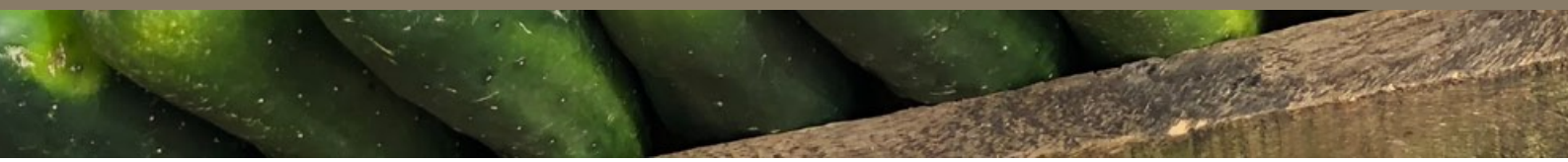
Innovation in the Informal Sector

A Case Study of **Business Evolution** and **Innovation** in the **Informal Food Sector**

Prepared by the Centre for Science, Technology and Innovation Indicators | December 2021



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- 2021: Innovation in the South African Informal Sector Survey – Statistical Report Baseline Survey in Sweetwaters, KwaZulu-Natal, 2017–2018.
- 2022a: A Case Study of Business Evolution and Innovation in the Informal Food Sector
- 2022b: A Case Study of Informal Apparel Businesses in KwaZulu-Natal, South Africa

All reports in the set can be downloaded from:
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The Centre for Science, Technology and Innovation Indicators (CeSTII) at the Human Sciences Research Council (HSRC) undertook the Innovation in the Informal Sector project, on behalf of the Department of Science and Innovation (DSI).

The fieldwork consisted of a baseline survey, digital storytelling workshops, and a set of semi-structured interviews with business owners and key actors. The project team consisted of researchers and data collectors from CeSTII and the Human and Social Development (HSD) research programme at the HSRC. Nazeem Mustapha was responsible for the overall project leadership and led the development of the conceptual framework and survey questionnaire.

The following project team members assisted with a review of the literature that informed the conceptual framework and methodology and the development of the survey questionnaire: Xolisa Magawana, Nozibele Gcora, Nhlanhla Malaza and Nicole van Rheede. Juliet Mokoele contributed to the data capturing and formatting of the data tables. Nicole van Rheede was responsible for the project management and direct oversight of the survey component within CeSTII. Isabel Bortagaray from the Universidad de la República Uruguay and Oluseye Jegede from Obafemi Awolowo University, Ile-Ife, Nigeria provided invaluable guidance, technical expertise, knowledge and assistance in all phases of the project. Il-haam Petersen acted as the co-leader in the baseline study and was responsible for the qualitative methodology and development of the interview schedules. The interview and digital storytelling data were collected by Nicole van Rheede, Xolisa Magawana, Juliet Mokoele, Viwe Sigunu and Nazeem Mustapha. The analysis of the qualitative data was done jointly by the core research team at CeSTII. These team members also drafted individual case study reports. This Food Case Study Report was led by Nazeem Mustapha.

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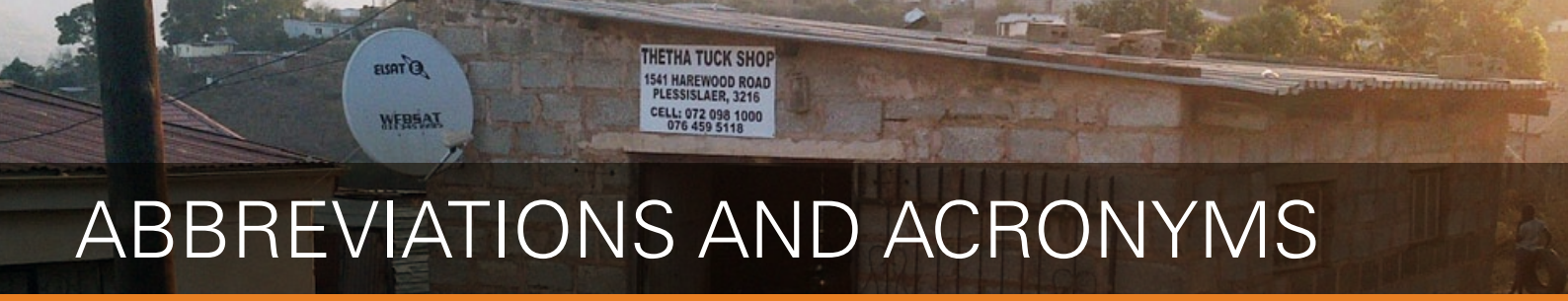


ABBREVIATIONS AND ACRONYMS

AFSUN	African Food Security Urban Network
CeSTII	Centre for Science, Technology and Innovation Indicators
CIS	Community Innovation Survey
CBPR	Community-based participatory research
DSBD	Department of Small Business Development
DSI	Department of Science and Innovation
DST	Department of Science and Technology
NT	National Treasury
the dti	Department of Trade and Industry
DUIIS	Doing, using, interacting, imitating and searching
EDD	Economic Development Department
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HSD	Human and Social Development
HSRC	Human Sciences Research Council
IDC	Industrial Development Corporation
IDP	Integrated Development Plan
IIS	Innovation in the Informal Sector
IKS	Indigenous Knowledge Systems
IMEDP	Informal Micro-Enterprise Development Programme
IMF	International Monetary Fund
IP	Intellectual Property
IPR	Intellectual Property Rights
LIPC	Local Innovation and Production Classification
LIPS	Local Innovation and Production System
NEF	National Empowerment Fund
NACI	National Advisory Council on Innovation
NESTI	National Experts on Science and Technology Indicators
NGO	Non-governmental organisation
NIBUS	National Informal Business Upliftment Strategy
NSI	National System of Innovation
OECD	Organisation for Economic Cooperation and Development
R&D	Research and Experimental Development
RedeSist	Brazilian Research Network on Local Innovation and Production Systems
SADC	Southern African Development Community
SAIE	South African Institute for Entrepreneurship
SEDA	Small Enterprise Development Agency
Samaf	South African Micro Finance Apex
SARS	South African Revenue Services
SIC	Standard Industrial Classification
SMME	Small, Medium and Micro Enterprise
Stats SA	Statistics South Africa
STI	Science, Technology and Innovation
UK	United Kingdom
UN	United Nations
WB	World Bank
YEDP	Youth Enterprise Development Programme

DEFINITIONS AND DESCRIPTIONS

Informal sector enterprises are private unincorporated enterprises that are unregistered or do not keep formal accounts (EC, IMF, OECD, UN and WB , 2009). A philosophical perspective that promotes inclusivity informed the methodologies that this study espouses. This is an important fundamental in the context of informal settings, to promote the quality of responses from the participants in the study. Therefore, in contrast to the practice adopted by national accountants and the like, the informal sector here is defined inclusively using local community individuals' perceptions of what they consider as informal sector businesses. However, there is a great overlap between this definition, which is a bottom-up working definition, and the definition used for statistical tabulations of national accounts or labour statistics. In many cases, informal sector businesses consider themselves to be in the informal sector, even though they may have registered as formal businesses in the past, considering formalisation as an aspirational ideal or motivational goal.

Innovation is a new or improved product or process (or a combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process) (OECD, 2018).

Innovation intensity is the proportion of employees that are involved in innovation activity, expressed as a percentage.

Innovation rate measures the fraction of successful innovators in the population; that is, excluding those with no innovation activity, or only incomplete (abandoned or ongoing) innovation activity.

Local innovation and production systems (LIPSs) are groups of economic, political and social agents localised in the same area, performing related economic activities, in which formal and informal interdependence and consistent linkages usually result in cooperation and learning processes, with the potential to generate increased productive and innovative capabilities (Lastres & Cassiolato, 2005, p. 7)

LIP Classifications are groupings of informal sector businesses involved in related production and learning activities, from the production of raw materials and other inputs into the final production of goods and services at the local level. LIP Classifications are based on an alternative method to the standard descriptions of economic activity for describing economic activities (e.g. Standard Industrial Classification in South Africa) at the local level.

Main economic activity of a business is the economic activity that generated the most income.

Standard Industrial Classification (SIC) codes are recommended by Statistics South Africa (Stats SA, 2012) for describing the economic activities of industries.

PREFACE

This is a study of innovation in the informal sector. It covers business innovation in small, informal businesses. It is distinct from grassroots innovation, which "covers a diverse set of activities in which networks of neighbours, community groups and activists work with people to generate bottom-up solutions for sustainable development" (DST, 2018) and social innovation.

This report contains the analysis of results and conclusions from the case study on Innovation in the Informal Food Sector in Sweetwaters / Mpumuza, Msunduzi, a peri-urban area in KwaZulu-Natal. The case study was informed by quantitative data collected from the Baseline Survey of Innovation in the Informal Sector (CeSTII, 2020) and data from qualitative methods, designed to determine what innovation takes place in informal settings like this one.

The qualitative components consisted of interviews with semi-structured questions for businesses in three selected sectors and other actors (community-based organisations and government actors) operating in the study area and a digital storytelling workshop for business owners in the area. One of the sectors selected was the food sector. The reason for adopting this mixed-methods approach is because relatively little is known about how innovation takes place in informal settings in South Africa and on the African continent. Furthermore, researchers within the field of informal sector studies have emphasised the need for community-based research methods to elicit responses and openness.

The main purpose of this report is to present the analysis of the survey and qualitative data for the food sector. The goal is to shed light on the topic of innovation in the context of informal settings and to provide information useful to the policy community. This case study report should be read as a companion to the statistical report and a second case study following the clothing, textiles, footwear and leather sector case. The former served as a means of reporting the results, with few or no inferences drawn from the statistics therein. Finally, a more detailed report that includes the synthesis of results from the individual case studies completes the suite of products from the project measuring innovation in the informal sector in Sweetwaters, KwaZulu-Natal, South Africa.

Dissemination

The findings of the 2017–2018 IIS Survey, case study reports, and integrated analysis report will be disseminated to stakeholders. The report and others in the series are available on request from CeSTII and the DSI. The reports can be downloaded from the HSRC-CeSTII website (http://www.hsrc.ac.za/en/departments/cestii). Care is taken to ensure the confidentiality of respondent information and the data presented in the reports are anonymised as far as possible. Data extractions in response to users' special data requests are generally provided free of charge unless substantial analytical work is required to meet any such request. Data extractions are done in accordance with the approved data access protocol and requests should be sent to cestiidata@hsrc.ac.za

Storage and archiving

The IIS project data will be archived according to established CeSTII procedures. All data are stored electronically on secure servers.

EXECUTIVE SUMMARY

This case study investigates the extent, nature and potential impact of innovation in the informal food sector in a peri-urban area in KwaZulu-Natal, the most prevalent informal sector in the region. Since food services, food retailers and food producers were prominent economic activities in the study, the analysis of informality and innovation activity was focused on these three subsectors within the local food sector. The analysis explores the reality of varying levels of business informality and its relationship to innovation at the local level, through innovation events – those events that cause innovation to take place. While it identifies in generality the indicators that describe the informality state of a firm, or collection of firms, the case study presents individual examples of these innovation events as vignettes.

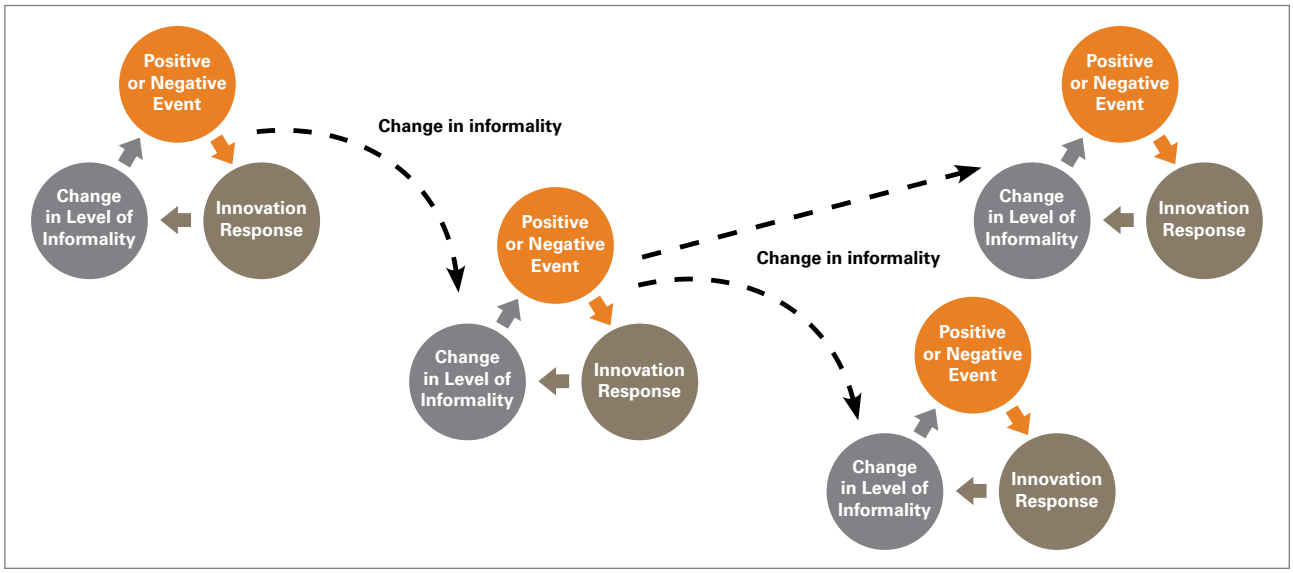
Our focus in this case study is on the rich variety of informality in the informal food sector (Mbaye & Gueye, 2020). Levels of informality in the sector depend on many criteria, such as firm size, registration status, the keeping of financial records, business location, and access to finance. A combination of these criteria determines the level of informality. Achievement of all these criteria characterises the state of a formal sustainable micro-enterprise. The case study explores how innovation supports the business evolution required to build and strengthen local food sector value chains serving low-income and impoverished households. The case study explores how informal businesses can grow through their innovation activities to be included in and strengthen local innovation and production food systems more effectively.

The way in which enterprise informality is typically understood, as a binary opposite of enterprise formality, is not helpful in informing policy responses. A survey of small businesses in the UK found that 20% of the businesses started up in the informal sector, with 64% of them doing so to test the viability of their businesses (Williams & Martinez, 2014). Therefore, the mechanisms for developing learning in a systemic fashion within informal sector businesses are a critical explanatory variable. This characteristic of the informal sector as a testbed for entrepreneurs is important and often overlooked in discussions on innovation policy. To promote inclusive development in Africa it is necessary to move beyond the conceptualisation of a temporary, linear process towards formality. A better conceptualisation and empirical understanding of the pathways through which informal enterprises evolve to become sustainable, profitable businesses is needed as a basis for designing policies that can bring about transformative and inclusive change.

Change in informality levels

Further research is needed to test the robustness of the findings in other areas of the country and varying socio-economic contexts.

Change in informality levels



Case study design and methodology

The analysis is based on quantitative data from the 2017–18 Innovation in the Informal Sector (IIS) Survey and a set of semi-structured interviews. The research uses a Local Innovation and Production Systems (LIPS) framework, adapted to the informal sector in South Africa (Cassiolato & Lastres, 2020 and Lastres & Cassiolatro, 2005).

Findings

The findings show the complex and embedded nature and dynamics of informal micro-enterprises, including how these firms are established, survive and grow, as a foundation for better informed interventions and policy approaches (Crush & Young, 2019; Resnick, Sivasubramanian, Idiong, Ojo, & Tanko, 2019).

Policy implications

For the policymaker committed to promoting the growth of informal businesses to formal micro-enterprises, the case study shines a light on the role innovation plays in these processes. It indicates the requirement for policy interventions that are more focused and targeted, based on understanding the local environment and systems dynamics. By investigating examples of how innovation transforms the level of informality in local innovation systems, as set out in this case study, the policymaker can formulate bespoke strategies responsive to locales based on understanding a relatively small set of novel innovation indicators that describe the state of a business or group of businesses within a local innovation and production system (LIPS).

A. INTRODUCTION

In South Africa, and many other countries in Africa, informal food trade in townships and peri-urban areas accounts for a large proportion of informal economic activity, and is critical to food access for the poor (Tawodzera, 2019; Petersen & Charman, 2018; Moore, 2020; Mottaleb, Mainuddin, & Sonobe, 2020). Informal enterprises such as spazas and shisa nyamas[1] need to innovate continually to compete and continue to provide cheap, flexible options for low-income and impoverished households. There is a growing critique of government intervention strategies, questioning the extent to which these mitigate the livelihood risks for the most marginalised in the informal economy, and how interventions could stimulate and support informal economic activities, given major supply and demand decline (Khambule, 2020; Rogan & Skinner, 2020).

