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Innovation in the South African Informal Sector Survey

Statistical Report
Philippi, Western Cape, 2021–2022

By the Centre for Science, Technology and Innovation Indicators, Human Sciences Research Council

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PREFACE

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This report presents the results of CeSTII's second Survey of Innovation in the Informal Sector (IIS) undertaken in Philippi, a peri-urban township area within the City of Cape Town municipality and Western Cape province. A "hybrid" format has been adopted to improve readability and reduce the overall volume of this statistical report. Key findings are presented in this document and the data tables are available for download in MS Excel format from CeSTII's website (https://hsrc.ac.za/divisions/centre-for-science-technology-and-innovation-indicators/).

The survey used a mix of methods designed to determine what kinds of innovation take place in informal settings such as Philippi. The adoption of a mixed methods approach recognises that relatively little is known about how innovation takes place in informal settings in South Africa and elsewhere on the African continent. Further, scholars and researchers working in the field of informal sector studies have emphasised the role that community-based research methods can play in eliciting useful insights and encouraging openness on the part of respondents.

In addition to this report a set of case studies will be conducted to further develop useful, in-depth insight into the nature, drivers, barriers, and outcomes of innovation in the South African informal sector. These companion publications will further inform the measurement of innovation in informal settings.

In contrast to surveys of innovation in formal businesses few, if any, standards have been proposed to expand the study of informal sector innovation into an area of measurement. To that end, CeSTII has proposed a standardised questionnaire (section 4) which has been designed to investigate innovation in the context of the informal settings where innovation takes place in many South African locales. The same questionnaire has been piloted in Nigeria to measure informal sector innovation in local communities. For each round of the survey that is conducted, the questionnaire is refined, as further insight into informal sector innovation is gained.

More detailed analysis including comparative analysis of the data collected in the two survey rounds: 2017–18 (Sweetwaters) and 2021–22 (Philippi), will be published as policy briefs, fact sheets and academic papers.

Dissemination

The survey report and others in the series are available on request from CeSTII and the DSTI. They can be downloaded from the HSRC-CeSTII website (https://hsrc.ac.za/divisions/centre-for-science-technology-and-innovation-indicators/) and DSTI website (www.dsti.gov.za). Care was taken to ensure the confidentiality of respondent information and the data presented in the reports are therefore 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. Such 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 Survey data is archived in accordance with established CeSTII and HSRC procedures. All data are stored electronically on secure servers.

ACKNOWLEDGEMENTS

The Centre for Science, Technology and Innovation Indicators (CeSTII) at the Human Sciences Research Council (HSRC) undertook the first Innovation in the South African Informal Sector Survey, on behalf of the Department of Science, Technology and Innovation (DSTI). The project team consisted of researchers and data collectors from CeSTII and the fieldwork service provider, the Safety Lab. The Safety Lab team was led by Nathaniel Roloff, Rory Liedeman and Asanda Dlangudlangu, who worked with a team of community-based researchers to administer the survey. Dr Il-haam Petersen was responsible for the overall project leadership and led the development of the conceptual framework and survey questionnaire, in collaboration with the previous project lead, Dr Nazeem Mustapha. Dr Nicole van Rheede was responsible for the project management, and direct oversight of the survey component within CeSTII. Dr Mbongeni Maziya assisted with oversight of the survey component and produced the quality indicators. CeSTII team members who assisted with data collection through conducting telephonic interviews and a focus group were: Dr Mbongeni Maziya, Setsoheng Mayeki, Lungani Mvelase, Viwe Sigenu and Dr Nicole van Rheede.

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Last, but not least, we thank all respondents who participated in the focus group, survey and engagement events.

