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The scope and scale of the informal food economy of South African urban residential townships: Results of a small-area micro-enterprise census

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ABSTRACT

Growing urbanisation in South Africa is reflected in burgeoning Working class and informal township settlements on the fringes of its major towns and cities. Paired with this is an increasing reliance on cash as the primary means of economic transaction, which has in turn stimulated the growth of micro-enterprise business activities within the township context. This article discusses the findings of an eight-township small-area census which occurred between 2010 and 2013 in Cape Town, Johannesburg, Ekurhuleni and Durban townships representing 250 000 residents. The researchers were able to establish the scope and scale of informal food and drink retailing in these localities. Of the 10 049 micro-enterprises located in the study, some 3966 (or 39% of the total) trade in food. These include enterprises in primary production, fresh produce retailing, grocery retailing from house and spaza shops, and informal foodservice enterprises. Food is the basis for much township informal business and plays an important role in making food increasingly affordable and locally accessible, and in creating cash employment. The article builds on the knowledge base of the township informal economy role in bolstering food security needs for the marginalised.

KEYWORDS
Informal economy; food security; micro-enterprise

1. Introduction

Despite limited research or quantification, the township informal economy of food appears both prominent and potentially important in its contribution towards the food security of its residents. Increasing urbanisation in southern and South Africa and a growing reliance on cash as the primary means of interpersonal trade enhance research interest in the scope, scale and nature of the informal economy of food production, preparation and retailing in such localities. Since South Africa's democratic elections of 1994, a mass process of internal migration took place whereby millions of impoverished people

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relocated to major South African cities in search of enhanced economic opportunities, following broader African urbanisation trends (Cartwright, 2015). This has in turn meant increased urban-based business opportunities and cash markets for food, thereby bringing about important strategic food security considerations for South Africa's 18 million township residents (Mahajan, 2014). Yet, as highlighted by Even-Zahav (2016), research into the informal food economy within the urban township context is little supported, with its food security contribution poorly understood. Instead, much research has rather focused on food security in the broader southern and South African region conducted from a public health policy perspective, most recently considering the 'triple burden' of overnutrition, undernutrition and macro-nutrient deficiencies faced by poor South Africans (Labadarios, 2005; Symington et al., 2015). Further work into food supply chains and production systems – in particular from analysis of macro-economic data collected by Statistics South Africa and others – has also taken place (Ingram et al., 2007; Labadarios et al., 2011). More recently, research emphasis has considered the informal economy and its role in satisfying regular food needs of urban informal residents (see Frayne et al., 2009; Battersby, 2011; Crush & Frayne, 2011). Building on this growing body of research we seek to contribute to the informal economy literature through analysis of a database comprising the findings of a small-area census of township micro-enterprise conducted in eight urban South African township settlements. In particular we aim to reveal the scope and scale of the township informal economy of food production, preparation and trade activities in order to enhance understanding of the prominence of this food economy.

2. Background

2.1. Food security

South Africa's constitution entrenches the right to adequate nutrition for all South Africans. However, it is apparent that despite broadly favourable indicators and a national status as 'food secure' 14% of the national population are food vulnerable and 26.9% of children under the age of six have had their development stunted by malnutrition (Said-Mohamed et al., 2015). In areas of concentrated poverty such as urban townships these numbers are probably much higher; for example, Battersby (2011) found that 80% of 459 households sampled from three Cape Town townships were moderately or severely food insecure.

South Africa's economic structure shares both a modern, formal and well-developed economy twinned with a substantive and interlinked informal sector, much of which originates in working-class informal settlements and townships. The rapid growth of such settlements across South Africa in the last two decades through largely economic migration brings about considerable economic and social changes for society (Crush et al., 2011), alongside large shifts in food markets and individual diets (Crush & Frayne, 2011). In line with global trends, urban dwellers increasingly now have to purchase almost all of their food with cash resources (competing with other household needs such as housing, transportation, healthcare and education) (Cohen & Garret, 2009). Koch (2011) further notes that food insecurity in South Africa is closely related to income and food purchasing power. Considering that the trend of urbanisation effectively represents a transfer of rural poverty to urban areas (Frayne et al., 2009) and increases the reliance on cash to access food (Battersby, 2011), this presents a new range of challenges for policy-makers in the food security sphere.

The township economy directly serves over 50% of all South Africans who are economically marginalised and generally black. The micro-enterprises in this landscape are an organic emergence within the South African economic landscape, and create important livelihood opportunities for keeping people out of poverty with the informal economy constituting a large periphery of formal food value chains (Greenberg, 2015). Whilst researchers such as Crush & Frayne (2011), Battersby (2011) and Frayne et al. (2009) reveal that there is substantial reliance of the poor on the informal economy to satisfy daily/weekly food needs of urban informal residents, the food security contribution of the informal food economy in the township context, particularly of street-foods, is poorly considered (Even-Zahav, 2016). Similarly, Even-Zahav points out that much of the scholarly work on the informal economy of food is nutrition and science based, and tends not to deal with the socio-economic realities of day-to-day life of township residents.

In some ways this technocratic dynamics has probably assisted in informing South Africa's multi-dimensional Integrated Food Security Strategy (IFSS) for household food security and considers the broad themes of: 1. Food availability; 2. Food access; 3. Food reliability; and 4. Food distribution in the changing South African economy. However, whilst having relevant objectives including increasing household production and trading, improving income generation and job opportunities, the IFSS focuses little on how such activities can occur within the (urban) informal economy. It is apparent that the urban informal sector of producers, preparers and retailers of food may play a role in bolstering local-level food security through providing local economic opportunities for micro-enterprise owners and serving as a food source safety net for residents. Research by Crush et al. (2011) highlights the growing nature of informal trade in food markets linked to southern African cities. Informal trade in food bolsters numerous aspects of food security including (among other things) physical food access via location (Methvin, 2015; Skinner & Haysom, 2016), geographic distribution (Charman et al., 2015), pricing (Skinner, 2010) and appropriate quantities (Battersby, 2012). Yet knowledge gaps are still large; in particular, as pointed out by Skinner & Haysom (2016), more research is needed regarding the type and quantity of goods that are purchased from formal versus informal retailers and why. Considering that South Africa's constitution enshrines the right to food for its citizens, then such businesses located in economically and commonly geographically marginalised township settlements of cities are worth deeper consideration.