Where informal enterprises are included government policy tends to focus on formalisation strategies, to bring the informal sector into business regulatory frameworks. However, the evidence suggests that enterprise informality in South Africa is long term in nature. In the context of a weakening economy, growing unemployment and poverty, the informal sector is growing (Fourie, 2018). Creating an informal enterprise is not typically a short-term action, with the expectation of rapid progress to formal opportunities.

This case study draws on a survey of innovation in informal enterprises, using methodologies adapted from informal sector research and the standard Oslo Manual (OECD, 2018), together with an in-depth case study of a food services local innovation and production system in a peri-urban area of KwaZulu-Natal. It analyses the relationship between the events prompting innovation for survival or growth, and the evolution of informal food service enterprises manifesting in different levels of informality over time. We argue that public policies that engage with the realities and persistence of the informal sector, and significantly, with the ways in which innovation is so central to the very nature of informality, can be harnessed to support enterprise growth and inclusive development.

We begin by presenting an overview of local innovation and production systems, as well as levels of informality as the conceptual elements guiding the study. This is followed by a description of the socio-economic and policy context of the study, then an overview of the methodological tools used for the collection of data. This is followed by a discussion of the local innovation and production systems in the informal food subsectors in the study area, after which we relate innovation to levels of informality. The final two sections provide concluding remarks and discuss policy recommendations that support innovation to evolve businesses in the services, production and retail of food.

1 Spaza shops are informal convenience stores selling groceries and beverages, and shisa nyama's sell barbecued or 'braaied' meat.

B. CONCEPTUAL ELEMENTS

B.1 Local innovation and production systems framework

The research used a LIPS framework, which is suitable for studying innovation in the informal sector when adapted, to take into consideration the characteristics of businesses and economic activities in the informal sector in South Africa (Cassiolato, Lastres, Szapiro, & de Matos, 2017; Cassiolato & Martins Lastres, 2020; Lastres & Cassiolato, 2005). For example, informal sector businesses tend to be survivalist micro-businesses operating in informal, resource-poor local settings with distinct spatial dynamics (Charman & Petersen, 2018; Fourie, 2018). The LIPS framework emphasises the following:

- Territorial dimension as a specific focus of analysis and policy;
- The link between micro-, meso- and macro-dimensions;
- The diversity of activities and actors – economic, political and social;
- Interactive learning – including the creation, assimilation and use of knowledge for innovation;
- Coordination ('governance') – including power relations among actors and activities;
- Embeddedness – the common identities and goals, cooperation and commitment of the different actors and the articulation and adherence of production and innovation initiatives to the development of that territory (Cassiolato, Lastres, Szapiro, & de Matos, 2017).

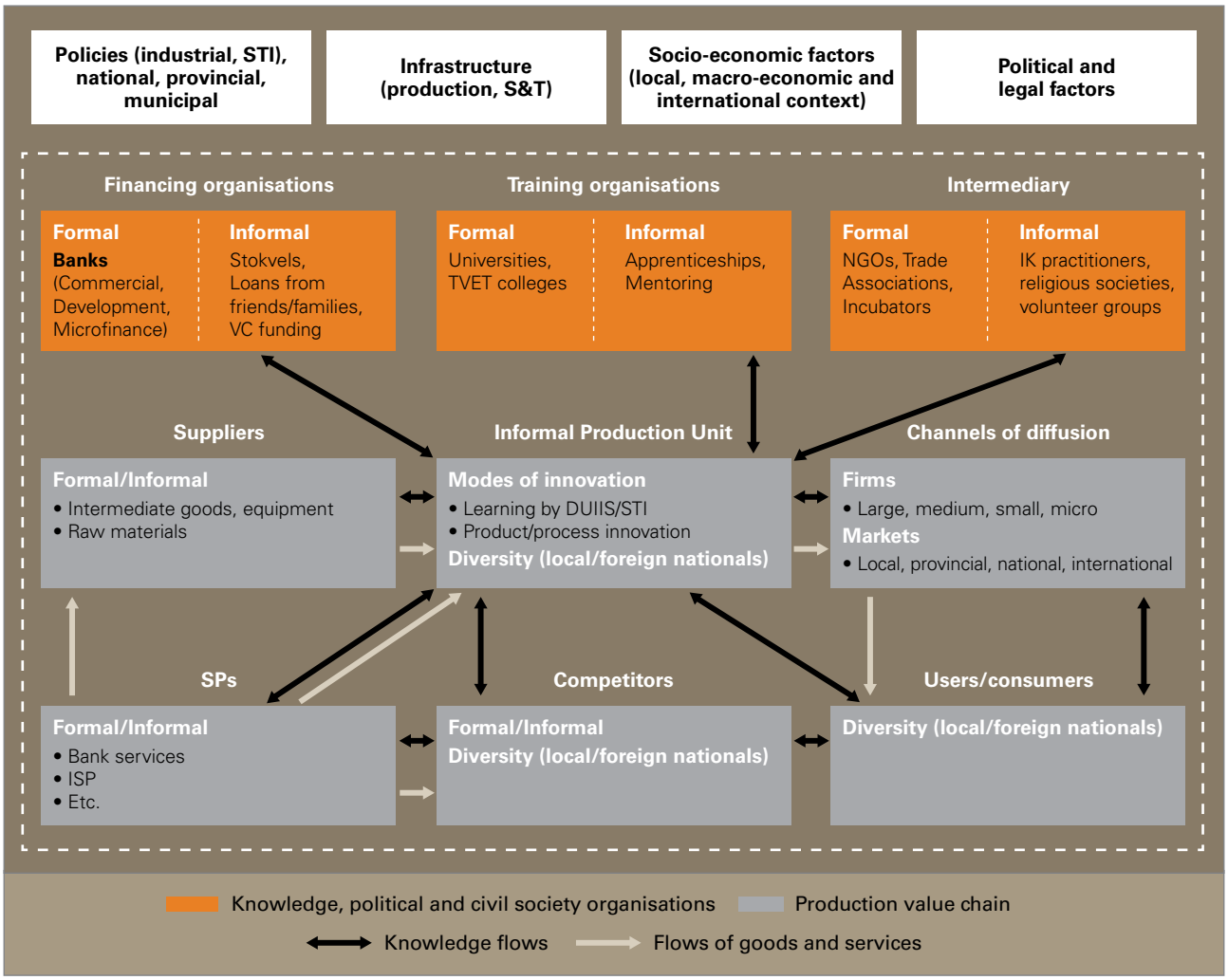
The LIPS framework places the unit of analysis in the set of agents, at the collective level, going beyond the individual business, specific sector or production chain and establishing a close relationship between the territory and the economic activities (Cassiolato, Lastres, Szapiro, & de Matos, 2017). The focus is on studying the linkages between a range of actors involved in inter-related economic activities. These include firms producing goods and services; suppliers of raw materials, equipment and other inputs; distributors and traders; workers and consumers; organisations geared towards capacity building and training of human resources, information, research, development and engineering; support, regulation and financing providers; cooperatives, associations, trade unions and other representative bodies as well as policy design and implementation actors.

To better align with the characteristics of the informal sector, the LIPS framework was adapted to include a broad range of new actors within the system (e.g. informal financing providers and intermediaries), informal linkages among the actors, as well as the peculiarity of the socio-cultural, political, institutional and technological landscape of the continent. A detailed description of the LIPS framework and the full methodology can be found in the 2017–18 IIS Survey Statistical Report (CeSTII, 2020).

The definition of innovation introduced in the most recent version of the Oslo Manual (OECD, 2018) was found to be suitable for measuring innovation in the informal sector:

> *"…innovation is a new or improved product or process (or a combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process)."*

Figure 1 Local innovation and production systems framework adapted for the informal sector



Source: Authors, based on (Cassiolato, Lastres, Szapiro, & de Matos, 2017) and (De Beer, Fu, & Wunsch-Vincent, 2013).

While the Oslo Manual (2018) provides useful insights for measuring innovation in the formal sector, the conceptual underpinnings and methodological recommendations for community innovation surveys used for measuring innovation in the informal sector in South Africa are not suitable. A survey of innovation in the informal sector in South Africa must consider the typical size of informal sector businesses, which tend to be survivalist and micro, and the local nature and spatial dynamics of informal sector industries. The IIS project, therefore, adopted a local innovation and production systems (LIPS) framework, which was further adapted for the informal sector in South Africa.

B.2 The path from informal to formal is not a straight one

In the informal sector, there are varying degrees of informality. These vary in characteristics such as registration status, firm size, and market orientation. By adapting the criteria developed by Mbaye and Gueye (2020), we measure informality based on the fulfilment of five of the seven criteria they present (see Table 1).

Table 1 Criteria of informality

Criteria	Description of criterion
Firm size	This is fulfilled if the business employs fewer than five people. It captures the size of firms, with fewer than five employees being characteristic of informal enterprises. This can be further broken down into: own-account workers with one employee (the owner), nano-enterprises with two to three employees, and small enterprises are those with four to five employees.
Registration status	This criterion is fulfilled when the business indicates that it is not registered with any public authority. Several modalities of registration are considered: registration with the tax authority, registration with the department of trade and industry, and registration as an importer or exporter.
Maintenance of financial statements	This is fulfilled when the business does not maintain regular, accurate accounts and financial statements. There are no certified statements, no annual accounts, and no registry of revenue or expenditure.
Access to business premises	This is met when the business does not operate from fixed premises. Instead the premises could be mobile, the operator's home or a public space used as a working premises.
Access to external finance	This is met when the company has not received a bank or microfinance loan within the last five years.

Source: Adapted from Mbaye & Gueye (2020)

Using these five criteria, proxies in our dataset were selected against which to apply the criteria and provide insight into the different levels of informality observed in the informal food services sector. Table 2 lists the proxies from the survey and interview data that were used for these purposes.

Table 2 Survey proxy indicators for levels of informality

Criterion	Survey and interview data proxy
Firm size	How many people are working in the business?
Registration status	Is your business registered?
Taxation	No proxy
Maintenance of accounts/financial statements	Does your business have a bank account?
Access to business premises	Business location
Access to external finance	During the two years (2017 to 2018) how often did you interact with the following sources of information in your innovation activities: commercial banks, microfinance banks? Did you receive any financial support?
Employee benefits	No proxy

Data source: CeSTII 2017–18 IIS Survey

The remaining two criteria that Mbaye and Gueye considered, namely taxation and employee benefits were not recorded in our sample and were therefore excluded from our analysis. Taxation in this context refers specifically to whether the enterprise pays any form of tax based on actual revenue. The employee benefit criterion, which was also excluded in our application refers to whether any employees were registered with a social security scheme such as health, retirement, or accident coverage (Mbaye & Gueye, 2020, p. 28).

Using the remaining five criteria, we define a businesses' level of informality according to the number of criteria it jointly fulfils. This distinguishes six levels of informality, specified in Table 3. Totally formal firms, which meet none of the criteria, are classified Level 0. For every additional criterion fulfilled, the business rises in informality, with six criteria being met as the highest level of informality. Those meeting all six are considered totally informal.

Table 3 Description of level of informality

All criteria and sub-criteria met	Level 6	Totally informal business
5 criteria met	Level 5	Mostly informal
4 criteria met	Level 4	Informal to a large degree
3 criteria met	Level 3	Semi-informal
2 criteria met	Level 2	Partially informal
1 criterion met	Level 1	Mostly formal
No criteria met	Level 0	Formal business

Source: Authors (based on Mbaye & Gueye (2020) and the 2017–18 IIS Survey data)

C. SOCIO-ECONOMIC AND POLITICAL CONTEXT

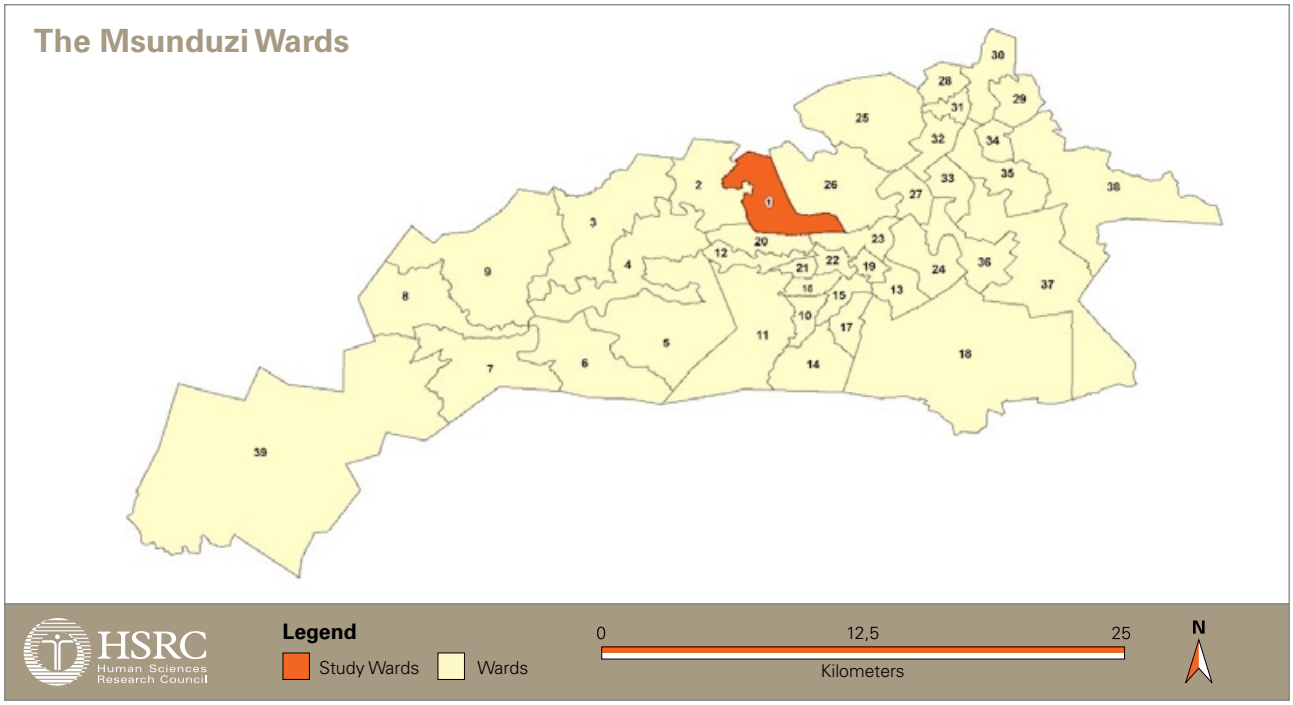
C.1 Study area

The IIS study was conducted in Mpumuza / Sweetwaters in Pietermaritzburg, KwaZulu-Natal. The area forms part of the Msunduzi Local Municipality within the boundaries of the uMgungundlovu District Municipality, northwest of South Africa's third largest city, the coastal city of Durban. The Msunduzi Local Municipality contributes 7.5% to the GDP of KwaZulu-Natal and 1.19% to national GDP (Msunduzi Municipality, 2018).

Mpumuza is predominantly a peri-urban area, but included parts that are rural residential. The Msunduzi Local Municipality encompasses the city of Pietermaritzburg, the second largest metropole in KwaZulu-Natal and capital of the province. Pietermaritzburg is the main economic hub of the District. On a regional scale, the municipality is situated at the junction of an industrial and agro-industrial corridor. As the second largest local municipality in KwaZulu-Natal, it has entrenched its role and position as the political hub of the province. Despite consistent economic growth in recent years, unemployment and poverty levels in Msunduzi remain a concern, particularly in townships and peri-urban settlements where unemployment rates may exceed 70% (Msunduzi Municipality, 2018).

The IIS study focuses on one geographical area within Mpumuza: Ward 1 and surrounds (see Figure 2). The study area has a population of approximately 18 500, with a working age population of 59% (Census 2011 and Community Survey 2016). The population consists of a slightly larger proportion of females (52%) and isiZulu is the main language spoken. Mpumuza falls under the authority of traditional Zulu leadership with a Chief and Izinduna. All economic and social activity is overseen by the traditional authority of the area (Mthandeni, 2002), in partnership with local government. Social structures, norms, values and practices are deeply entrenched in Zulu customs.

Figure 2 Map of the study area: Ward 1, Msundunzi Local Municipality



Source: CeSTII (2021)

Agriculture and agribusiness make an important contribution to the Msunduzi economy in general. However, the agricultural output of the municipality is limited, primarily as a result of the extent of land available for this purpose. Msunduzi falls under the Zulu monarch, King Goodwill Zwelithini and the Ingonyama Trust governs land usage in KwaZulu-Natal. The Trust was established to manage land owned by the province and is currently responsible for managing 2.8 million hectares of land. Permission from the traditional authority as well as the Ingonyama Trust is needed to obtain land in the area.