ABBREVIATIONS

Photo credit: Antonio Erasmus

CeSTII	Centre for Science, Technology and Innovation Indicators
CIS	Community Innovation Survey
CBPR	Community-based participatory research
DSTI	Department of Science, Technology and Innovation
DUIIS	Doing, using, interacting, imitating and searching
HSRC	Human Sciences Research Council
IIS	Innovation in the Informal Sector Survey
IKS	Indigenous knowledge systems
IP	Intellectual property
IPR	Intellectual property rights
ILO	International Labour Organization
ISIC	International Standard Industrial Classification of All Economic Activities
LIPC	Local innovation and production classification
LIPS	Local innovation and production systems
OECD	Organisation for Economic Co-operation and Development
RedeSist	Brazilian Research Network on Local Innovation and Production Systems
SIC	Standard Industrial Classification
Stats SA	Statistics South Africa
STI	Science, technology and innovation

DEFINITIONS

Incomplete innovation refers to innovation activities that do not result in an innovation (product or process), but are ongoing or aborted, discontinued or put on hold.

Informal sector enterprises are private unincorporated enterprises that are unregistered and/or do not keep formal accounts (EC, IMF, OECD, UN and WB, 2009).

Innovation 'is a new or improved product or process (or 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 refers to the amount of resources a firm allocates to innovation, which may be proxied by innovation expenditure or human resources allocated to innovation. In this report, innovation intensity is the proportion of employees that are involved in innovation activity, expressed as a percentage.

That is, innovation intensity = $\frac{\text{employees involved in innovation activity}}{\text{total employees}} * 100.$

Innovation rate measures the fraction of successful innovators in the population, excluding abandoned or ongoing innovation activity. Innovation rate = $\frac{\text{successfull innovators}}{\text{all enterprises}} * 100.$

International Standard Industrial Classification of All Economic Activities (ISIC) is the international reference classification of production, according to the economic activities of enterprises (i.e. not the product that they produce). See https://unstats.un.org/unsd/classifications/Econ/ISIC.cshtml for a description, the chronology of ISIC revisions, and concordance tables with other economic classification schemes.

Labour productivity represents the total volume of output produced per unit of labour. The labour productivity rate for informal sector enterprises is calculated as $\frac{\text{annual turnover}}{\text{total employees}} * 100.$

Local refers to the geographic closeness within which economic activity takes place. For example, customers and businesses are localised in that they are geographically close to each other.

Local innovation and production classifications (LIPCs) are groupings of informal sector businesses involved in related production 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 SIC for describing economic activities at the local level.

Local innovation and production systems (LIPS) 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 a potential to generate the increase of productive and innovative capabilities' (Lastres and Cassiolato, 2005:7)

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

A **non-innovator** has no innovation (product or process), but may have incomplete innovation.

Non-response is failure to obtain a measurement on one or more variables for one or more units selected for the survey. These include out-of-scope units. (Adapted from Sarndal, Swensson and Wretman, 1992).

Out-of-scope units are defined as units that should not be included in the survey frame because they did not belong to the target population within the reference period.

Process innovation is 'a new or improved business process for one or more business functions that differs significantly from the firm's previous business processes and that has been brought into use in the firm' (OECD, 2018).

Product innovation is 'a new or improved good or service that differs significantly from the firm's previous goods or services and that has been introduced on the market' (OECD, 2018).

Standard Industrial Classification (SIC) codes are recommended by Statistics South Africa for describing the economic activities of industries. The SIC 7th edition (2012) includes an alternative classification for the informal sector and is used to classify the main economic activity of the business.

Successful innovation is a (product or process) innovation that was realised within the reference period. Note that a successful innovator can also have incomplete innovation.

Unit response rate is the ratio of the number of units that have provided data, at least on some variables over the total number of units designated for data collection. Response rate is calculated as the percentage of responses received from the frame = $\frac{\text{responses}}{(\text{responses+non–response})-(\text{out–of–scope})} * 100$.