2.2. Township informal economy micro-enterprise

South African cities are characterised by conjoined township residential settlements with limited formal employment opportunities and substantive poverty. Townships are considered to be the working-class formal and informally settled urban areas originating through pre-1994 (apartheid) planning as residential settlements for non-white citizens, legally established and perpetrated through the Group Areas Act (1950). Such localities are generally geographically distant from city centres and business areas, and thus exist under relatively greater conditions of economic and social stress. As these settlements have grown, the townships have in turn spawned the rise of a relatively large and expanding informal economy broadly characterised as economic activities and/or enterprise (Hart, 1973), including 'businesses that are not registered in any way … small in nature … operated from homes, street pavements and other informal arrangements' (Statistics South Africa, 2010:XII). Although historically characterised as separate, the township informal economy displays both forwards and backwards links to formal-sector businesses (Devey et al., 2006; Valodia, 2006; Rogan & Skinner, 2017).

South Africa's urban townships are dominated by informal micro-enterprise activity. Micro-enterprises are defined by the South African National Small Business Act (No. 2 of 1996) and subsequent Amendment (No. 26 of 2003) as business activities employing fewer than five people, having a turnover of < R200 000 and assets worth < R100 000. The South African Revenue Service considers these to be informal when the operators (employers, employees or own-account workers) are not registered for income tax or value-added tax and where the employers do not deduct income tax from their salaries/wages (Statistics South Africa, 2013). Whilst South Africa's informal economy is considered to be a small collective contributor to the national gross domestic product, Ranchhod et al. (2015) showed how in Cape Town the informal economy of micro-enterprises brings about strong localised economic impacts and potentially represents the city's single largest employment option.

Interrogating this micro-enterprise informal economy using the Quarterly Labour Force Survey data, researchers such as Valodia et al. (2005) and Wills (2009) have shown that approximately half of the number of informal activities (and employment) entails trade activities, with construction and manufacturing together accounting for about one third of informal employment. Analysing Labour Force Survey data, Wills (2009) identifies the main occupations for informal self-employed persons as street vending (38.4% of total non-agricultural informal employment), craft and related trade workers (including construction workers, tailors, mechanics; 29.9%), service workers (including shebeen owners and spaza shopkeepers; 16.5%) and technical occupations (5.7%).

2.3. Township food retailing

In a 2015 paper, Charman et al. sought to address the gap in knowledge on the informal economy between the macro-data understandings (derived from the Statistics South Africa Quarterly Labour Force Survey and Survey of Employers and the Self Employed) and firm-level data, by reporting on their small-area census study within a range of five township settlements in Cape Town. In their research, the authors utilised a small-area census approach of immersion into a diverse range of township settlements, conducting GPS, quantitative and qualitative investigation of every locatable economic activity within a township suburb. Geographically bounded by Statistics South Africa sub-place boundaries in these areas, the small-area census findings were enriched through comparability with 2011 national census data. Their investigation found a well-established and fairly diverse local economy that was dominated (46% by enterprise number) by informal trade of liquor (taverns, shebeens and ad-hoc sales) and groceries (spaza and house shops). Other important sectors in these township economies were revealed to be informal food-service (takeaways and prepared meals), hair care and street vending of miscellaneous items. Reading into the findings it was apparent that the township food/drink economy reflects a varied group of business activities. In Charman et al.'s (2015) paper those enterprises that related to the provisioning of food included the following:

- Agriculture – primarily smallholder cropping of leafy vegetables and some individuals with small herds of animals (particularly goats).
- Greengrocers – retailers of fresh fruit and vegetables.
- Meat, poultry and fish retail – individuals commonly trading from street tables, street sites or from door to door in bakkies, these enterprises specialise in live, fresh slaughtered and frozen animals.
- Restaurants – sit-down dining premises.
- Spaza shops/house shops/tuck shops – township retailers of groceries.
- Takeaways – informal foodservice that includes preparing, braaing/cooking food to be consumed on the street or at home. Many of these businesses occurred on the street, or from private households.

For the commonly poorly skilled urban poor in township residential locations (particularly women with dependent children) entering the informal foodservice sector as a livelihood activity potentially fulfils existing cultural and economic demands, leveraging the local economic opportunities in an urban economy with otherwise high barriers to entry. Yet despite the considerable number of micro-enterprises in the sector, from an enterprise perspective relatively little has been researched or published on the township informal production and trade of food. By taking the food-related micro-enterprises from the Charman et al. (2015) dataset, and adding data (collected using the same methodology) from a further three national sites (a township in each of Johannesburg, Ekurhuleni and Durban), this article aims to build on those results, specifically in the food and drink context, and to consider this in light of a broader food policy and security context.

To date, little empirical work has been conducted on urban informal food markets. Where such studies have taken place they have generally been focused on the informal street-trade sector or specific business types and livelihood challenges, rather than food retailing per se (see Even-Zahev, 2016) Yet, within the context of growing urbanisation in economically marginalised areas, it is likely that increasing numbers of informal foodservice enterprises have emerged.

In order to contribute to the body of knowledge on this business activity, we address the following three questions with regard to the eight researched township sites: what is the collective scope and scale of micro-enterprise activities related to food production, preparation and retail in the various township and business contexts; considering the spatial layout of the township, how can this influence urban food markets; and what role, if any, can such enterprises play as a contribution towards enhancing South African food security?