Msunduzi municipality is ideally positioned for manufacturing, particularly aluminum, timber, and leather products and is known for hosting the Royal Agricultural Show. A variety of informal economy sectors are established in Msunduzi. The most common informal business activities occur in three LIPS sectors: Food (27,2%), Building (17,4%) and Haircare and Cosmetics (15,0%) services. The two smallest LIPS sectors, namely Electronics Repair and Maintenance, and Business Support Services, contribute less than a percent each to the overall number of businesses (CeSTII, 2020).

C.2 Policy context

The policy analysis has adopted a two-pronged approach, focused on the effects of the policy studied and the issues surrounding its implementation. The policy analysis aims to determine what policies have been developed to support micro-enterprises, informal enterprises or start-ups in the national, provincial and regional area with respect to the study area in Msunduzi. Policy documents and programmes were evaluated with respect to effectiveness and implementation. The effectiveness of the relevant policies was assessed based on their intent, impact on micro-enterprises and potential unintended effects. The implementation was assessed by examining the accessibility requirements of the policy, strategy or funding mechanism. It was also assessed by virtue of its direct implications for the scope and area of the study as well as the instruments through which the policy is implemented (see Table 4).

Table 4 Policy analysis dimensions

Effects	Effectiveness	What effects does the policy have on micro-enterprises?
	Unintended effects	What are the unintended effects of the policy?
	Equity	What are effects of this policy on the informal sector and/or study area?
Implementation	Feasibility	What is the feasibility of the policy, through its implementation instruments?
	Accessibility	How accessible is the policy to the study population?

Adopted from Florence Morestin's Framework for Analysing Public Policy, September 2012

C.2.1 Policies and strategies

C.2.1.1 White Paper on Science Technology and Innovation

The White Paper on Science Technology and Innovation has an SMMEs focus to grant support for social and grassroots innovation. The policy has had an impact on micro-enterprises through this support which is incentivized through mentorship and capacity building through supplier development. Although there are no accessibility requirements indicated in the policy, there are direct study implications through the necessary support recognized for SMME's in informal settlements and rural areas.

The policy identifies instruments to support grassroots and social innovation through innovation hubs. These hubs are to provide standard support, coaching and mentoring services to micro-enterprises. The purpose of these hubs will be focused on market and enterprise development, including intellectual property strategy development and access strategies to markets. In addition, consideration will be given to regulatory hurdles, as well as burdensome administration and legal requirements. The unintended effects of the policy for informal enterprises is that the objective for targeting marginalized

groups of innovators, particularly the youth, and provide more support on innovations that have high social return is unlikely to gain attention due to market failures.

C.2.1.2 Integrated Strategy on the Promotion of Entrepreneurship and Small Business

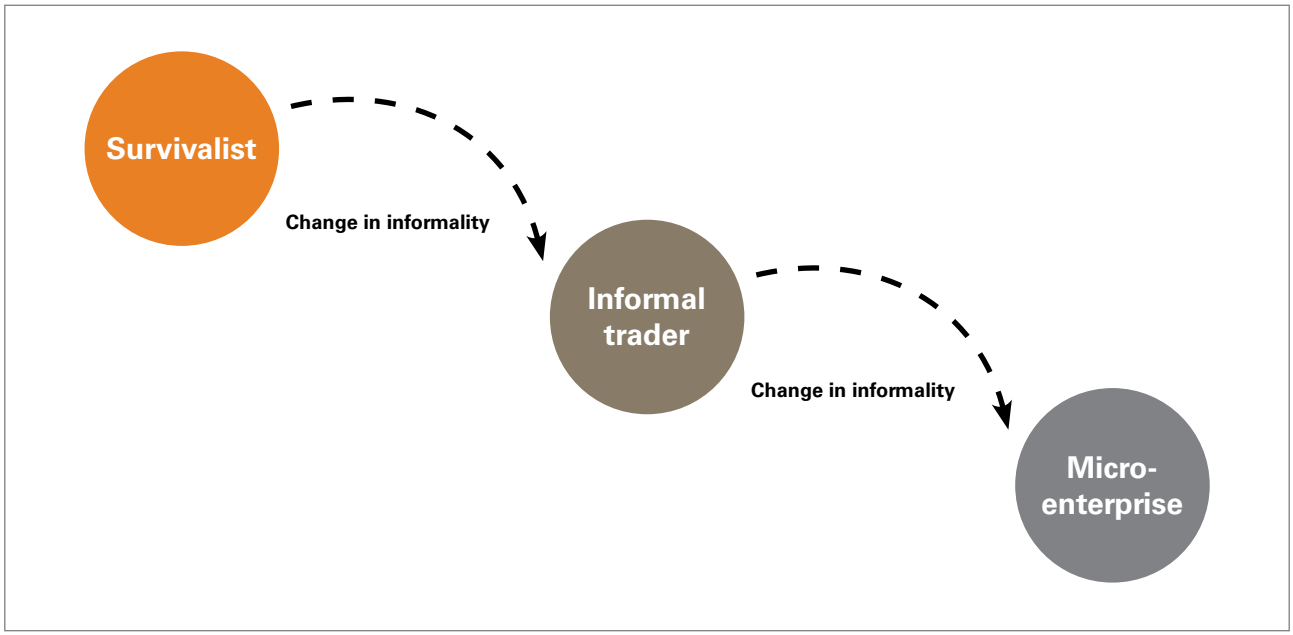
The strategic intent of the Integrated Strategy on the Promotion of Entrepreneurship and Small Businesses is to create an enabling environment for small enterprises by reducing administrative costs for micro-enterprises. The benefit is accessible to tax paying and VAT registered businesses and assumes that the small businesses is formally established. Therefore, an unintended effect is that it overlooks different levels of informality in informal businesses.

C.2.1.3 National Informal Business Upliftment Strategy (NIBUS)

The Department of Small Business Development's NIBUS strategy aims to uplift informal businesses and render support to local chambers, business associations and municipal local economic development offices and facilitate access to upliftment programmes. The strategy is targeted specifically at entrepreneurs in the informal economy and identifies the retail sector as one of five key sectors for developing informal businesses. One of the ways in which the strategy is implemented is via the Shared Economic Infrastructure Funding Faculty, for the funding of common infrastructure, and the Informal and Micro Enterprise Support Programme for businesses based in townships, rural areas and depressed areas in towns and cities. Owners do not need to have a registered business to access this funding, but they must be a local resident. Funding is based on a 50:50 cost sharing grant.

The Vuvuzela Graduation Model is a delivery mechanism that describes three levels of informal businesses and how they graduate from one level to another. Survivalist businesses graduate to informal trader and finally to micro-enterprise. The model aims to promote the development of informal businesses into viable small, medium and micro enterprises (SMMEs) and co-operatives. Priority areas include retail trading, manufacturing, services, agriculture, construction, and maintenance.

Figure 3 The Vuvuzela Graduation Model transformation from informal to formal business



Source: Authors based on Vuvuzela Graduation Model in the National Informal Business Upliftment Strategy (NIBUS)

C.2.2 Funding agencies

C.2.2.1 Small Enterprise Development Agency (SEDA)

SEDA has several programmes to promote entrepreneurship and develop small enterprises by providing customised, non-financial business services to support business growth and sustainability in collaboration with other role players. Its various programmes are listed in Table 5.

Table 5 SEDA funding programmes

Name of programme	Purpose	Target	Unintended effects	Implementation instruments
COOPS programme	To increase the number of cooperatives trading in townships though coordinated efforts with other stakeholders trading in rural areas; supported through supplier development programmes and through transversal agreements generated through the Department of Small Business Development.	Cooperatives	Accessibility not indicated	• Rural Enterprise Empowerment Process (REEP) through resource mobilisation, enterprise development and transfer and transformation. • One Municipality One Product (OMAP) regional development approach
Enterprise Development – Export Development Programme	Help small enterprises in South Africa to acquire and apply practical skills in developing their export capabilities.	Exporting small enterprises	Qualification criteria excludes businesses who do not meet this criterion.	
Enterprise Development - Supplier Development Programme	Help SMMEs to access business opportunities with bigger businesses and develop localised supply chains.	Targeted at SMMEs that have gone past the start-up phase and have the potential to become suppliers of goods and services to state-owned enterprises, government and the private sector.	Programme is buyer-firm focused. The buyer-firm decides on the selection process and client SMME participation.	SEDA plays an intermediary role by providing a platform to connect businesses and provides buyers with procurement options from SMMEs
Enterprise Development Tools	Provides mentorship on registration, finance, support, capacity building systems. Owners can contact a regional office to find out more about the resources available. It aims to develop personal entrepreneurial competencies for participants.	Prospective entrepreneurs, small and medium and micro enterprises that are trading and looking to grow	Existing SMMEs, potential entrepreneurs with promising business ideas, start-up businesses with bankable project proposals.	Delivered via network branches throughout the country.
Enterprise Development – Empretec Programme	Develops personal entrepreneurial competencies for participants	Existing SMEs, potential entrepreneurs with promising business ideas, start-up businesses with bankable project proposals	Participants have to be available for six days for the programme	
Enterprise Development – Basic Entrepreneurial Skills Development (BESD)	Available to the informal sector to assist with sustainability, management, financial management and profitability	Informal traders/ owners of micro enterprises.	Accessibility of this programme is not indicated. Business owners can contact the regional offices to find out how to access this programme.	The programme is designed to transfer basic business skills to micro-business owners. This takes the form of two-hour one-on-one training sessions over a period of 15 months.

Source: Authors

An unintended effect of the programmes is that the inaccessibility is a significant factor. Business owners in the informal sector need to be aware of the programmes on offer and inquire about a specific programme they are interested in and make themselves available to attend. The accessibility of these programmes in a peri-urban setting needs to be evaluated.

C.2.2.2 Small Enterprise Funding Agency (SEFA)

SEFA provides loans directly to SMMEs to support the sustainability of these enterprises by making finance easily accessible. To gain access to funding a business must be registered, have a business plan and upon application, demonstrate the ability to repay the loan. In addition, businesses need to provide credit references and a valid tax clearance certificate. These requirements make this fund inaccessible to the enterprises in our study, where a few may be registered but do not have tax clearance certificates. The fund is implemented via four instruments; these are asset finance, bridging loans, revolving loans and term loans.

C.2.2.3 National Empowerment Fund (NEF)

The NEF through its Rural and Community Development Fund provides funding to rural entrepreneurs to facilitate skills transfer and operational involvement by community groups for social and economic upliftment. Its applicability to the study population is that the fund offers support to start-ups in rural communities in the form of financing products. To access the funding, business owners must submit five-year financial projections (income statement, balance sheet and monthly cash flow statement), personal statements of assets and liabilities, as well as registration documents. It is therefore inaccessible to non-registered businesses and businesses that do not have adequate financial management processes in place. Financing products are for: 1) Acquisitions; 2) New Venture Capital and 3) Expansion Capital.

C.2.3 Policies outside the geographic scope of the study but relevant to the informal sector

C.2.3.1 Ethekwini's Informal Economy Policy

Ethekwini's Informal Economy Policy aims to promote economic development through the management and support of workers in the informal economy and by moving informal enterprises into the formal. The policy seeks to build capacity for informal business owners to grow their enterprises, so that they can be registered. Pilot projects developed as implementation mechanisms included one that required businesses to register for membership to jointly access storage, creche facilities, venues etc. Another project aims to create networks between formal and informal enterprises and the final project aims to assist businesses with market access. Allocations are made by local officials based on criteria developed by a stakeholder consultative process.

This policy is for the Durban Metro and does not affect the study area. The primary focus is the formalisation of the informal economy through registration. The policy overlooks the varying levels of informality in the sector and is based on an understanding of the informal sector being on a continuum from informal to formal in terms of business premises. This informs how a rental scheme has been structured for payments by street vendors to those who operate in marquees and incubators.

C.2.4 Summary of policies

Table 6 Summary of policy analysis

Policy/Strategy Programme/ Institute /Fund	Effectiveness	Equity	Accessibility	Feasibility	Unintended effects
White Paper on Science, Technology and Innovation	Supports grassroots and social innovation	N/A	SMMEs in informal settlements, rural areas and cooperatives	Locally based innovation hubs as avenues to deliver coaching and mentoring services	Focus on innovations that have high social return is unlikely to gain traction because of market failures.
Integrated Strategy on the Promotion of Entrepreneurship and Small Business	Reduced administrative costs for small businesses	Tax paying and VAT registered businesses	Not accessible to non-registered businesses	Inadequate implementation mechanisms.	Overlooks different levels of informality. Reduced administration costs are likely to only assist a very small proportion of informal businesses.
SEDA - BESD	Provides basic entrepreneurial skills for business owners	Targeted at Informal traders/ owners of micro enterprises	Available to the informal sector to assist with sustainability, management, financial management and profitability	Programme designed to transfer basic business skills to micro-business owners. Structure is two-hour one-on-one training sessions at their business premises over a period of 15 months	The accessibility of this programme is not indicated. Business owners to contact the regional office to find out about how to access this programme.
NIBUS	Targeted at entrepreneurs in the informal economy.	Be a South African citizen, business does not have to be registered, be a local resident, basic literacy and numeracy skills and have a growth plan	Targeted at the informal economy. Identified retail as one of the five key sectors for development of informal businesses.	Shared Economic Infrastructure Facility (SEIF) funding of common infrastructure; Informal and Micro Enterprise Support Programme for businesses based in townships, rural areas and depressed areas in towns and cities.	50:50 cost sharing grant

Continues overleaf...

Policy/Strategy Programme/ Institute /Fund	Effectiveness	Equity	Accessibility	Feasibility	Unintended effects
SEFA	Provide access to finance for SMMEs	Must be registered, have a business plan and proposal upon application, demonstrate ability to repay the loan, provide credit references, have a valid tax clearance certificate	Inaccessible to informal enterprises that are not registered and do not have tax clearance certificates.	Finance only available as either Asset Finance, Bridging Loans, Revolving Loans or Term Loans	Qualifying criteria include being a registered entity and being in possession of a valid tax clearance certificate
NEF	Offers support to start-ups in rural communities in the form of financing products.	5-year financial projections (income statement, balance sheet and monthly cash flow statement). Personal statements of assets and liabilities. Registration documents	Inaccessible to non-registered businesses and businesses that do not have financial management processes in place.	Financing products are limited to 1) Acquisition; 2) New Venture Capital and 3) Expansion Capital	The accessibility criteria limits access to the fund to businesses that have detailed financials and registration documents in place.
SAIE (South African Institute for Entrepreneurship)	There are a number of products to support start-ups and co-ops.	Courses are available in Durban, Cape Town and Johannesburg at a cost of R4 550. Accessibility to business owners with limited resources are low.	Business owners in the study area would need to travel to Durban to participate in the course and have funds for the cost of the course. There are no funding opportunities/ bursaries available for these courses.	Launching Your Business Idea Course and Business Leadership Course: R4550, 2 days, 5 hours per day	Cost and distance to training facility implications, makes these courses inaccessible to many business owners.

Continues overleaf...

Policy/Strategy Programme/ Institute /Fund	Effectiveness	Equity	Accessibility	Feasibility	Unintended effects
Junior Achievement South Africa	The programme most applicable to our sample is the Youth Enterprise Development Programme (YEDP) that focuses on 18-35 year olds and teaches them how to establish a sustainable business.	• Be between the ages of 18 and 35 • comfortable with speaking, writing and understanding English; • free from employment commitments and not be a full-time student; • able to demonstrate a keen interest in starting a business as this will grant preferred entry; • self-starters who are motivated and enthusiastic and willing to contribute to the programme by investing their time and effort; and • prepared to commit completely to the duration of the three to four-month course	There is a regional programme agent in KZN	The steps for interested owners or potential owners to follow would be to contact the regional programme agent and find out when the next programme will commence.	Questionable awareness of the programme. If owners do not have access to the internet and search specifically for the YEDP, how would they become aware of its availability?

Source: Authors

There are a few general trends revealed in the analysis of the policies, strategies and funds presented in this section (see Table 6 above). It can be observed that the main policy thrust is for the formalisation of informal businesses. This is evident in assistance being offered for registration. Many of the accessibility criteria for resources and funding exclude informal businesses by requiring financials, tax clearance certificates and other business documents. The policies generally overlook the varying levels of informality in the sector, and are based on an understanding of the informal sector being on a continuum of informal to formal in terms of business premises.

C.2.5 Support tools for the informal food sector

C.2.5.1 The Grocery Retail Market Inquiry

In 2015, the Department of Economic Development established the Grocery Retail Market Inquiry to get a deeper understanding of the grocery retail sector, and the features of this market that lead to increased market concentration, and a lack of transformation.

