and 11, while the remaining three discuss main findings related to each research question.

Table 2.
Summary of actions
taken to ensure
research rigour

| Measure | Purpose | Action taken |
|-----------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Confirmability | Assurance of the integrity of the findings based on data (interpretations, constructions, assertions, facts, etc.) | Data collected from relevant responders with tacit and active knowledge of grocery retail in South Africa |
| Credibility | Matching constructed realities of respondents to those presented by the evaluator | Multiple respondent types as data sources were used to triangulate emergent findings |
| Dependability | Trackable variance and transparency | NVIVO 12 software used for coding Interview quotations provided Coding scheme is elaborated Open, axial and selective codes used to present findings |
| Transferability | Specifying the context of scope in which research findings can be generalized | Case study research process Sampling of consumers and suppliers in sector of study |

4.1 Themes emerging from findings

Table 3 presents eight central themes emerging from the findings with demonstrative key words for each of the four interviewee groups. The first theme concerns food prices and people’s shopping habits through comparing prices from different outlets and the general prices of products. The second surrounds facilities for cooking and storing food and general living conditions. An important third theme is security and personal safety in the townships as there is abundant violence both domestically and on the streets. The fourth is the habit of buying a bundle of goods, referred to as a hamper, which is very common in the townships

| Theme | BEN | RES | RET | SOC |
|---------------|-------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------|
| Food price | Specials, price comparison, saving money | Specials, price and store comparison | Price competition between chains | Lack of affordable nutritious food |
| Facilities | Lack of storage, no electricity, paraffin stove | Fridge, cooking facilities | Unawareness of township living conditions | Shared hygiene facilities, electricity |
| Security | Robbery, unwillingness to go out at night | Safety of children, high crime rates | Hesitancy to entering township | Domestic violence, violent crime on the streets |
| Hampers | Dry staples, long shelf-life vegetables | Dry staples, long shelf-life vegetables | Essential commodities, festive season | Inexpensive staples, low nutrition |
| Spaza shops | Convenient location, lack of trust in quality | Convenient location, lack of trust in quality | Individual small items, hamper | Business acumen of owners |
| Supermarkets | Distance, trust in quality | Loyalty bonuses, quality comparison | Segmented marketing | Lack of product diversity |
| Fresh produce | Inadequate supply in township, unaffordable | From bigger supermarkets in town | Varying infrastructure for fresh produce across stores | Quality of meat and vegetables, lack of nutrition |
| Health | Non-communicable diseases, malnourishment in children | Non-communicable diseases, malnourishment in children | Marketing affordable healthy food | Nutritional education, lack of access to affordable healthy food |

Table 3.
Emergent themes from
analysis

and therefore a central theme. Hampers as well as many other necessities are bought in neighbourhood spaza shops, the fifth theme and central element in township grocery dynamics. Theme six, supermarkets, is gaining relevancy in township grocery shopping as more retail chains are realizing, thus, market potential. The last two themes are fresh produce encompassing meat and vegetables and health, particularly nutrition and diet-related noncommunicable diseases.

4.2 Relationship to SDGs 2 and 11

SDG2 and 11 are central for this research as urban food security is concerned with equal availability and access to food for all urban citizens. Further, the TBM concept is important as obesity, and micronutrient deficiencies are just as than under nourishment (Gómez and Ricketts, 2013). The food supply chain is thus a crucial factor for urban citizens dependent on the food market, and this places pressure on retailers to supply food according to preference and nutritional needs to avoid the TBM. The themes found in our analysis support a more holistic approach to SDG2.