2.4. Research sites

The data used for analysis in this article were collected in a small-area census process conducted during 2010–15 which is documented in Charman et al. (2015) and through a further range of qualitative interviews with food-related micro-enterprises encountered during the field research (including those of informal foodservice operators as reported by Petersen et al., 2017). In this approach the researchers sought to identify and record all informal economic activities and micro-enterprises across eight urban South African township sites which were selected to reflect differing spatial (inner city vs outer fringes), settlement (formal vs informal housing) and population characteristics (heterogeneous vs homogenous ethnicity), and local economic dynamics in township settlements of South African cities:

(1) KwaMashu (Durban): a township settlement established by the apartheid government in the 1960s. KwaMashu presently comprises a range of informal and formal residential areas, the latter serviced by municipal utilities of piped water, sewage, electricity and rubbish collection.
(2) Ivory Park (Johannesburg): located in Midrand and comprising a working class with mixed formal and informal housing, first settled by economic migrants and land seekers in the 1990s.
(3) Tembisa (Ekurhuleni): directly adjacent to Ivory Park, albeit in a different local municipality. Tembisa is a largely formal settlement of government-built brick housing (four-roomed houses) originating from the 1960s, with add-on informal dwellings and structures commonly adjacent to these buildings and in the yards of these properties. The township comprises a range of informal and formal residential areas, the latter serviced by tar sealed roads, rubbish services and formal electricity.
(4) Browns Farm (Cape Town): a settlement of informal and formal housing, established more than 20 years ago on the Cape Flats in the eastern part of Philippi, bordering Nyanga, between the N2 and the R300 routes.
(5) Delft South (Cape Town): a mainly residential township on the Cape Flats consisting of formal housing, with most houses built in the period 1996–2000, east of Cape Town International Airport approximately 25 km from the city centre.
(6) Imizamo Yethu (Cape Town): a settlement of both informal and formal housing situated on the mountain slope within the middle-class suburb of Hout Bay. It emerged in the early 1980s and has become more established since the 1990s.
(7) Sweet Home Farm (Cape Town): an informal residential settlement, situated on the Cape Flats in Philippi, adjacent to Browns Farm, with residents first occupying the site in the 1970s.
(8) Vrygrond (Cape Town): comprising three adjacent but very different areas – a 1980s formal housing component (Seawinds), a 2000s private-sector-led social housing development project (Capricorn) and an informal settlement occupied since 2005 (Overcome Heights).

The demographics of the sites are presented in Table 1.

The sites represent township communities of diverse population groups, from almost exclusively black South African, coloured (mixed race and Khoisan ethnicity), foreign African nationals through to mixed race settlements. They include varied degrees of informal/formal housing situations. Furthermore they include settlements close to formal suburbs and working centres (Imizamo Yethu and Vrygrond), and geographically detached from suburbs and related economic opportunities (KwaMashu). The range of settlement types and localities were chosen to reflect the range of South African township

Table 1. Demographics in eight urban township field investigation sites across South Africa.

Research site	Black African (n)	Coloured (n)	Total population (n)	Total households (n)	% of population female	% of population formal housed	% of population informal housed
KwaMashu	73 623	168	74 037	16 683	51.6	77.1	22.9
Ivory Park	44 979	102	45 453	19 146	45.5	86.8	13.2
Tembisa	40 920	78	41 673	10 467	49	95.7	4.3
Browns Farm[a]	40 893	578	41 895	14 355	50	20	80
Delft South	22 311	20 046	43 185	11 322	51	100	0
Imizamo Yethu	14 235	576	15 537	6 015	45	39	60
Sweet Home Farm	7 491	231	7 836	3 210	46	0	100
Vrygrond	11 910	11 916	25 197	6 627	47	79	21
Total	256 362	33 695	294 813	87 825	48	62	38

[a]Browns Farm total population data are estimated, comparing the actual survey area against the sub-place area; Browns Farm race data are estimated from the demographic profile of the sub-place area; and Browns Farm gender data are from sub-place area.
Source: 2011 census (Statistics South Africa, 2013).

dynamics and to allow for effective comparison across different sites. Table 2 presents the relative incomes of households in these townships, based on data obtained from the 2011 National Census (from http://www.census2011.co.za/).

Regardless of the location or settlement type, household income shows considerable uniformity in pattern across the eight sites. Although generally 20% of households in five of the eight sites reported no income, the informal settlement of Sweet Home Farm features as the economically poorest site with 26%. Amongst households with regular income, most report earning between R1 and R38 200 per annum whilst roughly 25% of all households report an annual income of between R19 601 and R38 200 (or between R1633 and R3183 per month). Across all communities, 30% of households have an annual income greater than R38 201. Merely 3% of households across all sites combined (n = 3290) have an annual income exceeding R153 801 (R12 816 per month).

It is within this township and poverty context that we aimed to collectively explore the economic self-help and informal employment opportunities which had emerged to serve local markets.

3. Methodology

Over the course of 2010–13, an experienced research team traversed all streets of each of these township settings on bicycles within Statistics South Africa census 2011 survey boundaries and GPS-logged the location and type of all identified micro-enterprises, ensuring that all informal economic activities, regardless of size or nature of business, were documented (including work activities that are undertaken for economic survival but that do not necessarily equate to an enterprise form). Mobile activities (such as street hawking) were recorded at the point of encounter. Unmarked or hidden business activities (such as inconspicuous grocery retailing house-based shops and clandestine liquor outlets) were located through personal referrals to the research team by local residents. The investigation was concluded once the entire suburb had been traversed and

Table 2. Household annual income data: number of households (2011 nominal values).