Stakeholders from different levels of operation in the retail value chain across South Africa made written and oral submissions to the inquiry. Participating stakeholders included national supermarket chains, small independent retailers, spaza shop owners, suppliers, customers, local authorities, national government departments and industry regulators. The inquiry made several recommendations:

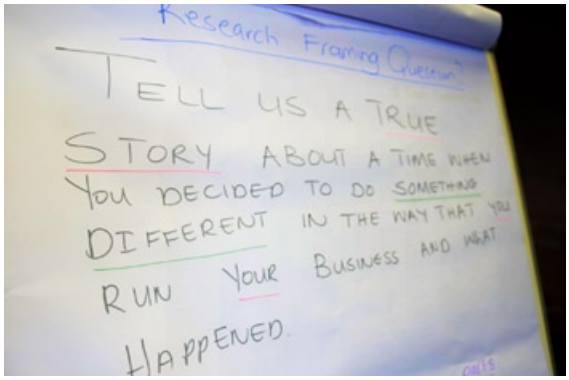
- Government should facilitate the establishment of distribution centers in peri- and non-urban areas to service small and independent retailers and wholesalers;
- Government should establish an incentive programme to provide seed finance for innovative commercial models of private businesses that offer support to small informal spaza shops;
- The effective incorporation of spaza shops into buyer groups and larger wholesale supply chain operations to assist them to realise economies of scale and scope in purchasing;
- The generation of key information on individual spaza shop operations so that the risks of extending credit finance to these shops can be more accurately assessed to facilitate credit access for the purchase of stock; and
- The development of consumer and business information to assist in the improvement of spaza shop businesses, including business and financial management training.

D. CASE STUDY DESIGN AND METHODOLOGY

This case study report forms part of a larger study measuring innovation in the informal sector in Msunduzi (IIS study). The IIS study employed a mixed methods approach to measurement and included three components: 1) a quantitative survey on all informal businesses in the study area (i.e. 2017–18 IIS Survey), 2) case study research on informal food services, as one of the key economic activities in the area, and 3) a series of digital storytelling workshops with business owners in the local area. The case study and digital stories explored the nature of innovation in greater depth than was possible through a quantitative survey, and focused on the individual business, specifically business upgrading as an important way to build innovation and production capabilities at the local level.

The analysis in this case study report draws on both the 2017–18 IIS Survey data and a set of semi-structured interviews. A total of 271 (27%) of 996 informal businesses included in the 2017–18 IIS Survey reported food production and services as their main economic activities. A small group of the food businesses, who indicated that they had engaged in innovation during the period covered by the survey, were selected for an interview. A total of 13 semi-structured interviews were conducted with the business owners. The interviews were conducted face-to-face and telephonically, depending on the availability and preference of the informal business owner. The aim of the interviews was to get a sense of the history of the business, how the business developed over time, and the nature of innovation and learning in the business.

The analysis also draws on a set of digital stories developed with businesses in Msunduzi. The stories were produced through a digital storytelling workshop conducted with informal business owners, from 27 to 31 May 2019. Digital storytelling is a community-based participatory research technique suitable for research with hard-to-reach communities and for exploring complex concepts and processes, such as innovation (see Lambert, 2013). Participants were recruited via the local expertise of informal businesses operating in the area. In total, eight digital stories focusing on the same guiding topic, were produced informed by the question: *Tell me a true story of a time when you did something different in the way that you run your business and what happened*. The digital stories – typically a four to five minute video clip – were factual and narrated by the informal business owners, in their own words. The transcripts of the digital stories were analysed to gain an in-depth understanding of the learning and innovation activities. The freedom of reflection provided by the workshop environment allowed for the identification of the nature of changing business events, and how innovation takes place in micro-enterprises.



E. FOOD SECTOR IN MSUNDUZI MUNICIPALITY

E.1 The importance of the informal food services sector

E.1.1 Food security

A baseline survey conducted by the African Food Security Urban Network (AFSUN) in 2008–2009, showed that Msunduzi's residents experience higher levels of food insecurity than similar neighbourhoods in Cape Town and Johannesburg and many other cities in the Southern African Development Community (SADC) region. Unlike a number of these cities, the food sourcing strategies of households are severely constrained (Crush & Caesar, 2014). The data from the baseline study revealed that only 7% of the interviewed households were food secure, which means that they experienced no worries about food, experienced no shortages of food, and were able to consume the types of food that they preferred (Crush & Caesar, 2014). This indicates the high levels of unemployment and poverty in the municipality. Fully 60% of Msunduzi households fell into the severely food insecure category and another 27% were moderately food insecure (Crush & Caesar, 2014).

E.1.2 Food sector businesses in Msunduzi Local Municipality

Urban agriculture and rural-urban food transfers are limited, and the informal food economy is much less significant than elsewhere. The control of the urban food system largely rests in the hands of supermarkets whose location and pricing policies put quality food outside the reach of most poor households. Households in Msunduzi purchase the food that they consume, which means that there is a strong relationship between food security and household income. Msunduzi has high levels of reliance on supermarkets, especially compared with the informal food economy (Crush & Caesar, 2014). Msunduzi has an extremely high concentration of supermarkets for a city of its size. A 2010 study of the supermarket sector showed that all of the major South African chains are well-represented: Pick n Pay (three outlets), Shoprite (four), Spar (seven), and Woolworths (four) (Naidoo, Govender, & Green, 2010). A local company, Save Cash and Carry, also has two supermarkets. The supermarkets are integrated with centralised procurement and distribution systems, generally sourcing their produce via company distribution centres in Msunduzi or Durban, rather than from local producers (Naidoo, Govender, & Green, 2010). Some Spar and Save Cash and Carry outlets do source fresh produce from local white-owned commercial farms and the Mkondeni Municipality Market. There is little evidence that rural smallholders supply any of the products sold in supermarkets. None of the major supermarkets is located in poorer urban neighbourhoods including Sweetwaters (Crush & Caesar, 2014).

Despite the lack of proximity of supermarkets, they still constitute the major source of food for poor households. In Msunduzi almost every poor household regardless of type, income, size or degree of food insecurity buy their food from formal supermarkets. Only 40% of Msunduzi households source food from smaller retail outlets (compared to 68% for the sample as a whole), which suggests that supermarkets may have a significantly negative impact on the viability of the small independent food retail sector (Crush & Caesar, 2014). Most households source food from supermarkets monthly, which tends to coincide with the payment of social grants and monthly wages. In an increasing number of South African cities, social grants are paid out at supermarkets. The monthly pattern of patronage suggests that households primarily obtain non-perishable items and staples in bulk at supermarkets instead of informal businesses or tuckshops. Most households rely on informal businesses when they want to buy food on credit during the month when they do not have money. This illustrates one of the roles of the informal food sector in the area. People rely on formal supermarkets for monthly groceries, and they go to spaza shops for items such as bread and milk during the month.

Ultimately, the context of Sweetwaters is not unlike many peri-urban settlements in the rest of South Africa which comprise hybrid environments of urban and rural informal economic activities. High rates of poverty and unemployment are also characteristic of Sweetwaters, as well as a prominent traditional leadership governing the area. Contextually, opportunities reside within its youthful population and geographic positioning, in that it is located in close proximity to the capital city of Pietermaritzburg. A study of the informal food sector in this context, seeks to understand the prominence of agri-processing activities in the municipality, alongside its large informal sector GDP contribution (12%) to determine how best to facilitate expansion into the overall regional economy.

E.2 Informal food services production value chain

The first step in the analysis of a local innovation and production system is to isolate the production value chain that forms part of the local system. According to Kaplinsky and Morris (2000), a production value chain is:

> *the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use.*

A simple production value chain for the informal food sector in Msunduzi links formal and informal food producers, food retailers and food services, and businesses supporting informal traders in the local area (Figure 4). Marketing of products (not indicated in Figure 4) are generally performed within the production unit.

E.2.1 Consumers

The overall profile of the consumer base for the informal sector reflects that of the informal sector in general in Sweetwaters, with small proportions of customers from government (0.4%), formal businesses (1.5%) and other informal businesses (0.7%). By far the largest part of the consumer base for informal food businesses come from individual households (94.5%). Direct exports accounted for 0.4% of consumer demand. Some of the food businesses (1.5%) indicated that they export their services. A large proportion (44.3%) of the customers were located within the local neighbourhood. This was similar to the average of 39.0% for all businesses in the study area, illustrating the importance of localness.

E.2.2 Food sector suppliers

The main suppliers were from formal businesses (35.4%) and households (52.8%). Typically, formal suppliers to the informal food businesses are low-price retailers in the local area or nearest town. This is true for informal food businesses as well as for 59.8% of informal businesses located within the local area. Around a third (32.8%) of suppliers were located within a main city in the province and another 1.1% elsewhere in the province. The further the distance from Msunduzi, the fewer the suppliers, with 3.0% found somewhere in the country and 0.4% outside the country.

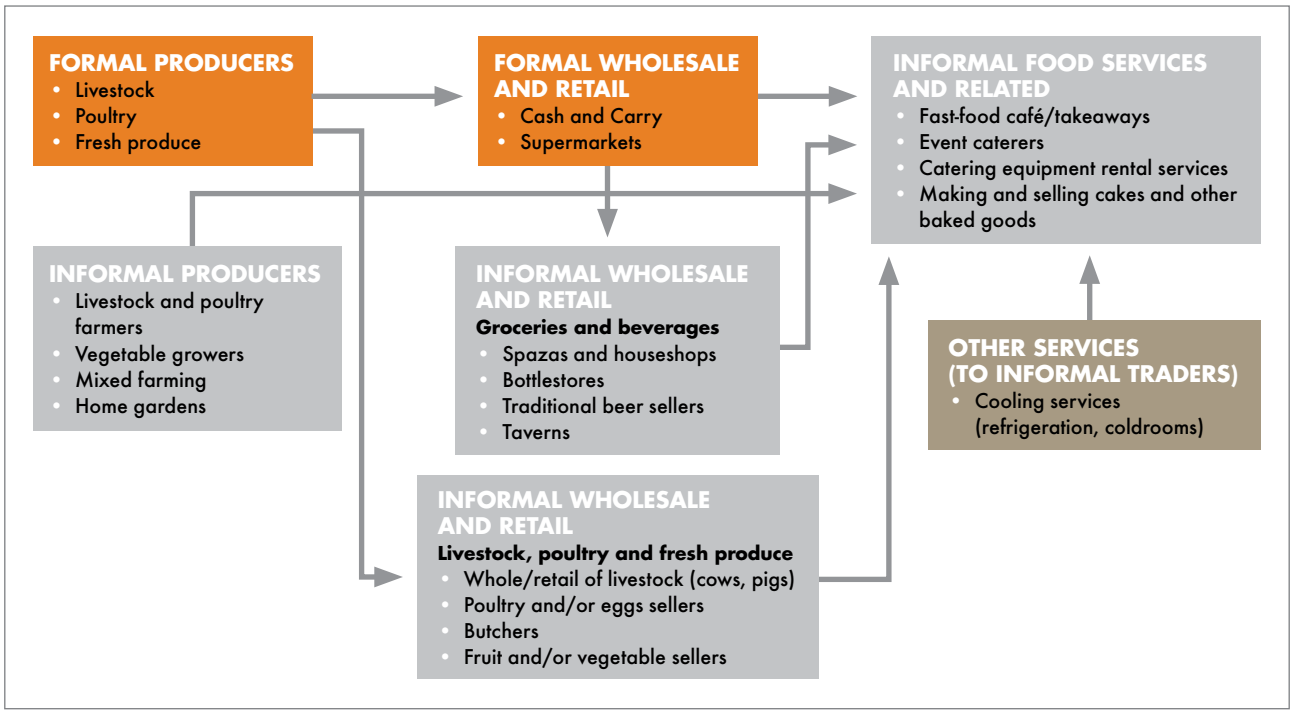
The specific type of supplier depends on the main economic activity of the production unit. For example, food retailers are also supplied by informal animal and fresh produce suppliers within the area. All in all, 7.4% of suppliers to the informal food businesses were from informal sources, similar to the proportion of informal suppliers to other informal businesses of 9.0%. Government was a very small contributor to the supplier base at 0.4%, as were direct imports at 0.7%.

E.2.3 Marketing

Marketing is primarily through word of mouth, with 81.5% of businesses reporting that this was how the business was marketed. This is very similar to what most other informal businesses (81.1%) in the study area reported. Significantly, the food businesses in the area appear to use bigger and newer signs (18.5%), more so than the average informal business (13.3%). This may be because a large proportion of food businesses are grocery and beverage retailers (i.e. spaza shops). Interestingly, similar to the average of 11.0% in the area, 13.7% of the food businesses reported moving the business

closer to customers as a means of marketing. Food businesses that use the internet or cell phone apps were around 15.5%. This relatively low level of use of a readily available technology is the same for the average informal business in the study area.

Figure 4 Production value chain for the informal food sector in Msunduzi



Source: Authors (based on van der Westhuizen (2006) and the 2017–18 IIS Survey data)

F. INNOVATION IN THE INFORMAL FOOD SECTOR

F.1 Local innovation and production system: informal food sector in Msunduzi (Sweetwaters)

At its core, a LIPS framework may be thought of as consisting of the production value chain for an economic sector, combined with the network of other actors engaged in interactions with the informal production unit. The food sector in Msunduzi, which has a sector production value chain as indicated in Figure 4, may be thought of as a complex of LIPSs for three production sub-sectors: Food Services, Wholesale and Retail Trades, and Wholesale and Retail of Animals and Fresh Produce.

F.1.1 Descriptive data for the informal food sector

The survey data collected by the Innovation in the Informal Sector (IIS) project allows us to quantify many of the social and economic conditions within which informal sector businesses are situated.

Figure 5 Distribution of economic activities in the informal food sector LIPS in Msunduzi