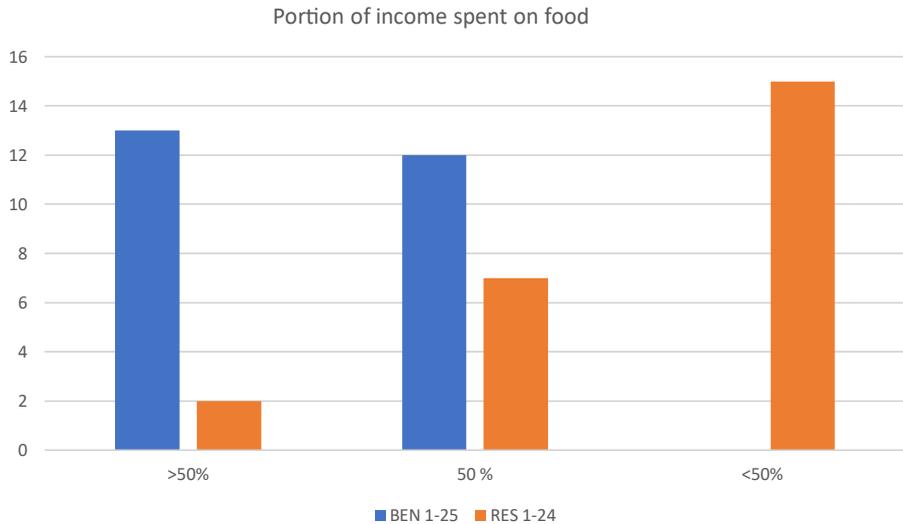
Many urban poor communities, such as this study South African's township, are informal and therefore lacking in basic services (Fox, 2014). Making cities more liveable through better access to food outlets, electricity and clean water is a crucial element to improve urban food security within SDG11. Issues of spatial constraints and reliable food outlets and basic necessities, such as electricity, were recurring interview themes as was general security in the township. Liveable cities include safe access to groceries for everyone, including women and children. Building safer communities would encourage businesses to include poor urban neighbourhoods in their locations, as security threats would no longer be an inhibiting factor.

4.3 RQ1: financial and spatial constraints to food access

Since food is accessed through the market in the township, household food security correlates with the household's financial entitlements. Township residents are divided into two groups based on their financial situation. The BEN group ($n = 25$) are beneficiaries of the collaborating NGO while the RES group ($n = 24$) have some form of income. Food is a major expenditure for both groups, but every BEN respondent spends at least half of their income on food every month, as shown in Figure 2. Sources of incomes vary as eight in the BEN group do not receive government grants due to being foreign nationals or otherwise ineligible and rely on assistance from family or friends. In total, 15 out of 24 in the RES group spend less than half of their income on food, while the rest spend half or more. Financial constraints are therefore an important indicator as any sudden changes to a household's income could significantly alter food security.

Shopping habits among both groups varied very little. Supermarkets and spaza shops were the most popular outlets. From a spatial accessibility point of view, spazas are located more conveniently in areas where people live in the township. Spaza shops are generally informal and unregulated, private businesses run mostly by immigrants from Somalia. Thus, the financial and spatial accessibility of spazas was paramount to anything else. Due in part to their unregulated nature, they address the needs of township dwellers in a much more flexible manner (Greenberg, 2017). However, accountability for the quality of the goods in the spazas fall solely on the individual shop and experiences with those differed. Most of the time, customers can get a refund or a replacement after complaining, but one interviewee, for example, referred to spazas selling faulty goods to children on purpose. For example, “[. . .] the thing is I love to buy and support the spazas around us, but the thing is the food that they were selling is not good for us. So, I would like to take the shops that we are using [like the local supermarket] to be closer to us because they are selling fresh food” (RES7). This was an almost unanimous concern in both respondent groups, the quality of the produce spazas sold was inconsistent at best, dangerously unhygienic at worst. Insufficient infrastructure is partly to

Figure 2.
Income differences
between BEN and RES
respondents



blame; some of the spazas are located within shacks in areas with no electricity. These shops mostly sell unperishable goods, but those with better equipment sell fresh produce as well.

The spaza owner interviewed for this study (RET6) stocks her shop with dry goods once a month but replenishes fresh goods every week, more often in the hot months if necessary. Spaza owners use wholesale companies for their goods, some of them deliver to the shop if necessary or one can go and pick up at the wholesaler. RET6 uses a delivery service for her shop. Many of the foreign spaza owners cooperate regarding their orders, which allow them to benefit from economies of scale and cut costs on delivery/transport. Reminiscent of food retail cooperatives, such an arrangement, would benefit all spaza owners but would require elements of trust and cooperation among competing businesses (Hingley, 2010). There was respect for the way the foreign spaza owners run their businesses, with SOC3 encouraging the beneficiaries to familiarize themselves with their business acumen. Research on the spaza dynamics is difficult as owners are cautious in talking to people due to xenophobic attitudes they have encountered.

A common monthly food shopping pattern is buying a “hamper” or a “combo” of staple products in the spaza shop and topping it up with vegetables, meat and canned goods from the supermarket or a specialty shop, such as a butcher. For example, BEN8 noted “[. . .] the spaza shops [has] this hamper that has 10 kg [packages] of groceries so we only buy that hamper and then the other small necessities we buy from the supermarket”. Hamper size increases the importance of the spazas located close to where people live. Interestingly, the corporate managers (RET 1–4) had rather limited knowledge about the hampers, even though they are an integral part of the township food dynamic.