Research site	No income	R1–4 800	R4 801–9 600	R9 601–19 600	R19 601–38 200	R38 201–76 400	R76 401–153 800	R153 801–307 600	R307 601+	Total
KwaMashu	3 144	885	1 275	2 964	3 231	2 571	1 602	693	347	16 712
% KwaMashu	18.8	5.3	7.6	17.7	19.3	15.4	9.6	4.1	2.1	
Ivory Park	4 323	792	1 236	2 772	5 004	3 432	1 200	294	114	19 167
% Ivory Park	22.5	4.1	6.4	14.5	26.1	17.9	6.3	1.5	0.6	
Tembisa	2 040	348	459	1 263	2 289	2 331	1 221	390	126	10 467
% Tembisa	19.5	3.3	4.4	12.1	21.9	22.3	11.7	3.7	1.2	
Browns Farm	4 650	1 626	2 049	4 089	6 660	3 591	1 239	402	201	24 507
% Browns Farm	19	7	8	17	27	15	5	2	1	
Delft South	1 908	573	915	1 704	2 877	2 025	930	285	105	11 322
% Delft South	17	5	8	15	25	18	8	3	1	
Imizamo Yethu	1 464	195	321	1 014	1 743	924	276	39	36	6 012
% Imizamo Yethu	24	3	5	17	29	15	5	1	1	
Sweet Home Farm	831	294	312	621	810	279	54	9	6	3 216
% Sweet Home Farm	26	9	10	19	25	9	2	0	0	
Vrygrond	1 443	276	351	1 005	1 569	1 188	561	171	72	6 636
% Vrygrond	22	4	5	15	24	18	8	3	1	
Total	19 803	4 989	6 918	15 432	24 183	16 341	7 083	2 283	1 007	98 039
% of all	20.2	5	7	15.7	24.7	16.7	7	2.3	1	100

Source: 2011 census (Statistics South Africa, 2013).

resident referrals failed to reveal new micro-enterprise outlets. This methodological approach has value in its comprehensive nature in measuring all businesses, giving community members a sense of inclusion and non-selective processes (which for many businesses that could be considered illegal may discourage involvement). Previously this has allowed the authors to accurately document businesses as diverse as informal grocery retailers (Liedeman, 2013), liquor retailers (Charman et al., 2012) and traditional healers (Petersen et al., 2014).

The research method included a business survey implemented for the prominent sector of grocery retailing in spaza shops where more than 90% of identified businesses were surveyed during the field research. Furthermore, 113 informal foodservice micro-enterprises were subsequently interviewed in a follow-up process in all sites. Seventy-one were interviewed in Gauteng, 36 in Cape Town and six in KwaZulu Natal. These questionnaires explored business owner demographics, enterprise longevity, size and scale, and details on business challenges. The research was conducted by a multi-gender, multi-cultural and multi-lingual research team applicable to each research locality. All participants were informed of the objectives of the research and their consent was secured.

Additional qualitative aspects of the research comprised participant observation, photographic and audio recording, unstructured interviews and participatory action learning interventions where the researchers engaged with specific groups. The researchers conducted dozens of interviews during the data collection process with business and community leaders, civil society organisation workers and ordinary individuals. The data from these interviews were recorded in field notebooks.

A system of classification was developed in order to capture the nature of the various economic activities as specifically as possible. Enterprises and their economic activities were categorised according to their most visually predominant activity into one of 34 vocational groups. These broad-ranging categories varied from micro-manufacturing, liquor retailing, hair care, traditional medicine, religious services to takeaway foods. In this respect, the system of classification substantially differs from the Statistics South Africa Quarterly Labour Force Survey classification (derived from the International Standard Industrial Classification). Our reasoning for alternative classification was to sufficiently disaggregate the diverse range of activities within retail trading beyond the Statistics South Africa categorisation.

The data were recorded in Microsoft Excel for analysis. In a secondary process the categorised data were subsequently imported into MapInfo for analysis of the spatial distribution of micro-enterprises and particular sector dynamics. These visual maps enabled the researchers to examine enterprise distribution against settlement architecture, street grids and proximity to formal business centres and transport nodes.

4. Results

4.1. Quantitative findings

The total number of micro-enterprises counted within the small-area census (in the key sectors) is presented in Table 3. Collectively the research recorded a total of 10 049 micro-enterprises of all types which were recorded in 37 enterprise categories within the eight township research areas across South Africa.

Table 3. Micro-enterprises located by category in small-area census research of eight urban residential townships.

Research site	Agriculture	Appliance repair	Art and craft	Building services	Business services	Car wash	Community service	Drug dealer	Educare	Entertainment services	Greengrocer	Hair care	Health services	Home maintenance	House shop	Miscellaneous liquor sales	Meat, poultry fish retail	Mechanical services	Micro-manufacture	Personal services
KwaMashu	57	18	0	6	49	11	2	11	26	13	3	39	32	52	156	9	3	49	55	4
Ivory Park	8	46	5	53	43	17	3	6	37	18	143	141	39	0	429	76	21	67	59	0
Tembisa	23	18	1	16	57	27	2	3	42	11	98	97	25	0	449	9	11	53	21	6
Browns Farm	10	22	1	39	28	22	6	8	42	9	72	133	49	0	229	2	56	34	32	0
Delft South	7	6	0	22	17	6	8	8	32	30	21	63	5	0	131	0	17	52	22	0
Imizamo Yethu	0	7	4	9	7	5	0	2	10	7	0	44	23	0	47	25	4	10	5	12
Sweet Home Farm	5	4	0	6	0	1	0	5	6	7	13	12	12	0	37	0	9	3	4	2
Vrygrond	10	14	0	14	16	3	3	17	25	10	13	29	15	0	49	1	14	39	9	1
Total	120	135	11	165	217	92	24	60	220	105	363	558	200	52	1 527	122	135	307	207	25

Research site	Phones	Recycling	Religious services	Restaurants	Shoe repair	Grocery retail (spaza)	Specialist store	Shebeen	Street trade	Tailor	Tavern	Takeaways	Transport services	Tuck shop	Wholesaler	Wood and coal	Total
KwaMashu	21	194	42	1	6	127	4	252	122	9	21	101	38	21	0	2	1 556
Ivory Park	49	122	24	2	32	181	33	256	313	31	21	144	13	62	0	14	2 508
Tembisa	39	83	27	10	21	153	12	141	118	27	29	77	14	0	0	0	1 720
Browns Farm	35	68	65	3	15	185	10	285	51	21	7	125	45	0	0	0	1 709
Delft South	10	16	38	5	4	181	7	102	17	11	18	36	3	0	2	4	901
Imizamo Yethu	4	5	13	6	2	77	10	154	30	8	1	55	8	1	0	0	595
Sweet Home Farm	4	18	11	2	3	56	1	111	36	1	0	19	12	0	0	1	401
Vrygrond	4	10	35	1	1	140	11	130	11	6	1	18	3	0	0	6	659
Total	166	516	255	30	84	1 100	88	1 431	698	114	98	575	136	84	2	27	10 049