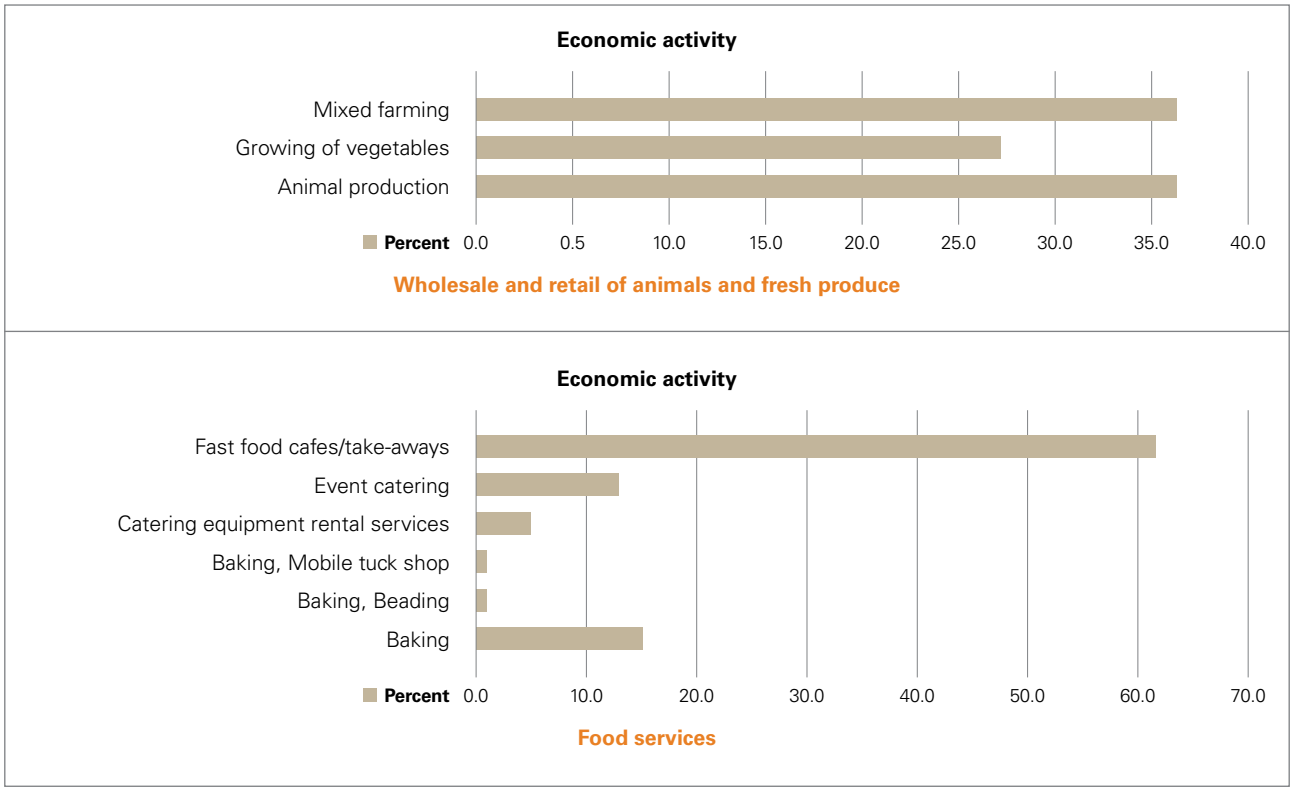


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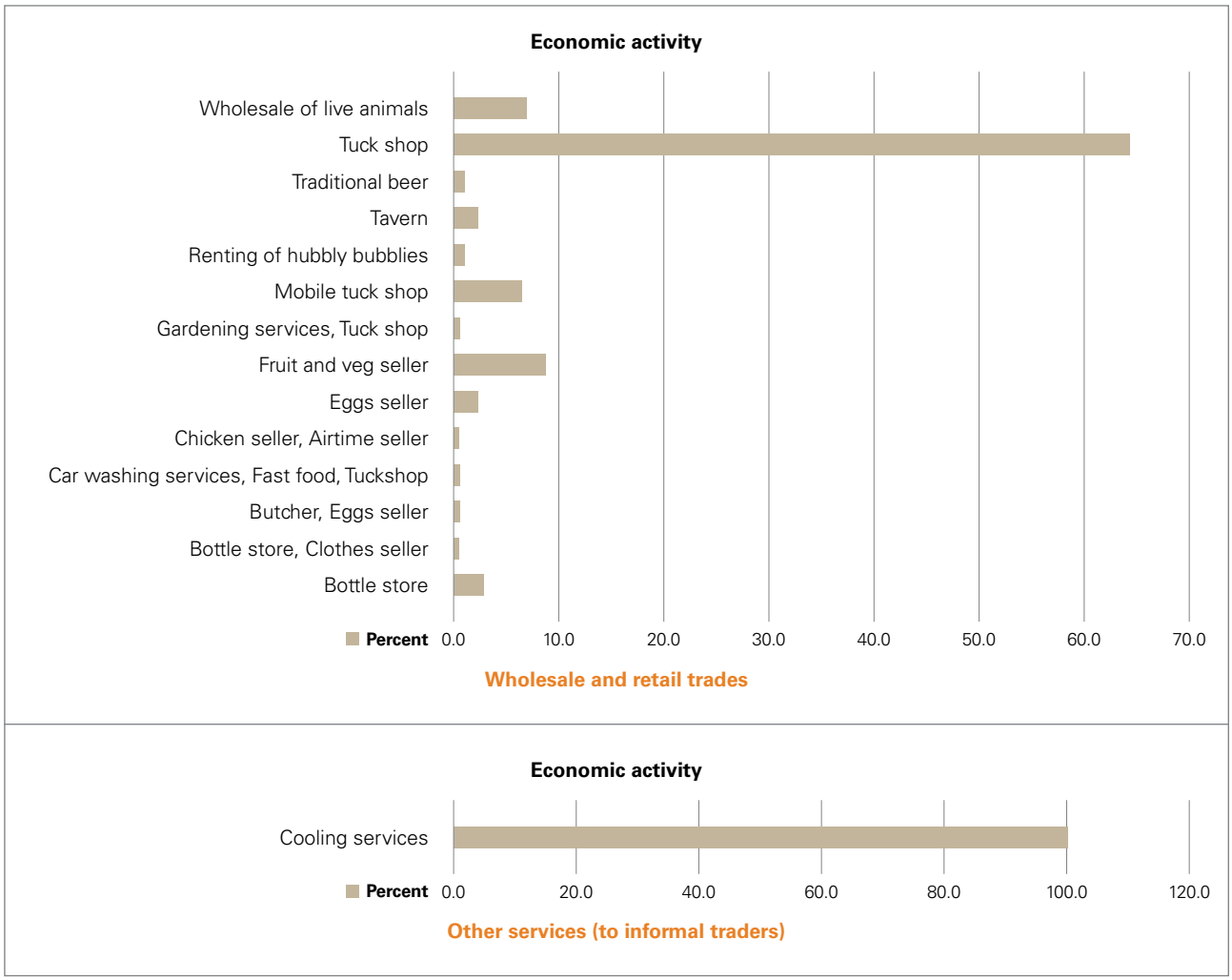
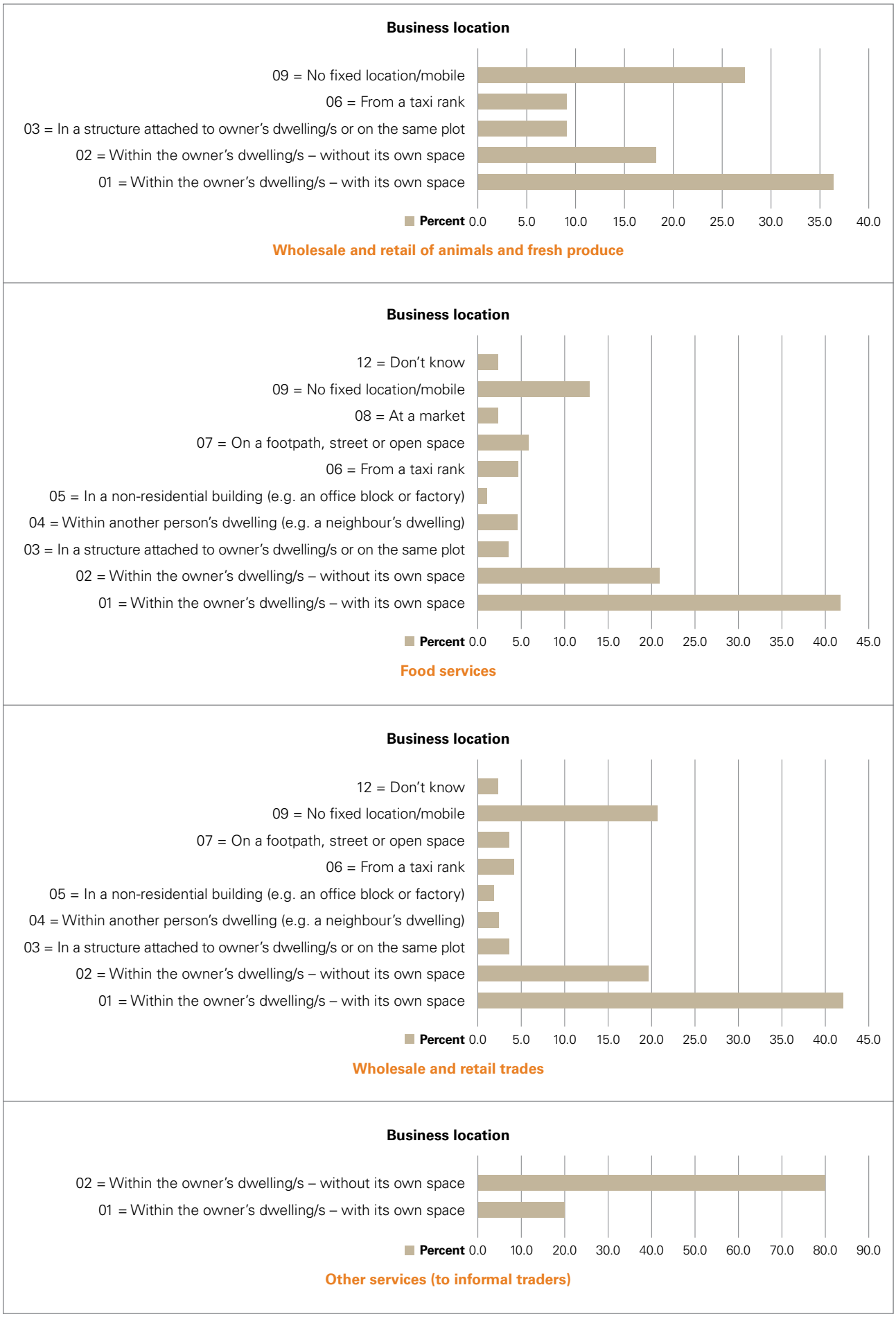
Figure 5 Distribution of economic activities in the informal food sector LIPS in Msunduzi *(continued)*



Data source: CeSTII 2017–18 IIS Survey

The majority (62,4%) of firms in the informal food sector production value chain (Figure 8) are in the wholesale and retail trades subsector. Food services account for 31,7% of the firms in the informal food sector, and the wholesale and retail of animals and fresh produce subsector contributes 4,1% to the composition of firms in the production value chain. The remaining 1,8% of firms provide cooling (refrigeration) services to informal traders in the production value chain. Sometimes businesses have more than one economic activity. This reflects the practice by firms in the informal sector to seek opportunities that may lie far outside of their main economic activity.

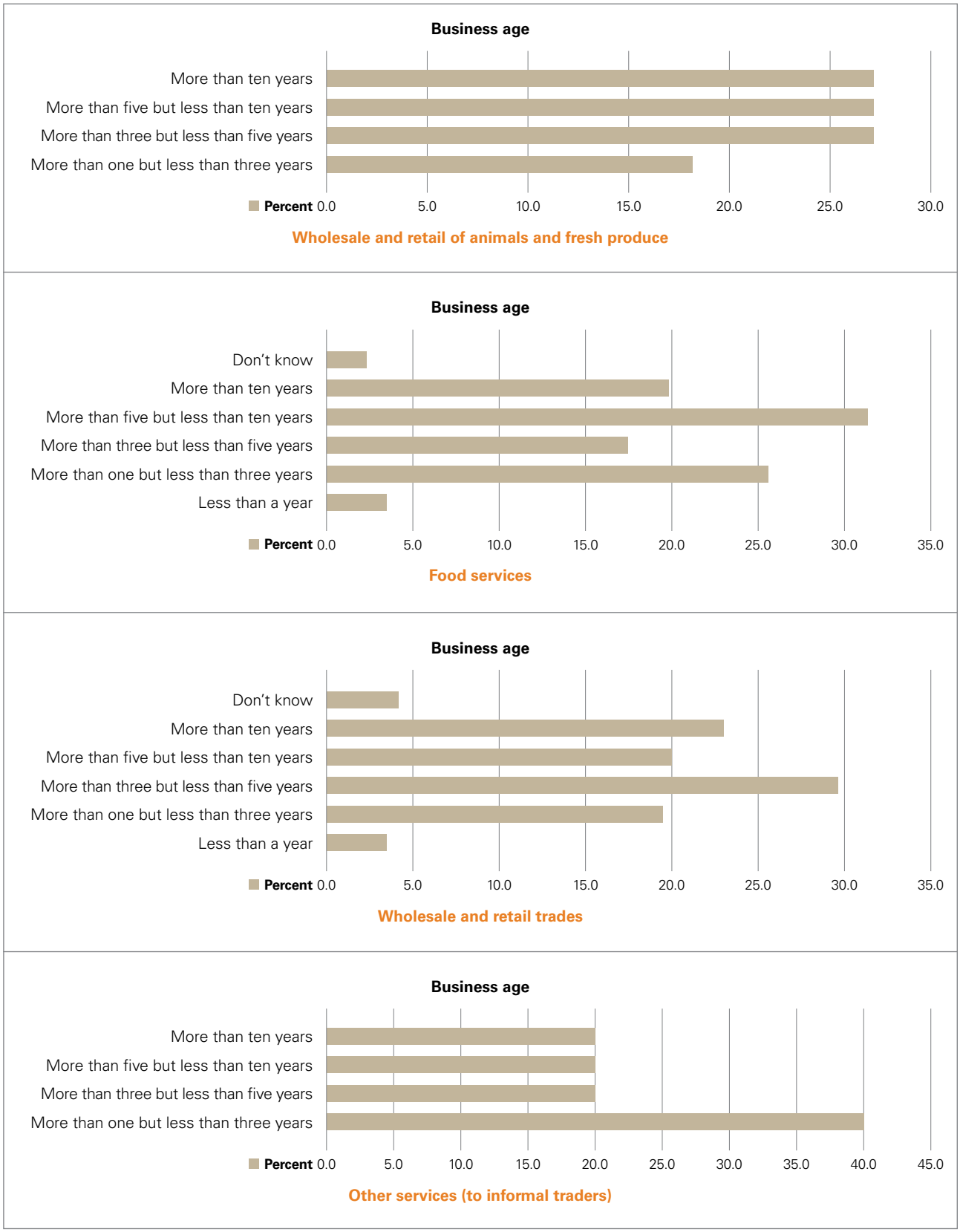
Figure 6 Location of businesses in the informal food sector LIPC in Msunduzi



Data source: CeSTII 2017–18 IIS Survey

The largest proportion of businesses have dedicated space for operations within the owners dwelling (Figure 8). This is true of all the subsectors in the production value chain.

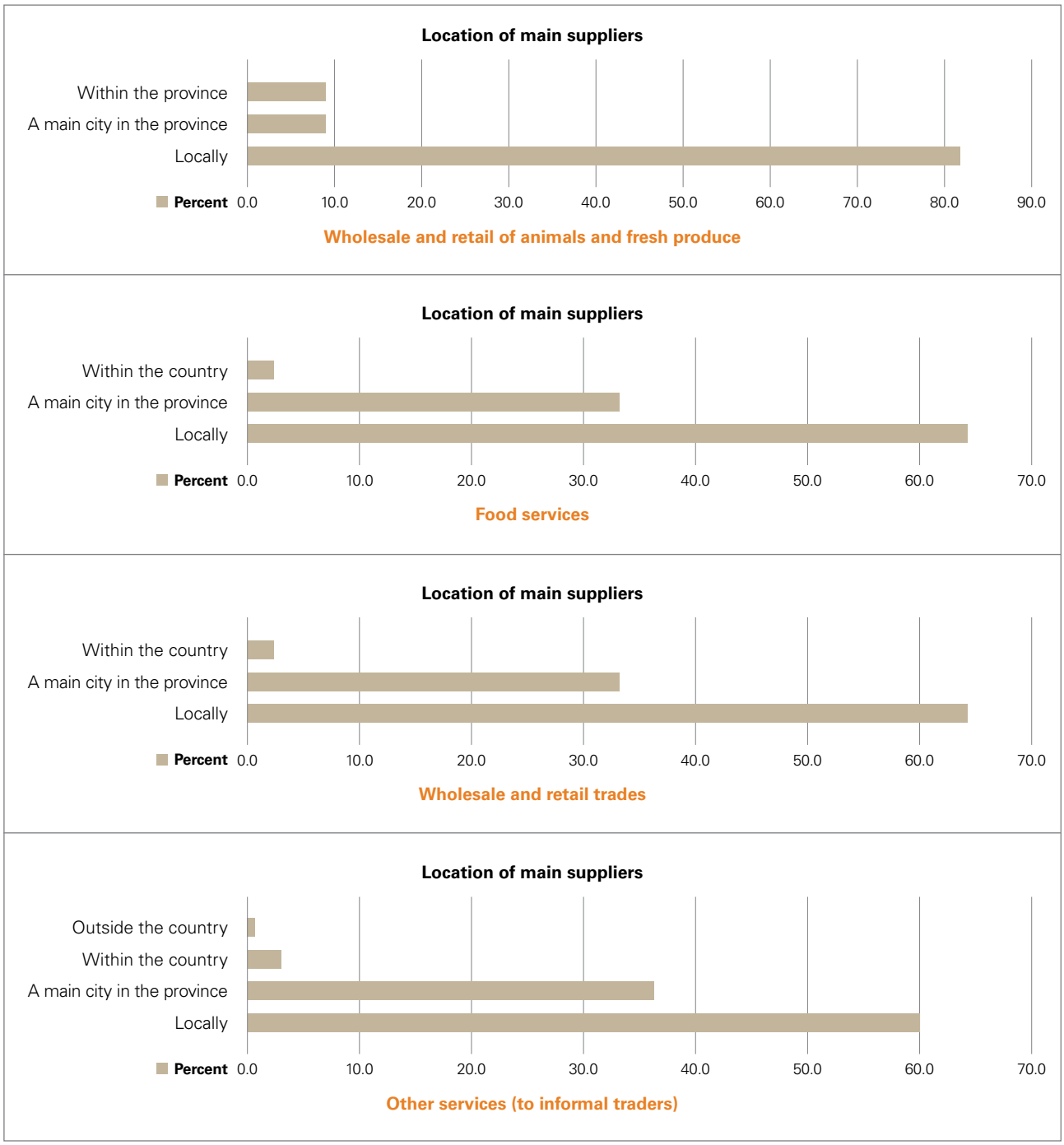
Figure 7 Age of businesses in the informal food sector LIPC in Msunduzi



Data source: CeSTII 2017–18 IIS Survey

Businesses are typically older than five years in three of the subsectors linked by the food production value chain in Msunduzi. This is similar to the findings of other studies for the age of grocery retail sector businesses in informal settings in South Africa (Chiliya & Roberts-Lombard, 2012). A large proportion, between 20% and 25% of these, were older than ten years. This shows that businesses in this sector form a sustainable field of economic activity and are not just a temporary relief from unemployment. The only businesses that were relatively new businesses, between one and three years old, were the businesses providing cooling services to informal traders.