Supermarkets have become increasingly relevant for the township’s food dynamics and relied upon for consistency of quality and product availability (Battersby and Peyton, 2014). For example, “[. . .] I prefer shopping in town because they are never short of anything like in spaza shops where you would try buying something and find that they do not have it” (BEN16). The township studied has a small shopping centre along the main road close to the train station. Respondents relied more on the small supermarket there, but larger supermarkets in the nearby town centre were also used mostly by people who worked in town and shopped during their commute. Supermarkets in town were spatially inconvenient for many

interviewees due to distance and transport costs. Even the township's own supermarket was hard to reach for some, as it is located at the bottom of the hill the township is spread over. There is public transport available to nearby towns and cities, but very little within the township itself, which also increases the significance of local spazas.

From a world systems and urban metabolic perspective, the spaza shops represent the "periphery" or "parallel metabolism" (Castán Broto *et al.*, 2012; Greenberg, 2017). They are juxtaposed with formal retail, or the "core", providing services where formal flows do not reach. As the spazas are such an integral part of the township dynamic, despite their quality issues, this would indicate inequalities in the distribution of resources within the city (Heynen, 2006). Spatial and financial constraints are household specific, but, at the same time, stem from deeper societal structures, such as the legacy of apartheid that facilitates the continuing social and spatial segregation (McLennan *et al.*, 2016).

4.4 RQ2: triple burden of malnutrition

South Africa in general suffers from high levels of malnourishment and micronutrient deficiencies, and obesity is on the rise (Battersby and McLachlan, 2013). Foods containing high calories but few nutrients, such as margarine, sugar and cookies, are cheaper to purchase than fresh produce and therefore a relevant part of the township dwellers' diet. The NGO measures malnourishment among the children of the township, which manifests in physical symptoms, such as stunted growth and underweight. For example, "[...] people do not have money so they purchase what they can afford and what they can afford is carbohydrate. That's why you have obesity rising" (SOC1).

Among adults, non-communicable diseases relate to lack of dietary diversity, such as diabetes, are common (Battersby and McLachlan, 2013). Many health issues faced by the urban poor derive from the lack of diversity in their diets, which mostly consists of starchy staples but very few fresh vegetables or protein sources. The lack of financial access is a factor, but also knowledge about what constitutes a healthy meal is limited. Most townships dwellers rely on the hampers as their nutritional base, potentially supplemented with fresh produce, such as meat or vegetables. For many, it is a choice between the two. For example, "[...] because of the money some would have that hamper and just buy maybe meat" (SOC2). While many would like to eat more fresh produce "[...] healthy food is so expensive and then unhealthy food is so cheap" (SOC1).

The hamper concept has not spread to most supermarkets, but one supermarket chain in town offers a vegetable combo, comparable to the staple goods hamper, on a certain date each month. The vegetables in the combo are ones with long shelf life, such as potatoes, onions and carrots, since these are easier to store with limited or no refrigerator space. A majority of BEN and RES interviewees made the effort to go into town on the specific date the combo was available. For many, this was the only vegetable element in their diet, so its significance is notable. Vegetables were considered too pricey or unavailable in the local supermarket.

The cycle of unhealthy, starchy foods dominating as sources of nutrition not only originates from the demand side, but the supply side as well. The NGO gives out a food parcel for beneficiaries participating in their programs. The contents of the parcel are donated by a large food brand and the NGO has little, if any, say in the nutritional profile of the parcel, which is predominantly made up of carbohydrates. As a result, "[...] this food parcel was made by a nutritionist in Johannesburg who just decided this is what's healthy" (SOC1). For many beneficiaries, the food parcel is the only source of food in a month, which means interfering in the donor's offering could lead to an impossible choice. "You choose, either you have obese mums, or you have hungry mums. You take a pick. And I'm sitting here and I'm thinking what can I do, there's nothing I can do!" (SOC1).

Interviews with the retail experts point in a similar direction. “[. . .] in their marketing they will talk about that they want to make sure that health is affordable. But back at the ranch it’s a cut-throat, to a large extent an adversarial type environment” (RET5). Starchy carbohydrates have demand, so it makes financial sense for companies to keep selling them, even if they wish to focus on consumer health. “What should be and what it is are not necessarily the same thing . . . it’s about rand and cents and their own profitability. I do not necessarily believe that there is a significant focus on doing what is right. It’s about shareholder value, it’s about growing market share” (RET5). Thus, for food supply it is the demographic division that dictates what is on offer and for whom and even though most supermarket chains in South Africa are locally owned they operate with a large global retailer mindset.