The frequency and proportion of the identified micro-enterprise activities per business type in each site reveal that grocery retailing from house shops (n = 1527/15.1%), liquor retailing via shebeens (n = 1431/14.2%) and grocery retailing from spaza shops (n = 1100/10.9% of total) are collectively the most common micro-enterprise types across all eight sites (and generally most prominent within each site), collectively comprising 40.3% of all identified micro-enterprises. Broadening the grocery retailing sector to include allied retailers such as 'tuck shops' (n = 84), 'greengrocers' (n = 363), 'meat, poultry and fish retail' (n = 135), the preparation and retailing of food (collectively termed 'informal foodservice') of restaurants (n = 30) and takeaways (n = 575) increases food-related outlets to a collective 3814 enterprises (38% of all micro-enterprises). Adding in all liquor retailing outlets such as shebeens (n = 1431), licensed taverns (n = 98) and miscellaneous liquor sales (n = 122), the liquor retail sector is represented by 1651 outlets (16.4%). Collectively these food and liquor retailing sectors represent 54.7% of all township micro-enterprises. Despite the prominence of the liquor trade and consumption of liquor in the township context we have subsequently excluded these enterprises from analysis due to the non-essential nutritive nature of the products and their generally recreational focus. Similarly, 698 businesses were recorded as 'street trade' and were excluded from analysis. This category included retailing of plasticware, clothes, cigarettes and other non-food items, although some of these outlets conducted a secondary trade in sweets, chips and other snacks. Where street traders conducted the primary activity of food trade such as the retailing of meat, vegetables or prepared food they were separately categorised by the predominant food-related activity they conducted.

4.2. The scope of township food-related enterprise

The food-related businesses revealed in this micro-enterprise census were broadly grouped within a number of general categories. It was pragmatic to divide township food enterprise into groupings of agriculture, fresh produce retailing, grocery retailing and informal food-service. Within these groupings, specific business typologies were recognised that reflected the micro-enterprises experienced in the field research.

4.2.1. Agriculture

Regardless of the scale or motivation, primary production of crops in market gardens and tending of animals within any of the geographic areas was collectively grouped as 'agriculture' (n = 120). This includes examples of people ranging herds of goats to forage across the township landscape, farming chickens within backyards for egg production or live trade, or tending market gardens of leafy vegetables. Only one externally supported garden project was located within any of the sites. This was excluded from analysis due to its external funding and management characteristics.

4.2.2. Fresh produce retailing

Specialist outlets trading in specific ranges of fresh produce items were grouped – thus fruit and vegetable traders were considered to be greengrocers (n = 363), and another category was established for meat, poultry and fish retail (n = 135). Such businesses operated in a range of modalities including street trade stalls, or mobile trading from shopping trolleys, motor vehicles such as bakkies, and horses and carts.

4.2.3. Grocery retailing

The grocery retailing category combines a range of township food retail outlets. These included spaza shops (n = 1100), the predominant retailers of processed food throughout South African townships. We defined these outlets in the field as those with a dedicated premises, a signboard with a business name, a commercial (glass door) fridge, trading for a minimum of five days a week and purveying at least six of eight staple products including bread, milk, maize meal, rice, eggs, sugar, soft drinks and cigarettes. Initially in Cape Town, grocery outlets that did not attain these criteria were classified as (smaller) tuck shops (a common local term for small grocery outlets) (n = 84), although for subsequent field sites such enterprises were considered house shops (n = 1527). These outlets generally traded from private households (commonly the kitchen) with only a limited range of items such as chips, sweets, paraffin and frozen food. Two wholesalers were identified in the research – these were probably formal businesses that serviced the informal-sector grocery market. These were excluded from broader analysis.

4.2.4. Informal foodservice

The preparation and trade of prepared foods as 'informal foodservice' is an important economic activity in the township context. Within this the category of takeaways (n = 575) was established which included enterprises that commonly prepare and trade ready-made meals and snacks on the street or in private kitchens for street sales to commuter traffic. Where such enterprises had unique, dedicated premises (no matter how rudimentary) and served exclusively to sit-down clientele they were categorised as restaurants (n = 30), although they were considerably fewer in number than takeaways.

Micro-enterprise numbers in these related activities are summarised in Table 4.

Food plays a critical role as an economic activity within the township economy. According to the small-area census counts, at least one third of all micro-enterprise activity in each of studied communities was food related, rising to 50% of all micro-enterprises in Tembisa. Accounting for nearly 70% of micro-enterprises, the businesses of spazas and house (tuck) shops that retail industrial-sector manufactured food products are by far the most predominant business activity within the food sector.

In terms of the number of active local farming enterprises and the subsequent small volume of produce, urban informal agricultural production is a very small contributor to the urban township food economy. Of all sites, only KwaMashu had large enough residential house plots and vacant land surpluses which allowed for cropping and communal grazing to a reasonable degree. In many cases where this occurred the activity appeared more of a pastime than a dedicated economic activity. For example, in Tembisa a group of old age pensioners have created individual (approximately 100 m^2 each) market gardens of leafy vegetables in a high-voltage powerline servitude that bisects the site. In this case, the non-suitability of land for housing in this immediate location created the opportunity for this activity. The quantities of vegetables produced are unlikely to present large income opportunities for the sector participants. Fresh produce was reportedly either consumed by the gardeners themselves or sold to neighbours and others in the community.

Fresh produce retailing collectively represents 13% of all food-related micro-enterprise, rising locally to 19% in Browns Farm. Greengrocers of fruit and vegetables were the predominant businesses in this sector. Other activities included trade in live chickens

Table 4. Food-related micro-enterprises within the township research sites.