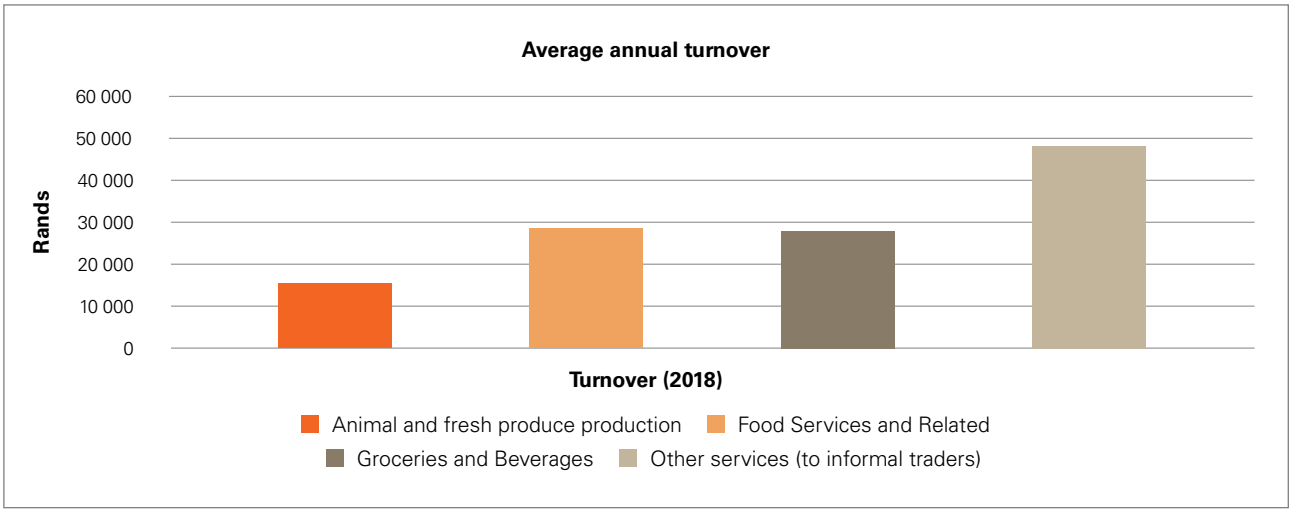
Figure 8 Location of suppliers in the informal food sector LIPC in Msunduzi



Data source: CeSTII 2017–18 IIS Survey

Between 50% and 60% of businesses in the four subsectors serve customers that are local, reflecting the geographic boundedness of the food production value chain. Similarly, suppliers (Figure 8) are mostly local, with a large proportion of suppliers also found in a main city in the province. Very few suppliers are found within the country, but outside the province.

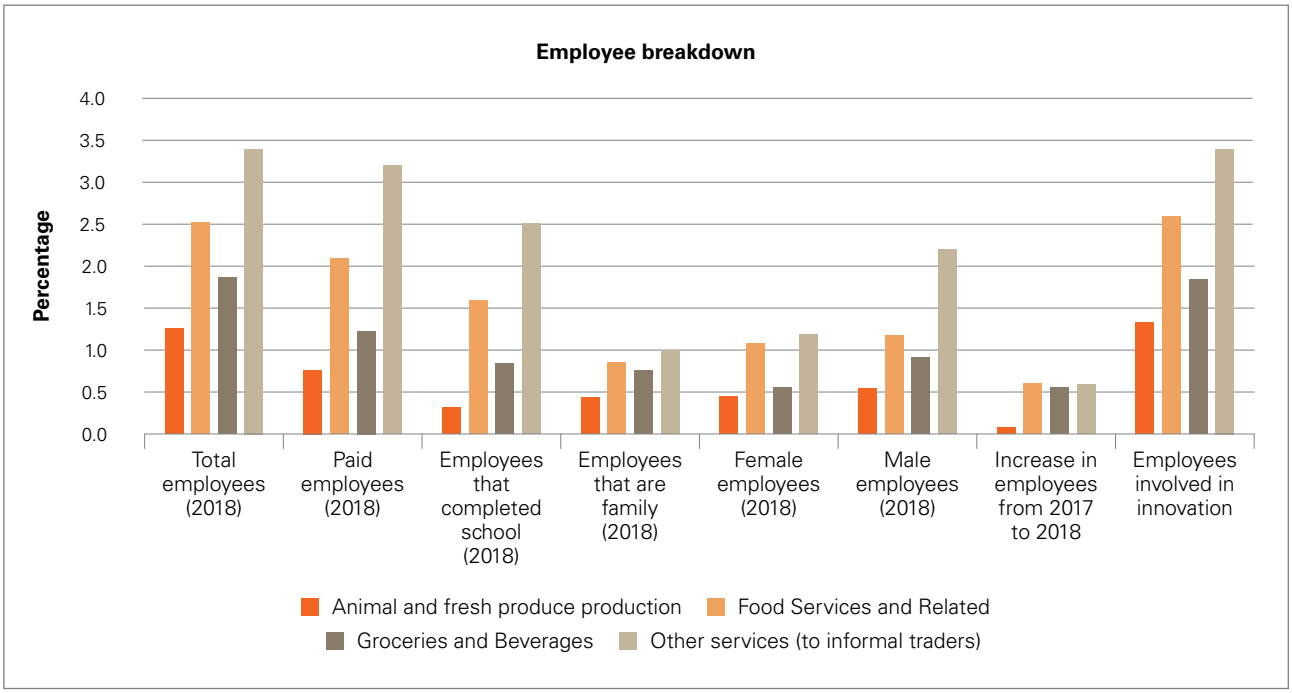
Figure 9 Turnover of firms in the informal food sector LIPC in Msunduzi



Data source: CeSTII 2017–18 IIS Survey

The average annual turnover in 2018 was between R15 311 (animal and fresh produce production) and R48 250 (cooling services) in the food LIPC Figure 12. The cooling services subsector has an annual turnover that is substantially greater than the average in any other subsector of the food sector LIPC.

Figure 10 Characteristics of employees at firms in the informal food sector LIPC in Msunduzi



Data source: CeSTII 2017–18 IIS Survey

The sector with the greatest number of employees is the cooling services sector, with an average of 3,4% employees. The animal and fresh produce production sector consists of businesses with one or two employees on average. The other sectors lie between these two sectors in terms of level of employment. Around half of all employees are family members, across all sectors. Most employees are male. The majority of employees are involved in innovation activities, across all sectors.

F.2 The characteristics of innovation in the informal sector

F.2.1 General results

Businesses are largely innovative in the informal sector. And for that reason, innovation may even be considered a characteristic of informal businesses. In general, innovation in the informal sector is of a non-technological nature. The form that such innovation takes is individual or household based. The main innovation activity involves using new equipment and tools for developing capability. Furthermore, a lot of innovation activity rests on imitating, even copying the products that competitors, both formal and informal provide. The types of economic activity can rapidly change within one informal sector firm, adapting to changes in customer demand. Such rapid adaptation is necessary for the survival of informal sector firms, given the socio-economic context within which they reside, characterised by low household incomes. When asked about potential challenges to innovation, the majority of respondents reported no barriers to their innovation attempts. This reflects, perhaps, the spirit of the owners of informal businesses who are constantly willing to adapt to changing circumstances and opportunities.

The survey revealed an innovation rate of 82.5% across all sectors, with the highest innovation rate recorded in the food services sector. What we see in the informal sector in Sweetwaters is that the majority of innovation activity occurs within the day-to-day activities of the business. Based on an analysis of the full study sample of close to 1 000 businesses, the most prevalent innovation mode takes place with employees who learn by using (83,6%). This is followed by doing everyday working tasks (57,6%), and imitating the products of formal businesses (44,4%). Businesses notably added new products quickly – based on anticipated customers' needs or from customer requests – known to be a common practice in food retail or food services.

Similarly, when it came to process innovation the proportion of businesses that implemented new processes was 78,9%. Of these process innovations, 41,7% were marketing innovations, of new or improved ways of advertising the business, and 63,2% were organisational innovations which included new ways of organising the business, including price lists, packaging, or inventory systems. As with product innovations, most businesses stated that the source of knowledge for innovation was that it was common knowledge (43,1%).

F.2.2 Innovation rate, innovation intensity and type of innovation

A very high proportion (85.6%) of the food businesses surveyed reported that they engaged in innovation activities, with 67.2% reporting product innovation and 81.5% process innovation. The rate of innovation was higher in food services businesses than the businesses in the other segments of the value chain (see Table 7). On average, the intensity[2] (90.6%) of innovation in the food businesses was higher than other businesses in the study area (79.9%).

2 Innovation intensity is the proportion of employees that are involved in innovation activity, expressed as a percentage.

Table 7 Types of innovation by food businesses

Sub-sector	Innovation activity		Type of innovation			
	Innovation[a]	Abandoned or ongoing innovation[b]	Product innovation[a]	Process innovation[a]	Marketing innovation[a]	Organisa-tional innovation[a]
Animal and fresh produce production	9 (81.8%)	8 (72.7%)	6 (54.5%)	9 (81.8%)	2 (18.2%)	7 (63.6%)
Food Services and Related	76 (88.4%)	64 (74.4%)	62 (72.1%)	73 (84.9%)	38 (44.2%)	48 (55.8%)
Groceries and Beverages	142 (84.0%)	119 (70.4%)	110 (65.1%)	134 (79.3%)	66 (39.1%)	78 (46.2%)
Other services (to informal traders)	5 (100%)	4 (80%)	4 (80%)	5 (100%)	5 (100%)	4 (80%)
Total: Food sector	**232 (85.6%)**	**195 (72.0%)**	**182 (67.2%)**	**221 (81.5%)**	**111 (50.2%)**	**137 (62.0%)**
Total: All businesses	**822 (82.5%)**	**705 (70.8%)**	**622 (62.4%)**	**786 (78.9%)**	**328 (41.7%)**	**497 (63.2%)**

Data source: CeSTII 2017–18 IIS Survey

Notes:

a. Innovation rate is included in brackets, measured as the fraction of successful innovators in the population; that is, excluding those with no innovation activity, or only incomplete (abandoned or ongoing) innovation activity.

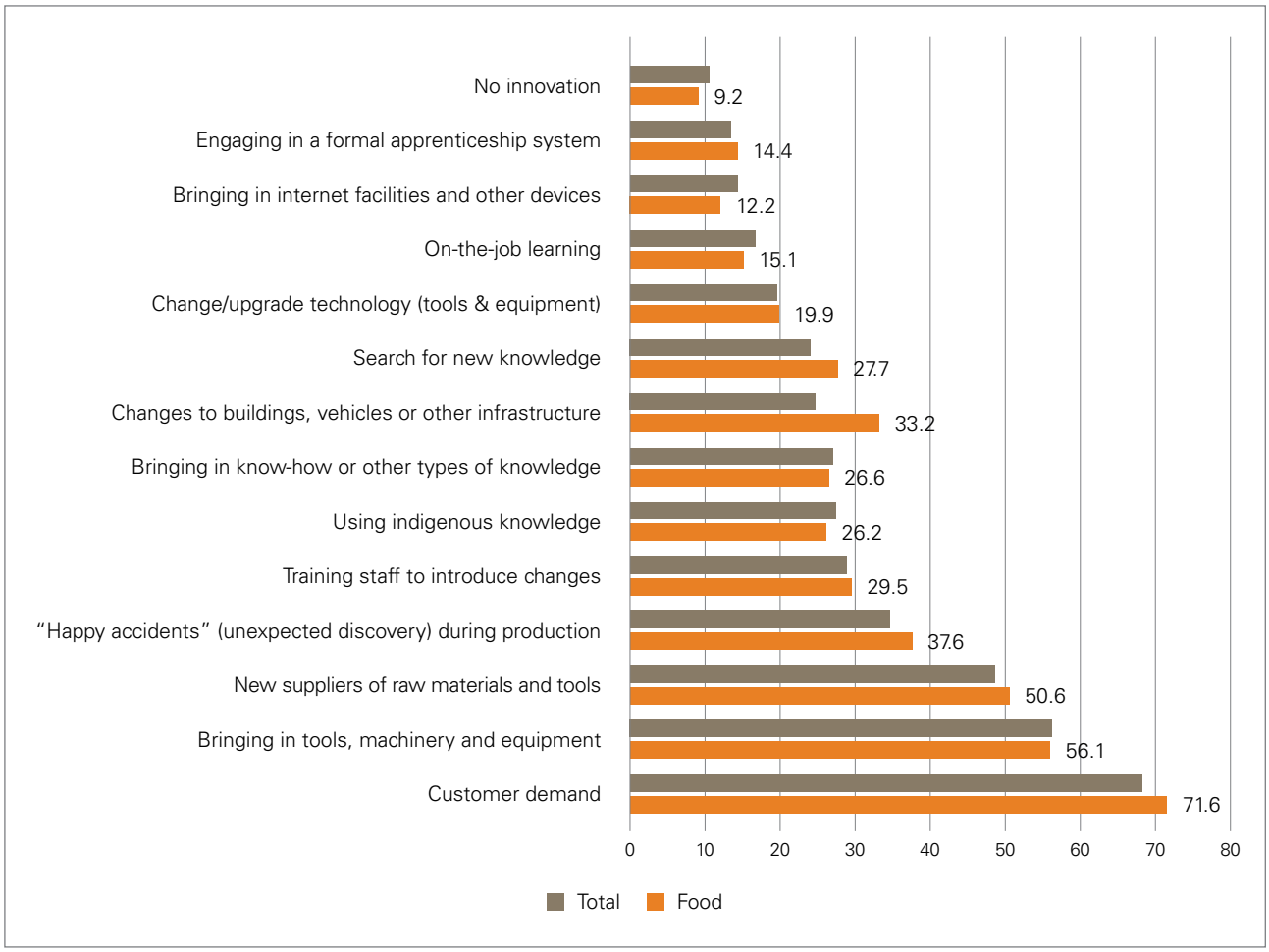
b. Incomplete innovation rate is included in brackets, measured as the fraction of businesses reporting incomplete (abandoned or ongoing) innovation.

The product and process innovations were mainly new to the local area (27.7%) or the local industry (26.6%).[3]

The distinctive nature of innovation in these informal businesses is illustrated in Figure 11. The most frequent innovation activities reflect the prevalence of forms of local learning and capability building, from customers, suppliers and other external sources.

3 Almost half (44.6%) of the respondents did not respond to the question on the novelty of their innovations.

Figure 11 Innovation activities in the informal food businesses, compared to the total sample



Data source: CeSTII 2017–18 IIS Survey

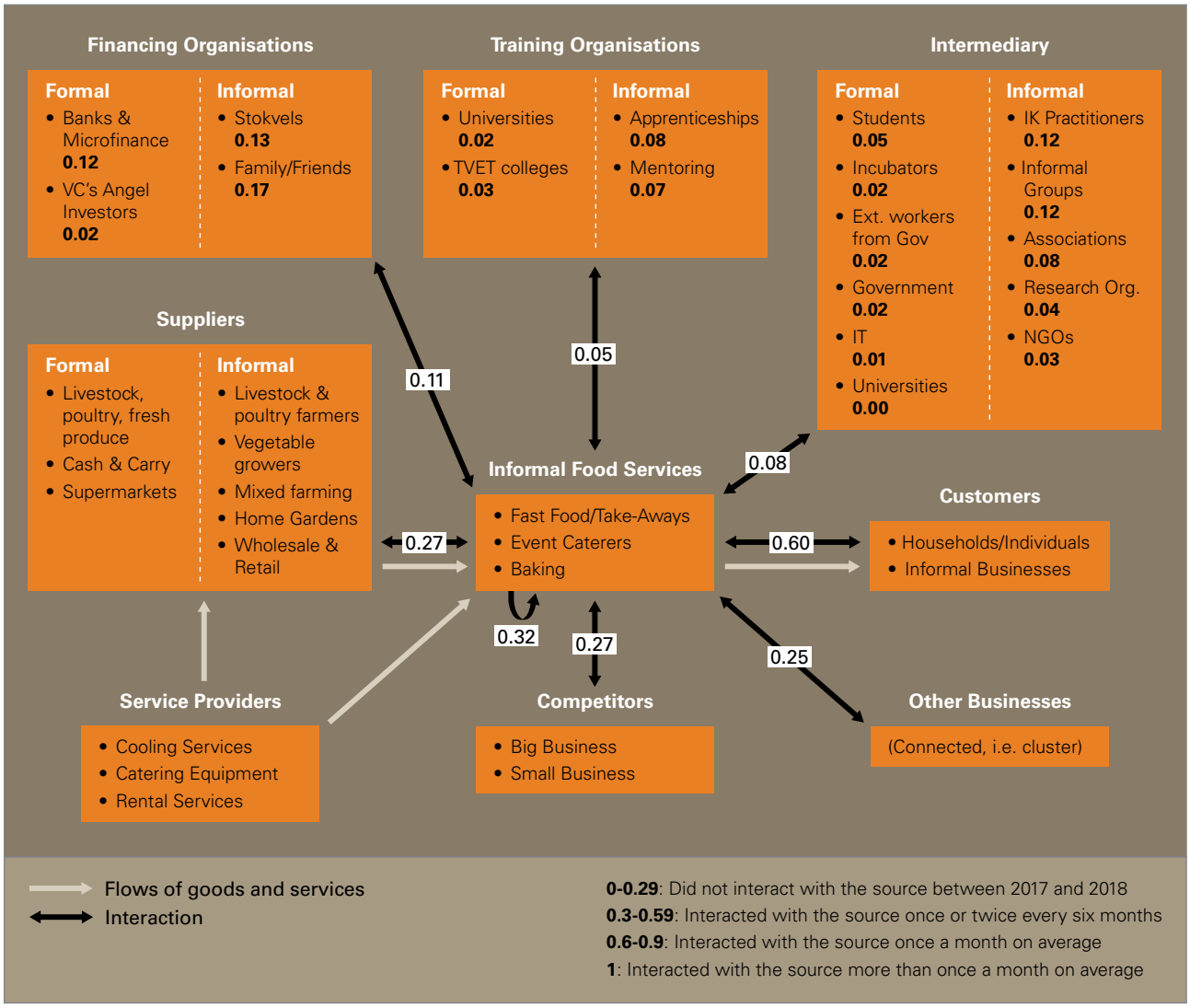
Figure 11 shows the most frequently reported innovation activity is responding to customer demand, based on their feedback (71.6%), followed by acquiring tools, machinery and equipment (56.1%), such as buying a fryer to allow for the sale of hot chips, and finding new suppliers of raw materials and tools (50.6%). Suppliers were typically formal wholesale and retail shops in the proximity of the business locale, but the businesses also sourced new suppliers from the nearest big city, or a cheap supplier in a larger metropole. The importance placed on innovating to better respond to customer demand was higher for the food businesses than the average of 68.2% for all informal businesses in the study area. This may be because of the nature of business in the food retail and food services subsectors, where there is a relatively high rate of customer interaction compared with other industries. Changes to buildings, vehicles or other infrastructure was also more important for the food businesses (33.2%) than other businesses in the study area (24.8%). Finally, a common innovation activity is described as 'happy accidents', that is, unexpected discoveries during production (37.5%).