Residential segregation that still dominates society in South Africa has connotations that go beyond physical location (McLennan *et al.*, 2016). Many township dwellers have come from elsewhere in South Africa, leaving their homes and extended families to come look for work. Only four of the 49 interviewees were born in the township, while six came from Zimbabwe and one person from Swaziland. The language of apartheid is still used when discussing origins; “homelands” was a term often used. Those originally from South African were from the Eastern Cape, where the Xhosa tribe was segregated to during the apartheid years. “There isn’t a broader world picture in [the township]. And that’s due to poverty and dislocation of people. If you come from poverty, you’re going to be stuck in poverty [. . .] the rest of your life” (SOC3). While in principle there is free mobility and equal rights within the country, it is limited in practice.

According to SOC1, it is very difficult to coach people about eating, not to mention attempting to shift entire cultural paradigms. Comforting, familiar foods bring some ease into people’s lives. Convincing someone to give up sugar, a simple everyday luxury, for health’s sake is difficult. “[. . .] That frustration of, everything else is just so bad that, and food for many is a comfort” (SOC1). The health implications are a fair exchange for a few moments of joy.

Healthy protein sources and adequate fresh vegetables were beyond the reach of most respondents, and sugar consumption is extremely high. When interviewees were asked what they would like to eat if they could eat anything, the most common answer was fresh vegetables and meat. For many respondents, especially the BEN, the only food source is the hamper and food parcel from the NGO. The food parcel is slightly healthier than the hamper as it also contains oats, beans, canned fish, peanut butter and a soup mix, which all contain protein. The parcel has been put together by a dietician however with respect to donor wishes and product availability.

Many interviewees discussed health issues, such as high blood pressure and weight problems, likely linked to the high starch, low protein diet. As demonstrated by a wish to eat more vegetables and meat, there is some awareness about the lack of dietary diversity but little opportunity for action. This awareness is manifested by their wish for better quality food to be available in the townships, so healthier options and fresh produce would be more accessible. The hampers potentially provide an avenue to improve the quality of the food people eat. The starchy staple contents of the hamper are very ingrained in the societal psyche of people living in townships due to deep historical roots. Eliciting change in this mindset would require a cultural overhaul and would also require extensive empirical research on hampers and the staples of the South African diet.

4.5 RQ3: retail supply chain considerations and potential solutions

Global North studies on food deserts focus heavily on supermarkets and the lack of food access, i.e. on-shelf availability (Fermie and Grant, 2008). In a South African township context, the variety of food outlets is more complex as is the diversity of inhabitants. The spatial conceptualization of a food desert is a useful starting off point, encompassing the scarcity of

retail outlets and residential segregation on a general level, but disregards the fluid dynamics of many people's daily lives (Battersby, 2012). The BEN and RES interviewees represent the diversity of township dwellers: backgrounds ranged from lower middle-class local government employees to undocumented immigrant single parents. Therefore, even though there was a factor of spatial proximity, it did not characterize the entire neighbourhood as a conventional, Global North-style food desert (Wrigley, 2002).

Many of the RES group leave the township daily for work and hence are not bound to the local grocery outlets, while the BEN group relies heavily on outlets within the township. These kinds of dynamics are often missed through a top-down approach, where formal retailers group township dwellers into one homogenous group purely on their demographic. “[. . .] We hear [things] from out in the industry, but we do not actually know. What are the food patterns and how do they change?” (RET3). The most recent policy on food and nutrition security in South Africa is from 2014 (Anon, 2014) and contains a separate section on challenges that inhibit nation-wide food security. These challenges include inadequate safety nets for those unable to meet their nutritional needs as well as lack of information and knowledge on healthy and sustainable diets. The findings in this paper's study support these notions and add the perspective and role of the retail sector in helping to provide such food security.

Battersby and Crush (2014) suggest moulding the food desert concept to fit the modern, fluid African city perspective, and our findings support this notion. There are plenty of outlets, spaza shops as well as low-end supermarkets, but the entitlements of the inhabitants are lacking as well as the product quality available. The diversity of the township demographic requires the household to be central unit of analysis in a South African food desert. Food security levels vary substantially among households, due to e.g. income and employment. Historical legacies of apartheid-era residential segregation continue to strongly influence who lives where; therefore, townships have varying levels of income from the very poor to middle class.