	Primary production			Fresh produce retailing				Grocery retailing					Informal foodservice				Totals	
Research site	Agriculture	Total agriculture	% of food related	Greengrocer	Meat, poultry and fish retail	Total grocery retailing	% of food related	Spaza	Tuck shop[a]	House shop	Total grocery retailing	% of food related	Restaurants	Takeaways	Total informal foodservice	% of food related	Total all	% of all micro-enterprises
Kwa Mashu	57	57	12	3	3	6	1	127	21	157	305	65	1	101	102	22	470	30
Ivory Park	8	8	<1	143	21	164	17	181	62	429	672	68	2	144	146	15	990	39
Tembisa	23	23	3	98	11	109	13	153	49	431	633	74	10	77	87	10	852	50
Browns Farm	10	10	1	72	56	128	19	185	0	229	414	61	3	125	128	19	680	40
Delft South	7	7	2	21	17	38	10	181	0	131	312	78	5	36	41	10	398	44
Imizamo Yethu	0	0	0	0	4	4	2	77	1	47	125	66	6	55	61	32	190	32
Sweet Home Farm	5	5	4	13	9	22	16	56	0	37	93	66	2	19	21	15	141	35
Vrygrond	10	10	4	13	14	27	11	140	0	49	189	77	1	18	19	8	245	37
All sites		120	3			498	13				2 743	69			605	15	3 966	39

[a]The concept of 'tuck shop' was only developed after Cape Town data collection was completed. In Cape Town sites, these enterprises were originally included in the 'house shop' category.

(generally 'spent hens' sold from cages and sourced from commercial egg-laying batteries), and the bakkie trade of frozen fish pieces and fifth-quarter meat products. Many of these micro-enterprises were street based or mobile (on foot, out of trolleys or from motor vehicles) and transient in nature. The ad-hoc slaughter of pigs and chickens in the street was also observed, with in some cases multiple animals slaughtered on the spot for immediate trade to the surrounding public. In some communities (including Imizamo Yethu where few such enterprises were recorded) it is probably that some such ephemeral enterprises were missed at the time of the research.

Spaza and house shops are the predominant form of retail grocers within the township context. In Tembisa, Delft South and Vrygrond these two categories of enterprises represent over three quarters of all food-related business, and maintain over 60% dominance of all food businesses in the township setting. Although many house shops may be selling only a few specific items and appear very much economic survivalist in nature, they are commonplace micro-enterprises. Interestingly, in Cape Town spaza shops generally predominate over house (and tuck) shops, whilst in Johannesburg smaller house shops feature more prominently in the food economy. All such outlets are primarily selling items manufactured in the South African industrial economy which were pre-packaged and acquired from formal wholesale outlets. Very few also retailed fresh produce such as fruit, vegetables or meat. Interestingly, local consumers highlighted a distinct unwillingness to purchase such items at spaza shops – in particular from the predominant foreign national operated spaza outlets – ostensibly due to their perceptions of poor cleanliness within these outlets.

With respect to informal foodservice, prepared food takeaways are by far the most predominant business activity. These outlets include street-prepared barbequed red meat and chicken pieces, offal, flame-grilled sheep heads and various other fifth-quarter animal products, deep-fried potato chips and ready-made meals such as '*kotas*' (quarter loaves of bread with cooked fillings) for commuters and others 'on the move'. Interestingly there are very few 'sit down' restaurant venues in any of the study sites.

4.3. Scale of township informal food retailing (as a proportion of the residential population)

Whilst grocery retail businesses are the predominant food business in the study, the research identified variable numbers of certain business types across the research sites. To ensure a 'like-for-like' comparison the data were reinterpreted through recalculating micro-enterprise numbers per capita of the local population. The research sites were of differing geographic scale, population size, demographics and economic status (from formally housed to informal shack settlements). This could impact on the comparability of direct site by site comparisons. Therefore, utilising Statistics South Africa population data and average household size in each location, an estimate of micro-enterprises per 1000 persons was attained. These estimates relative to other research sites are presented in Table 5.

This table reveals once again that spaza and house shops are consistently the predominant township business activities as a proportion of the local population in each of the studied communities. The relative predominance of house shops as a business activity in sites such as Tembisa and Ivory Park stands out as overall business numbers in these

Table 5. Number of food-related enterprises per 1000 people in the research sites.

Research site	Primary production	Fresh produce retailing		Grocery retailing			Informal foodservice		
	Agriculture	Greengrocer	Meat, poultry and fish retail	House shop	Tuck shop	Spaza	Restaurants	Takeaways	Total
KwaMashu/1000	0.77	0.04	0.04	2.11	0.28	1.72	0.01	1.36	6.33
Ivory Park/1000	0.18	3.15	0.46	9.44	1.36	3.98	0.04	3.17	21.78
Tembisa/1000	0.55	2.35	0.26	10.77	0.00	3.67	0.24	1.85	19.70
Browns Farm/1000	0.24	1.72	1.34	5.47	0.00	4.42	0.07	2.98	16.23
Delft South/1000	0.16	0.49	0.39	3.03	0.00	4.19	0.12	0.83	9.26
Imizamo Yethu/1000	0.00	0.00	0.26	3.03	0.06	4.96	0.39	3.54	12.23
Sweet Home Farm/1000	0.64	1.66	1.15	4.72	0.00	7.15	0.26	2.42	17.99
Vrygrond/1000	0.40	0.52	0.56	1.94	0.00	5.56	0.04	0.71	9.72

sectors are also at the highest levels per capita. Similarly, Ivory Park and Tembisa also share in the highest relative proportions of greengrocers per capita – many of whom were seen during the field research to be mobile operators utilising commandeered supermarket trolleys to ferry and market their goods. The informal foodservice business of takeaways features most prominently in communities of Ivory Park, Browns Farm, Imizamo Yethu and Sweet Home Farm – all of which have large areas of informal settlements.