F.2.3 Analysis of knowledge sources for the informal food sector LIPS

Knowledge actors other than those involved in production perform financing, intermediary and service provision functions. While different actors may take on any of the three roles, depending on the state of the system, the actors have been grouped into the functions they typically perform in Figure 12, Figure 13 and Figure 14.

The food services sub-sector consists of fast food takeaways, event caterers, and baking services (Figure 12).

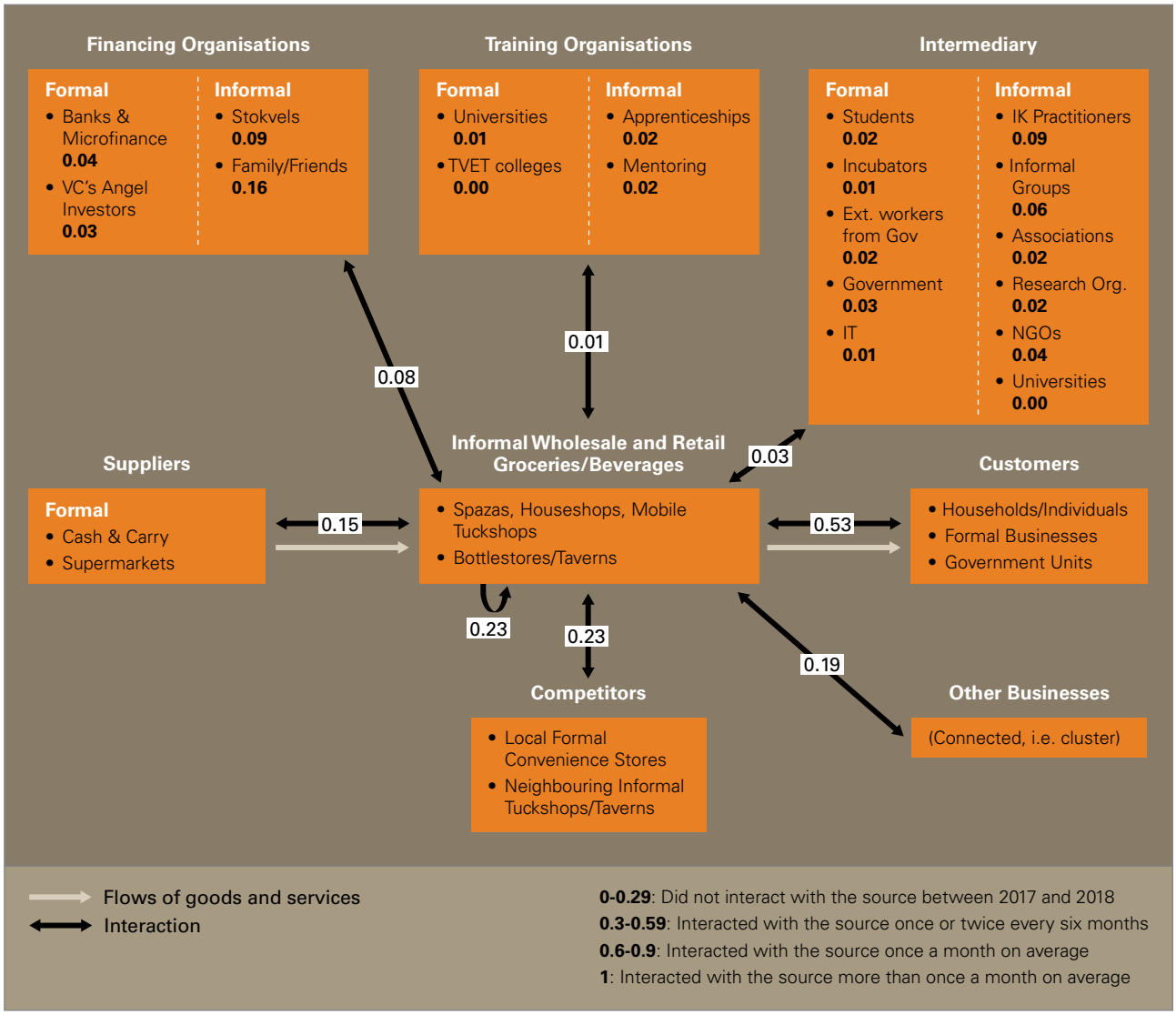
Figure 12 Local innovation and production system for food services in Msunduzi



Data source: CeSTII 2017–18 IIS Survey

The wholesale and retail groceries/beverages sub-sector consists of spazas, house shops, mobile tuckshops, and bottle stores/taverns (Figure 13).

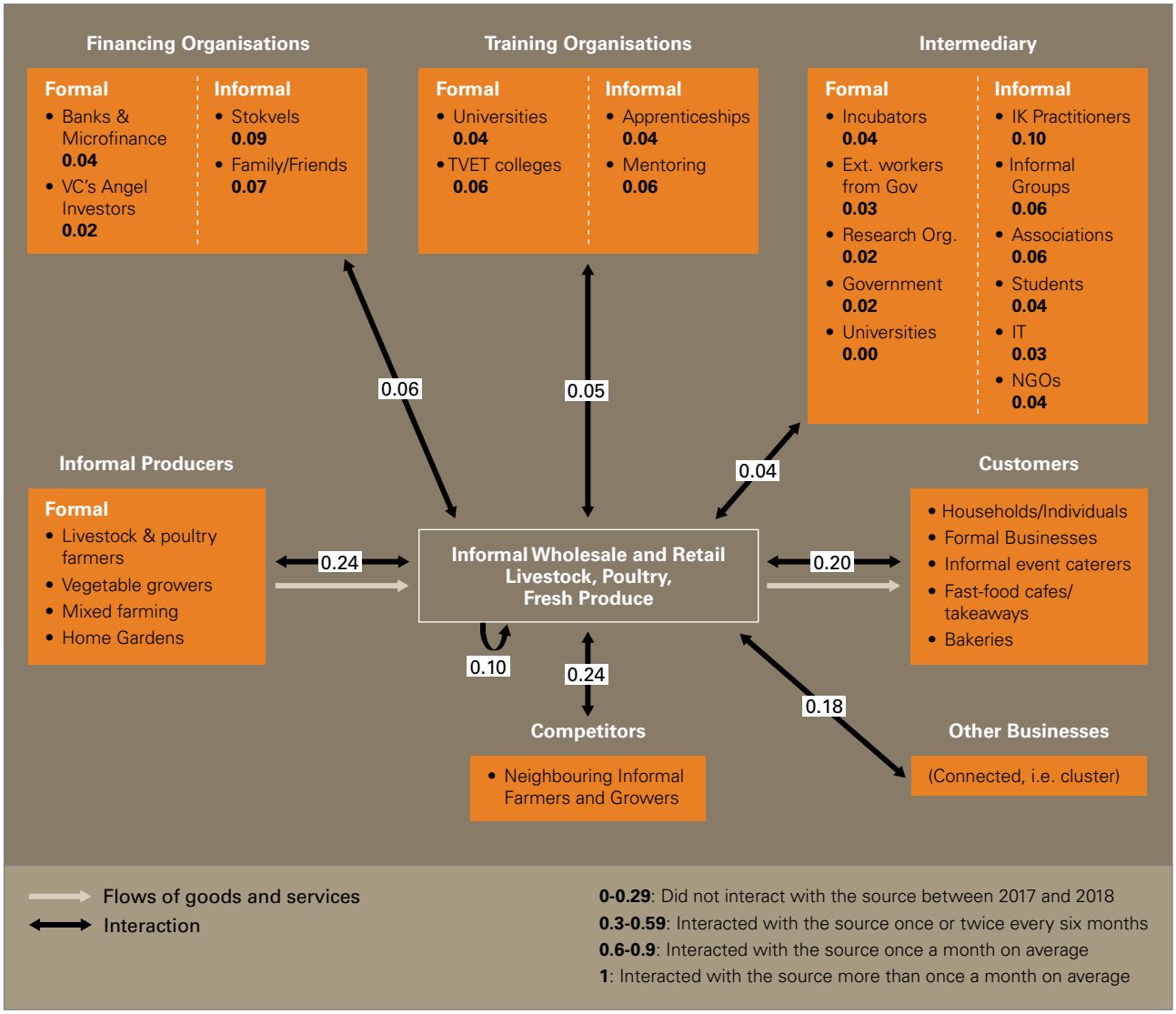
Figure 13 Local innovation and production system for wholesale and retail groceries/beverages in Msunduzi



Data source: CeSTII 2017–18 IIS Survey

The wholesale and retail of animals and fresh produce sub-sector consists of animal and vegetable growers and farmers (Figure 14).

Figure 14 Local innovation and production system for wholesale and retail of animals and fresh produce in Msunduzi



Data source: CeSTII 2017–18 IIS Survey

The strength of the interaction between actors within the LIPS is indicated as an index value between 0 and 1 within the diagrams (Figure 12, Figure 13 and Figure 14) for each subsector. The Innovation in the Informal Sector survey quantified the strength of interaction by the number of times the informal production unit exchanged information with an actor over the two-year period of 2017–2018 (Table 8).

Table 8 Key for the ranges of indicator values of interaction strength

Indicator value	Number of knowledge exchanges between 2017 and 2018
0	Did not interact with the source
0 < value < 0.5	Interacted with the source once or twice every six months
0.5 ≤ value < 1	Interacted with the source once a month on average
1	Interacted with the source more than once a month on average

Data source: CeSTII 2017–18 IIS Survey

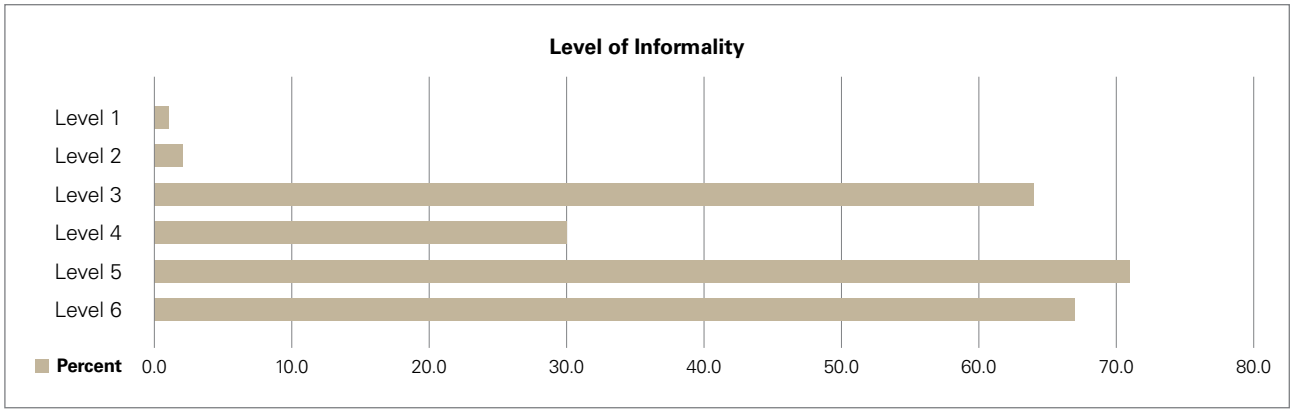
Most of the interaction indices in the three LIPS subsectors were in the lowest interaction range, with many of them closer to 0 than 0.5. That translates to knowledge exchanges in most of the informal businesses being either non-existent or less than a couple of times in the space of six months. The inference is that the local innovation system for each of these subsectors is very weak. In order to strengthen innovation capacity, the learning potential needs to be improved through greater linkages with actors in the local subsystems. The only linkage between the firm and LIPS actors that had a relatively large value, was that between the informal firm and customers in the food services LIPS and the wholesale and retail groceries/beverages LIPS within the informal food sector complex. This result in itself is not too surprising and fits with economic thought that ascribes a competitive advantage to small firms due to their ability to directly and frequently engage with customers, and adapt accordingly. While the strength of interaction between the firm and suppliers, other businesses (e.g. in a cluster), and competitors is not zero, these interactions are still less than those the firm has with customers. The businesses in these sectors would do better to increase their knowledge exchanges with other businesses, including suppliers. The knowledge exchanges with actors not in the production value chain are virtually non-existent on average. The interactions with government actors and learning institutions are where the most improvement can come to grow the LIPSs. Also, interactions with financing actors are very low. This too is not surprising, with the type of financing accessed being mostly from informal sources, such as friends and family. Low financing flows are a critical constraint on the ability of firms to grow and prosper. Access to formal financing sources depends on the level of formality (registration documentation, bookkeeping records, economic viability, and so on) that the informal business has reached.

G. RELATING INNOVATION TO LEVELS OF INFORMALITY

G.1 Informality levels in informal businesses in Msunduzi

The food sector forms 27% of all businesses in Sweetwaters, which amounts to a total of 271 businesses. Of the businesses within the sample, 38% needed to be excluded from the classification due to missing data. A total of 167 businesses were used to determine the varying degrees of informality.

Figure 15 Distribution of informality levels



Data source: CeSTII 2017–18 IIS Survey

Each business in the food services sector in the sample had at least some form of informality, and no businesses were excluded from meeting at least one of the criteria. The breakdown of the businesses according to the level of informality is depicted in Figure 15. It is worth noting that many of these informal businesses are registered businesses.

Most of the businesses in the sample were rated at Level 5 informality, meaning that these businesses were mostly informal, followed by Level 6: totally informal business, then Level 3: semi-informal. Only one business in the sample was rated as a mostly formal business at Level 1.

Level 5 businesses, that were mostly informal, had received some form of financial support or loans from financial institutions or operated their business from fixed premises.