A strong demographic division permeates the South African retail market, i.e. “[. . .] the [grocery] group has a targeted approach in branding for these stores” (RET1). This targeting has significant implications regarding store locations, which in turn affects the access to different products (Hingley, 2005). From a consumer perspective, those unable to leave their neighbourhoods have limited access to a diverse range of products. The grocery group has three different types of outlets. A high-end supermarket targeting the wealthier demographic sells imported items, perishables and a much wider selection of brands. Most of South Africa, i.e. the growing middle class, are covered by another brand, where the selection is less luxurious but still relatively varied. The stores that target the lowest end of the echelon gear their selection toward staples, such as “millie” meal, flour, rice, sugar and cooking oil, most of them store brands. The residential segregation that dominates the urban landscape in South Africa is the defining factor in the location of the different types of outlets. The high-end supermarkets are easily reachable by private vehicle, located around wealthy neighbourhoods and commercial zones, whereas the lower-end ones are near townships and lower middle-class neighbourhoods.

Comparing the average baskets bought at the different outlets the difference is significant, R80 (≈€4.70) at the low-end store and R150 (≈€8.80) at the higher end. “[. . .] [People] are accustomed to a certain quality, and for that you are willing to pay a certain premium. Now we cannot expect someone from [the township] to buy that kind of product. It's not discrimination, but you've got to be real” (RET2). This indicates average basket differences do not derive merely from the quantity of products that people buy, but significantly also the quality. This correlates with statements from SOC1 regarding starchy staples. A redefined food desert concept needs to include the differences in quality of food purchased from a financial, spatial as well as a cultural perspective, making it more complex but also more comprehensive.

Previously, formal retailers have been moving into the townships with their regular concepts, but some are trying a more flexible, spaza like-concept in a few townships around the country consisting of small, mobile stores placed into harder to reach areas in the townships selling the same products as the permanent supermarkets (Mathe, 2019). While a positive development, it does encroach upon individual entrepreneurs' livelihoods. However, because it is a formal retailer, the quality of products it sells is more reliable, and this is appreciated by the residents.

Being more aware of urban poor dynamics in retail planning could prove lucrative for businesses, as well as involve townships in supply chains in a more comprehensive manner (Nandonde and Kuada, 2016). Financial constraints on the demand side notwithstanding the poorer demographic represents "[...] *the real bulk of the income*" (RET2) in South Africa. The high-end supermarkets are there to appease the wealthier demographic but are not financially most valuable. This could manifest in the South African grocery market through an increase of formal retail outlets in townships. However, retailer interviews indicated the townships were not a familiar context for them, but there is interest. "[...] *In South Africa . . . if you can follow the buying patterns of the lower end of the market, if there is data available, if you can stay on top of that, you can run a very smart business*" (RET3).

The township where this study was conducted did not have its own formal supermarket until a decade ago, and the traditional way of food shopping, i.e. specialty shops for meat, dry goods and fresh produce, is the principal sources. However, that landscape has changed as "[...] *retail, formal retail as we know it have gone into [the townships][...] and have challenged those what we call down the street sales significantly*" (RET5). The lucrateness of the lower demographic is due to volume. "*It is not primarily or necessarily geared towards the needs of people because that's the right thing to do . . . but because it is a significant opportunity*" (RET5). While the dissemination of supermarkets into the townships may have increased the diversity of products on offer, it has not seemingly improved access to better nutrition for township dwellers nor is that the goal of the food chains. Lack of data on township dynamics, stemming from historical and political flows, e.g. continuing social segregation, are a hindrance to data availability and expansion to these contexts, as are the high crime rates in the townships. However, the interest is financial, i.e. improving nutritional access is not the objective but expanding the customer base and increasing profits.

5. Conclusions

Our study contributes theoretically in several ways. First, it simultaneously considers the SDGs and SCM and development literature through an interdisciplinary approach, theoretically influenced by urban metabolism. Findings evidence that societal factors play a significant role in food distribution for the urban poor both from a spatial perspective of retail outlet location and from a nutritional standpoint. Constraints to accessing adequate nutrition faced by township residents are substantial, and many of them are deeply rooted in historical and economic metabolic flows. The division of society in South Africa is severe, and this has implications in food retail as well.