4.4. Survey and interview findings (spaza and informal foodservice)

The outcome of the spaza shop surveys and informal foodservice enterprise interviews revealed a range of specific findings. With respect to demographics, the spaza sector revealed high levels of male foreign national ownership by Somali, Ethiopian and Bangladeshi nationals in all sites except KwaZulu Natal. Foreign national operated businesses feature prominently in Tembisa (81 from 132 outlets), Ivory Park (145 from 218 outlets), Delft South (88 from 180 outlets), Vrygrond, (68 from 91 outlets), Imizamo Yethu (53 from 60 outlets) and Browns Farm (144 from 300 outlets). Ethiopians represent the dominant grocery traders in Ivory Park and Tembisa, whilst Somalis predominate in Cape Town sites. Bangladeshi nationals operate in small numbers within all sites. All foreign-owned spaza outlets are operated by men. Local community members highlight this demographic change from South African to foreign ownership over the course of the last decade. Much of the social and economic conditions related to changes in this market have been documents by Liedeman (2013).

Converse to the retail grocery market, the informal foodservice sector is dominated by South African women (71% of enterprises) of an average age 35 years who were also carers of dependent children. The 113 interviews of these businesses revealed an economic activity dominated by survivalist street braaing in order to serve immediate local markets throughout the residential township context. Based on reported income the sector is deeply informal with a survivalist nature (approximately 80% of informal foodservice enterprises) for what are relatively simple enterprises focused on preparing and retailing one or two products. The remaining 20% of enterprises could be considered more entrepreneurially and growth focused, displaying behaviours of bulk purchasing, innovation in menus and operations and comparatively increased levels of business turnover. Specific findings of this investigation are reported in Petersen et al. (2017).

5. Discussion

5.1. The township informal economy of food

The township informal sector of food micro-enterprises represents an important business opportunity for local residents and encompasses a diversity of business activities and consumer options. Furthermore, considering that 70% of poor households in the township setting report significant food insecurity challenges (Frayne et al., 2009), such micro-enterprises potentially play a valuable role in bolstering access to affordable foods. Within the township context a very uniform dynamic of informal businesses featuring grocery retailers including fresh produce, grocery retailers and informal foodservice fulfils an important market need for raw, processed and prepared foods. Items such as the staples of maize meal, bread and rice readily located in spaza shops, leafy vegetables from greengrocers and braaied chicken feet and meats from informal foodservice represent some of the variety of food products readily available for consumption. As such the findings of this research agree with the work of Battersby (2011) that the location and type of local outlets and markets are (and will become) increasingly important for promoting local level dietary diversity. Interestingly and requiring more research is the very clear delineation of business types and activities. For example, spaza shops commonly sell packaged groceries, but rarely fruit and vegetables, and virtually never offer foodservice such as takeaways. Similarly, aside from frozen chicken pieces in house shops, meat is rarely sold from spaza shop outlets. Similarly, meat businesses such as those trading live chickens, butchers and bakkies selling fresh and frozen fish, greengrocing and informal foodservice represent distinct business genres appearing to conduct only that particular activity. The specialisation of enterprises within the township food market is notable and requires further qualitative investigation.

In terms of enterprise numbers the business of food represents the mainstay of the township economy, with 39% of all micro-enterprises being directly related to the production, trading and preparation of food items in this setting. Grocery retailing via spaza shops, tuck shop enterprises and house shops is by far the most prominent micro-enterprise type in terms of serving local consumer demand. The local food security impact of these enterprises is thus probably considerable. Despite the controversial and changing dynamics of business ownership in the spaza retail sector (Charman et al., 2011; Liedeman, 2013), the considerable price competition in this market makes them cost-effective food providers in localised areas. Fresh produce retailers (greengrocers and meat/poultry/fish trade) are in considerably smaller numbers but are also prevalent – reflecting nearly 15% of all food outlets. Informal foodservice reflects a prominent value-adding activity majority owned and managed by South Africans. In this case, the businesses are predominately operated by women with dependent children. In addition to the income such enterprises earn from selling stock and potentially their household groceries, these businesses serve to subsidise the cost of food for their immediate families. As such the business of informal foodservice could be seen to enhance both the customer's and the owner's personal food security. In all cases, these outlets (fresh produce and grocery retail, and informal foodservice) retailed commercially grown and procured produce from formal-sector suppliers and industrial-sector producers. Interestingly, whilst the manufacturing and wholesaling sectors are predominately large formal businesses, virtually the entire township food retailing sector is informal. Outside of commonly adjacent malls or formal streetscapes, no examples of chain stores, high street or formal retailers were found in any of the research sites.

General micro-enterprise positioning of food-related micro-enterprises commonly reflects the residential address of the home-based business owners. In some cases, such as informal foodservice, business owners rent trading space on high streets and other busy locations including transport hubs. Regardless of the researched township location, the high numbers of retail grocery outlets reveal a universal and ongoing consumer demand to support business operations. Furthermore, the common positioning of spaza shops, house shops and informal foodservice away from the high streets and in residential locations suggests that this demand is highly localised. It is apparent that these retail businesses draw on customers within a close walking distance from their homes. In this way, home-based micro-enterprises appear to exploit a positional comparative advantage over their (formal and informal economy) competitors.

Whilst primary production is most commonplace in KwaMashu (12% of all food-related micro-enterprise), in all other sites such activity was negligible (between 0 and 4% of all food-related outlets). Whilst the researchers did find examples of animal herders and smallholder vegetable growing, many such activities were conducted by pensioners and others who themselves were unlikely to be sustained by their production. In light of this small production contribution, the informal township food economy can thus be characterised as heavily dependent on South Africa's industrial food production complex and formal food supply chains. Prominent food brands found in supermarkets and high street stores are thus widespread in the township setting, demonstrating market dominance in similar ways to suburban and inner-city areas. Considering the general lack of open space in urban townships for primary production pursuits and the limited organic emergence of such businesses, the authors would contend that investment in developing this sector may not necessarily bring about considerable dividends in terms of industry development or short-term enhancement of food security in the local environment.