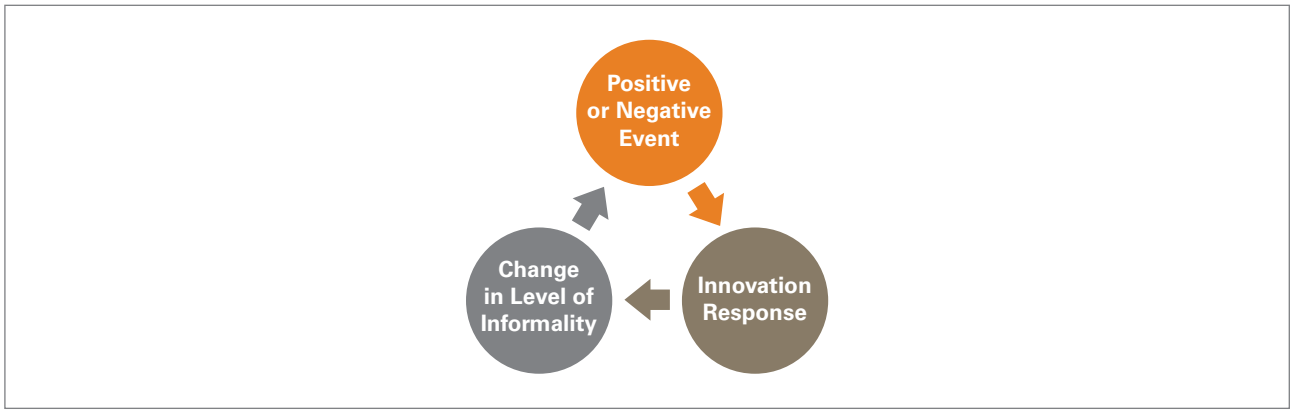
G.2 Innovation events in informal businesses in Msunduzi

G.2.1 Evidence of innovation events in Msunduzi

Innovation events are incidents that cause innovation to take place. They are events that trigger a change in the business and can lead to a different level of informality. Such events may drive the business closer to becoming a formal business, or they may drive the business toward a different profile at the same level of informality. From an investigation of the qualitative data that was collected in Msunduzi, we found that the trigger for change may be the same (or similar) situation occurring at different levels of informality in the evolutionary trajectory of the business. Examples of innovation events

include being involved in an accident, being a victim of crime or debt, and bankruptcy. These adverse events sparked the need for business owners to try something different in their business. The data showed that in most cases, these events led to increased revenues and the acquisition of new markets. This is not a surprising finding, because firms innovate in order to achieve a goal that it views as a positive outcome. Innovation events can take place as a recurrence or sporadically. In the boxes on these pages, we have presented some vignettes on typical innovation events from the data collected in Sweetwaters.

Figure 16 The relationship between innovation, innovation events and levels of informality



Source: Authors

Box 1 Dumisani's Tuckshop

For this owner two very similar events were experienced on separate occasions, which led to two different innovations. Both events were caused by the owner himself, which he attributed to his neglect of his store. The first occurrence of store neglect resulted in debt. As a response to this situation, he added a new product to sell at the store and this turned things around for the business. This new service was the sale of hot chips, which was an activity somewhat removed from the core activity of a small retailer. The innovation required the owner to take on new employment. After a few months of success, the second occurrence of store neglect was experienced, which again resulted in financial strain. The owner then tried reducing working hours for an employee that managed the store to relieve some of the strain. To cope with the new challenge, the owner realised that a means of tracking financial flows was required. After searching for knowledge on this problem online, he introduced a financial management and stock auditing system. This event ultimately saved the business.

What the example illustrates is the growth in complexity of the business from a single-owner, small grocery retailer to an employment-generating, stable business with management expertise, and a simultaneous growth in learning on the part of the business owner. Much of this learning was made possible by access to online knowledge sources.

Box 2 Mandla's Flowers and Vegetables

One of the key assets of this business was a vehicle, which was lost when the owner was involved in an accident. The vehicle had been used for transporting produce from the owner's dwelling to customers. After the accident the vehicle was scrapped, leaving the owner stranded, and halting the businesses ability to carry out deliveries and provide transport. The event encouraged the owner to diversify in order not to rely solely on the delivery of flowers and vegetables, but to seek out alternative opportunities for the sale of products. This resulted in new sales at a weekend flea market in addition to undertaking deliveries when he eventually managed to purchase another vehicle. The outcome was business growth with the opening up of a new market.

Box 3 Siyanda Construction

Siyanda Construction is a construction business that experienced an innovation event which triggered its evolution from one level of informality to another.

The innovation event for the business was linked to the event that compelled the owner to start the business. The owner lost employment when his employer relocated overseas and, not having completed secondary schooling, it became necessary to do something for income. The owner used his existing skills in the building sector to start a construction company and sought training opportunities in the industry. The training, which was instigated as a result of the owner's lack of education, provided the impetus for him to acquire larger construction projects. The business was not registered, nor did it have a separate business bank account, attributing to its Level 4 informality. However, the acquisition of larger construction projects required the hiring of more employees. The business now operates with four employees and hires an additional two depending on the scale of the project underway. Based on these criteria and this innovation event, the business evolved to Level 3.

G.2.2 Innovation events resulting in changes in informality level in the food LIPC

This section provides an analysis of the food sector, with examples drawn from a tuckshop business, food store business, and catering business. The examples include a series of innovation events extracted from the digital stories that were conducted in the study area, demonstrating how different events initiate the start of innovation. Pseudonyms have been used to anonymise respondents.

G.2.2.1 Sunshine Tuckshop

The innovation event that brought about change in this business was linked to customer demand, which led to additional products being offered. In response to flagging sales, the business added a product (fries) based on customer demand and as a result, sales increased. This tuckshop business was an own account business, with no employees besides the owner. The business owner was employed on a full-time basis, so only opened the shop after returning from work. The business did not have a business account but did have a separate bank account used only for business transactions, which was previously a personal bank account. What was standing in the way of expansion was having a full-time employee, adding more products, and increasing operating hours. Even though the separate personal account was not a business account, it could be recorded as such since it is separate from the owner's personal bank account. Fulfilling this criterion would move this business to Level 4 informality.

G.2.2.2 Spaza 4 U

When the owner of Spaza 4 U became a victim of crime, at a time when the business was experiencing bankruptcy and had incurred debts with micro-lenders, this spurred innovation on the part of the owner. The event caused the owner to move to operating on a cash-only basis, which alleviated the debt. It was then possible to approach a financial institution for loans. The business had also developed a credit system for elders in the community, where they could pay for their products at a later stage. The business was registered and had up to five employees, including the owner. As a result of the event and the resultant innovations, the business would move to Level 2 informality, and is considered as partially informal.

G.2.2.3 Lungusani Caterers

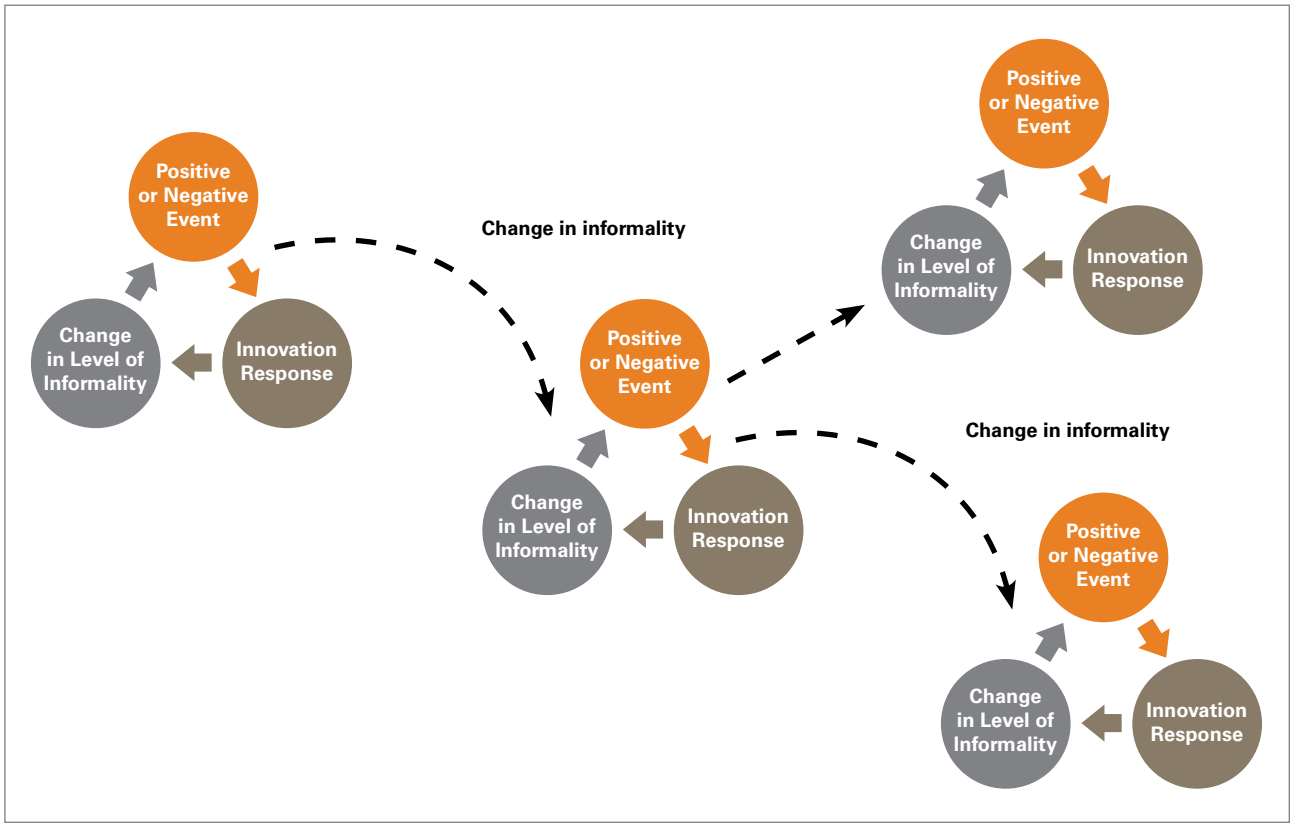
Politics in the community relating to land ownership caused this business to close its doors. This was a setback for this owner which led to the search for alternative business premises. In addition, it led the owner to reconsider the location of the business and engage with community authorities for support to ensure that business displacement did not occur again. The business hired five people on a temporary basis to assist with large catering events. The business was registered and had previously obtained a business loan from a formal banking institution, which was used to purchase equipment. It previously had a business account but closed it due to the high costs of keeping it open. If the fulfilment of these three criteria is taken into consideration, even if staff is temporarily employed, the business would leapfrog to Level 1 informality, making it mostly formal.

G.2.3 Summary of innovation events resulting in changes in informality level in the food LIPC

What can be seen from these cases is that an innovation event leads to an innovation (product or process) that causes a change in the level of informality. The current state of informality itself, in addition to the event, creates the context for change in the business. These cycles can take place several times, which may lead to increases or decreases in informality. To save costs, the owner may decide to close a business account (leading to increasing informality) or to access business finance (leading to decreasing informality). One event can also lead to an innovation response that skips more than one level of informality.

This cycle can occur multiple times in multiple cycles of innovation events, as depicted in Figure 17.

Figure 17 Innovation events that shift informality levels



Source: Authors

"A consensus has emerged on the fact that there are degrees of formality and informality along a continuum rather than mutually distinct sectors", therefore using a single indicator would not capture the varying degrees of the firm in the informal sector (Mbaye & Gueye, 2020, p. 23). Each business within the food services sector in the sample demonstrated at least some form of informality, and no businesses were excluded from meeting at least one of the criteria. Most range between Level 3 to 5 informality, and could be shifted towards formalisation by providing support for registration, opening a separate business bank account, and experiencing business growth and expansion beyond four employees. What can be seen is that these innovations are generally linked to an event that caused a shift in levels of informality. These events led to innovation that could be said to result in business growth and a subsequent decrease in the level of informality. The innovation event could be of a positive or negative nature, but it is the resultant innovation response that ultimately causes a shift in informality. What is seen from the analysis is that innovation events can occur in cycles leading to multiple changes in informality. One event can also cause various innovation responses resulting in jumping through more than one level of informality.

The results indicate that the state of a firm, characterised by its level of informality, is important to know and understand in order to promote its growth from informal business to a sustainable formal business. Innovation events shape the future

trajectory of any group of firms depending on the starting state and the local environment. Therefore, policy interventions that seeks to promote the desired change must be based on an understanding of the level of informality and the type of innovation event that prevails in any LIPS.

What these examples also make clear is that business registration is not, in itself, a guarantee of sustainability. Indeed, the formal registration of a business may be done for the very strategic aim of acquiring new business opportunities, for example from public suppliers; and the informal firm may choose to let that registration lapse from time to time. Moreover, for an informal business to graduate to a successful formal business, it must have several attributes defined by its level of informality. That is, it needs to employ staff regularly, keep records, and needs management capabilities. The absence of bookkeeping records, for example, may have a negative effect on the firm being able to access finance from formal sources; and poor management capability or presence could result in business failure as a result of under-supervised staff.

The primary constraints on decreasing informality for these businesses were business registration, having a separate business bank account, and expanding beyond four employees. Support in these areas would assist businesses move towards attaining a formal status that is sustainable.

H. CONCLUSION

H.1 Summary of results

The food sector LIPS is a complex consisting of three LIPS subsectors: food services, food retailers, and food growers/suppliers. Each of those subsectors has LIPSs that are weakly formed with low knowledge exchanges between actors in the local innovation system. The strongest interactions on average take place between the informal firm and its customers. The next strongest level of interaction is between the firm and other actors in the production value chain of the innovation system. The lowest interaction strength is between the firm and public sector actors including government and universities, and financing actors. Financing is mostly from informal sources.

The absence of formal financing sources is partially related to the low levels of formality in the food sector businesses in the study area. While the policy thrust from government assumes a linear model of evolution from survivalist enterprise to informal trader to formal micro-enterprise, this does not reflect the reality of the evolutionary trajectory experienced by informal businesses. Instead, there are a multitude of levels of informality that firms attain at various stages of their development. These levels of informality depend on many factors. This case study considered the level of employment, registration status, keeping financial records, business location, and access to finance. A combination of these determines the level of informality. Achievement of all these criteria corresponds with the state of a formal, sustainable micro-enterprise. Innovation events may be the key to understanding how firms move from one level of informality to another. This is important for the policymaker interested in promoting the growth of informal businesses into formal micro-enterprises by shining a light on the role innovation plays in these processes. It indicates a requirement for policy intervention that is more focused and targeted, based on an understanding of the local environment and local systems dynamics.

I. RECOMMENDATIONS

To strengthen innovation capacity, the learning potential of informal firms must be improved through stronger linkages between actors in local sub-systems. The interactions with government actors and learning institutions are arguably where the most improvement can come to grow the LIPSs, given that these are the areas with the weakest interactions. One support tool that already exists for food sector informal businesses is the promotion of local distribution centres. This is one way that linkages between businesses and government or other formal institutions may be strengthened.

However, the strengthening of informal linkages, for example, with competitors or other informal businesses in the same sector, are also opportunities to improve learning capabilities. Another option is the promotion of co-operative businesses to empower employees or own-account businesses in the same sector. Also, interactions with financing actors are very low. This is typically due to the barrier of achieving registered business status required to access formal sources of financing innovations, or indeed any other business functions.

The journey from informal to formal cannot be viewed as linear. There are various events that create a change in informality that may be progressive or regressive. This necessitates a developmental approach to supporting the growth of businesses from informal to sustainable formalisation. By sustainable formalisation, we mean a business reaches that does not depend only on registering as a formal business, but is also able to support a reasonable number of employees and have critical management systems and expertise in place. By understanding what influences formality, policy could be directed toward providing support for micro-enterprises that focuses on building formalisation capability. By taking a developmental approach to formality the enterprise can seek assistance as it is organically required in the growth and evolutionary trajectory of the business. Resources and policies to support this expansion need to be made available in a drive, not towards formality, but towards the stable expansion of the business.

The study considered that the primary constraints for a decrease in informality for these businesses was to be registered, have a separate business bank account, and expand beyond four employees. Support in these areas of 'low hanging fruit' would most assist businesses towards formalisation.

Innovation in the informal sector differs from the formal sector. Where innovation in the formal sector can be promoted through funding or technology, innovation in the informal sector comes about in response to an event. Policy, therefore, needs to focus on problem solving and innovative responses to events that occur within the business. A change of focus in policy is required to ensure that innovation is promoted through problem-solving support, which creates the conditions for formality and the sustainable expansion of businesses.

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Innovation in the Informal Sector – A Case Study of Business Evolution and Innovation in the Informal Food Sector

In South Africa, and many African countries, informal trade accounts for a large proportion of economic activity and supports the survival of many indigent households. To compete effectively, informal enterprises must innovate continually to provide affordable goods and flexible services to the populations they serve. A growing critique of government interventions asks how these can better mitigate livelihood risks in the informal economy and support informal economic activities. Our evidence suggests that enterprise informality in South Africa is dynamic, non-linear and enduring, encompassing a rich variety of informality. Based on a novel mixed methods case study of informal food enterprises in peri-urban KwaZulu-Natal, the Human Sciences Research Council's, Centre for Science, Technology and Innovation Indicators (CeSTII) identified how innovation events trigger change in informal food enterprises, shaping business evolution pathways. We conclude that a better understanding of the pathways through which informal enterprises evolve is needed to design inclusive economic and innovation policy.

HSRC Human Sciences Research Council | CeSTII Centre for Science, Technology & Innovation Indicators