Second, SSCM research has focused on the environmental aspects of sustainability, leaving the social side somewhat under-researched. Urban food security encompasses numerous social aspects as well as having strong supply chain elements. Food security discourse, for example the SDGs, often discusses food production on the one hand and consumption and nutritional figures on the other hand. While these are useful and important factors in food security, the supply chain from production to nutritional factors is absent from the discussion. Urban dwellers are dependent on the market for their nutrition, putting grocery retail in a relevant role. However, there are significant differences in access to the

market, both financially and spatially, deriving from underlying social factors, and this research has highlighted these challenges for SCM.

Third, the use of urban metabolic flows juxtaposed with food SCM and retail distribution have provided insight into social factors and how residential segregation and historical aspects are related to food security and access. When those flows are better understood, SCM is a tool to improve food access for the marginalized communities through location of retail outlets and the diversity of products available.

The triple burden of malnutrition, encompassing undernutrition, micronutrient deficiency and obesity is closely associated with access, especially in an urban environment. Complete lack of access leads to undernutrition or even starvation. Micronutrient deficiency and obesity on the other hand are consequences of lack of entitlements to purchase nutritious food, as heavily processed starches tend to be less expensive than fresh produce. Fourth, this contributes by highlighting the need to include access issues in food security research and global agreements, such as the SDGs. SSCM is a perspective, which can holistically include social factors in practical approaches to nutrition and grocery retail in challenging contexts.

Consumer research in South African townships is difficult and time-consuming due to security concerns and language barriers. The lower demographics however represent a huge and lucrative market in South Africa, so understanding township and other low demographic neighbourhood grocery dynamics is also beneficial from a business perspective. The significance of monthly hampers and spaza shops as well as the systematic and diligent manner people in townships conduct their grocery shopping are insights formal grocery chains could use in expanding their business model into townships. Fifth, while the exploratory manner of this study does not produce any quantitative or “hard” measures, it contributes by providing a point of departure and factors, which to investigate with further research.

Sixth and last, this paper, combined with other and studies done in townships and similar contexts, provides valuable insight into the dynamics of food shopping and eating in these areas. This bridges a research gap in urban food security studies, promotes interdisciplinary research in SCM and highlighted the importance of the urban context in development policy and planning.

Practically, the study provides guidance for food retailers and policymakers to include nutritional guidelines in their distribution planning, as well as the dynamics of the diverse neighbourhoods that exist in modern cities. Supermarkets are clearly positioned for different demographics, not just in terms of location but also diversity of products they sell. Supermarkets located near townships and other poor areas have significantly smaller selections of fresh produce, limiting nutritional options for those dependent on these outlets. While there are other outlets available to the township dwellers, such as spaza shops located within them, options remain limited due to storage issues, financial constraints and questions of quality and hygiene. Thus, there may be a role for further cooperative development (Hingley, 2010) for residents to help lift themselves up or a hybrid solution, such as Hingley's (2005) “super middlemen” who could provide better quality products to the spaza shops.

Township dwellers included in this study had very specific shopping patterns that also warrant attention from food retailers. The lower South African demographics are the largest segment in the country, ergo being familiar with their habits makes business sense as well. The common practice of buying a hamper of staple goods once a month largely determines the starchy basis of the diet, with additional fresh produce purchases complementing the nutritional profile. Not everyone is able to make these additional purchases, in fact some could not even afford the hamper and are dependent on NGO food assistance. The starchy diet leads to many health issues, such as diabetes and obesity, but when the alternative is starving, it is an obvious choice.

For policymakers, this study indicates an ongoing public health crisis within townships deriving from inadequate nutrition. Interdisciplinary planning and action are required to combat this crisis. Food insecurity in South Africa is rooted in the townships, where people live in precarious circumstances, often without electricity or running water in their homes. Distribution networks are improving for the urban poor from the formal retail side, but nutritional deficiencies are very difficult to address due lack of knowledge about eating healthy and cultural aspects. Addressing these deficiencies through improved and inclusive SCM, accounting for societal structures and shortcomings, could provide a gateway solution for this humanitarian issue.

As with all research there are some limitations. Qualitative data were derived solely in one township of South Africa; thus, there is limited generalizability to other contexts. However, by providing empirical foundations in a specific context, this study should inform and motivate further research on the challenges of urban food security and access. To do so, future research could *inter alia* verify these findings in a larger sample across this and other contexts, i.e. adopt a cross-country perspective, particularly incorporating Global South countries where the issues investigated in this study predominate. Further, a mixed-method approach could be used to enhance generalizability of findings to specific countries or regions.

Note

1. The term Global South is widely used in development literature referring broadly to contexts outside Europe, North America, Australia and New Zealand, i.e. the Global North (Dados and Connell, 2012), and we use these terms in this paper.

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