5.2. Collective impact of township informal food trade

Despite important food security relevance, the employment impact of such informal-sector enterprises is poorly understood. The eight township sites broadly reflect similar trends and activities. Taking a generalised approach of extrapolating the data from these research sites for all urban townships allows for broad estimates of the number of informal township food micro-enterprises. Based on macro-level quantitative data, Wills (2009) estimates that informal self-employed shebeen, spaza and street food enterprises collectively account for 1 016 000 people. Earlier work by the Bureau of Market Research (2004) considers that up to 750 000 food outlets are extant in South Africa including hawkers, traders and grocery outlets. Within the study sites, a conservative assessment of 14.16 food-related businesses per 1000 people, combined with Mahajan's (2014) estimate that some 18.3 million residents reside within urban townships, allows for a basic extrapolation of enterprise numbers. Over this population size would mean there are some 260 000 urban township informal food-related businesses in South Africa (Table 6). Categorising and weighting urban township food micro-enterprise within the broad enterprise types in this study gives a sense of the broader importance of these business types.

Whilst simplistic (and conservative), this extrapolation gives a rudimentary sense of the considerable scale of urban township residential-based informal food retailing (and

Table 6. Extrapolated food-related micro-enterprise numbers across South African urban townships.

Informal food micro-enterprise type	Prevalence in sample sites (%)	Outlets (urban national)
Primary production (urban)	3	7 800
Fresh produce retailers	13	33 800
Grocery retail	69	179 400
Informal foodservice	15	39 000
Total	100	260 000

Figure 1. R1 (US$0.08) food items available from informal food retailing outlets in Delft South (2015). Source: Image composed and taken by Justin Patrick (www.justinpatrick.co.za).

production) in South Africa. Note that this assessment is certainly conservative for a number of reasons: firstly, the field research did not occur at night, meaning that many informal foodservice operators active at that time were not recorded; secondly, enterprises such as street traders whose primary trade was non-food but who may have also sold items such as snacks and sweets were excluded from analysis; and thirdly, this research did not take place in clustered informal trader markets and inner-city/suburban trade. Obviously by adding in these missing enterprises, plus rural-based food micro-enterprise, the estimated 140 000 'traditional trade' (spaza) outlets (urban and rural) estimated by Neilson (2016) and considering the national estimate of 265 000 shebeens (urban and rural – many of which also sell food) (Charman, 2006) would substantively increase the numbers of food outlets. Considering the estimates generated in this study only reflect urban townships, there is a likelihood that numbers of informal food retailers of all forms have been considerably underestimated in the past.

5.3. Township micro-enterprise contribution to food security

Township food micro-enterprises represent an important contribution to South African food security – primarily with respect to food accessibility. Alongside the trend of urbanism is the increasing reliance on cash as the means of trade (Battersby, 2011). With most township residents being financially poor and relying on public transport, the procurement of bulk quantities of food can be challenging and financially prohibitive (Skinner & Haysom, 2016). The widespread geographic nature of informal food businesses (such as residential home-based and street-based outlets) creates ready access to food of an affordable nature, cultural preference and in appropriate quantities for budgets. Whilst not thoroughly assessed, an important consideration in the researched informal food markets, and in particular informal foodservice, was the common prevalence of highly processed and inexpensive energy-dense foods such as those high in fats and carbohydrates. Whilst many such food items may 'not foster good health' as reported by Hill et al. (2016), there remains a reasonable diversity of healthy foods available from comparable numbers of fresh produce retailers in the township context.

This study concurs with Frayne et al. (2009) about the general importance of township food retailing, where consumers are most likely to conduct their daily and weekly food purchases in local shop outlets and informal markets. Whilst direct price comparisons with supermarket chains and wholesalers were not conducted, the informal food retail sector represents an efficient use of food resources (such as full nose-to-tail consumption of meat, and blemished fruits and vegetables not tradeable in supermarkets) and a variety of business strategies to keep prices low. This research finds that foods in the informal sector are commonly reasonably cheap per unit and purchasable in small quantities in ways not possible from supermarkets and large outlets. That said, with supermarkets acting as distributors for state grants and increasingly moving into the township geography (das Nair & Chisoro, undated), an important research gap is to understand the impact of these enterprises on micro-enterprise and local-level food security. There is also a requirement for reconsideration of government strategies such as the IFSS which, in its current form, does not sufficiently consider the scope and role of the urban informal economy in food security matters (Figure 1).

The figure highlights the range of products available from informal grocery and food retailers for township consumers at the price of ZAR1.00 (US$0.08). The small purchase quantities of items (e.g. cereals, biscuits, single tea bags and individual chicken feet) are generally not available in such formats from formal-sector retail outlets. Such trading fills a market niche in informal grocery products that allows for continued business operations in spite of the emergence of formal supermarkets and wholesalers on the geographic fringes of the township economy (Crush & Frayne, 2011).

6. Conclusions

Drawing on primary investigation from a small-area-based survey of informal businesses in eight townships across four South African metros, this research aimed to work towards filling knowledge gaps around the role and contribution of the informal economy to food markets and food security. The small-area census approach revealed a range of food-related outlet types, from a fairly economically insignificant urban agricultural production sector, to a substantive grocery retailing spaza sector ethnically predominated by male foreign nationals, to large numbers of house shops and a South African female-dominated informal foodservice sector. All businesses demonstrate considerable reliance on formal industrial-sector food producers as their predominant source of supply. This demonstrates that significant entanglement of South Africa's formal and informal sectors. The geographically widespread nature of this food economy throughout township high streets and residential areas demonstrates its importance in meeting highly localised consumer demands for food otherwise potentially not fully considered in policy approaches such as the IFSS and local municipal trading by-laws targeted to manage/control the activities of informal traders. Whilst the volumes of food traded are not known, nor the specific contribution of these micro-enterprises to the broader food security needs of these communities, the business of food is a critical aspect of shaping the township economy. Alongside increasing levels of urbanisation in South Africa, this business activity will continue to grow in prominence and strategic usefulness within the context of enhancing food security.

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