Photo credit: Antonio Erasmus

CONTENTS

PREFACE 1
ACKNOWLEDGEMENTS 2
ABBREVIATIONS 3
DEFINITIONS 4
1. INTRODUCTION 8
Defining the informal sector 8
Why measure innovation in South Africa's informal sector 8
Distinguishing features of this survey round 9
2. METHODOLOGY 10
Local Innovation and Production Systems framework 10
Survey design 12
Frame, sample selection and fieldwork 14
Philippi township study area 14
Why Philippi was chosen for the second IIS survey 15
Informal production unit 15
Developing a frame 16
Innovation survey fieldwork 17
Quality indicators of survey coverage, fieldwork and analysis 18
Classification of economic activities 20
The challenge of collecting SIC in the field 20
Alternative aggregation for the informal sector 22
Data processing and analysis 25
3. FINDINGS 26
Key indicators 28
Characteristics of informal businesses in Philippi 30
Informality and readiness to formalise 30
Employment, value added and productivity in the Philippi study area 32
Indicators of informal sector business innovation 33
Product innovation 33
Process innovation 33
Incomplete innovation 33
Innovation barriers 33
Technological capability for innovation 34
Sources of information, knowledge flows and collaboration 34
Marketing 35
Intellectual property protection 35
4. GUIDE TO THE DATA TABLES 36
5. REFERENCES 64
6. APPENDICES 66

List of tables

Table 2.1: ILO criteria for defining informal sector enterprises 16
Table 2.2: Unit response 19
Table 2.3: Alternative classification of economic activities based on SIC 7 recommendation for the informal sector 21
Table 2.4: LIPC concordance with SIC classes 23
Table 3.1: Selected indicators of innovation, by LIPC 29
Table 3.2: Indicator framework for measuring formalisation capability 31

List of figures

Figure 2.1: Local Innovation and Production Systems (LIPS) framework adapted for the informal sector 11
Figure 2.2: Mixed methods methodology for measuring innovation in the informal sector 12
Figure 2.3. Study area in Philippi East, Cape Town, Western Cape 14
Figure 2.4: Fence erected to protect a business, Philippi 15
Figure 2.5: Process for conducting a census of businesses in a selected local area 17
Figure 2.6: Fieldwork process for administering the Innovation in the Informal Sector Survey instrument 18
Figure 2.7: Item response per section 19
Figure 2.8: Wearing apparel and homeware value chain 22
Figure 3.1: Spatial distribution of informal sector business innovation the Philippi study area, 2021–22 28

Appendices

Appendix 1: Alternative industry classification to Stats SA's SIC 7, based on the LIPS framework 66

1. INTRODUCTION

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Defining the informal sector

The informal sector includes all informal enterprise units, as well as own-account workers that generate income conducting legitimate economic activities. In the International Labour Organization's (ILO) Transition from the Informal to the Formal Economy Recommendation 2015 (No.204), informal sector enterprises include:

a. Units that employ hired labour;
b. Units that are owned by individuals working on their own account, either alone or with the help of contributing family workers; and
c. Cooperatives and social and solidarity economy units.

The term 'informal sector' is distinguished from 'informal employment', which includes the informal sector as well as informal workers in formal enterprises. The broader informal economy includes informal employment, informal sector enterprises, as well as households that produce exclusively for household consumption, such as subsistence agriculture.

In South Africa, there is no comprehensive business register for the informal sector. For the purposes of the Innovation in the South African Informal Sector Survey, the informal sector is defined in an inclusive manner using survey participants' own perceptions of what they consider to be informal sector businesses. 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. This is in line with the ILO (2013), which considers registration as well as how a business is organised and carries out its activities.

Why measure innovation in South Africa's informal sector

Documenting informal sector innovation sheds light on how people in townships, rural villages, remote towns and other local settings build livelihoods to lift themselves out of poverty or prevent them from falling deeper into poverty. In a weakening economy with growing unemployment, the informal sector, with its largely unregulated but legitimate economic activity, is a persistent feature of the labour market in South Africa (Skinner and Rogan, 2019).

Dominated by women and youth, the informal sector, accounts for nearly 20% of total employment and encompasses approximately three million people (Khuluvhe, 2023, based on 2021 and 2022 estimates by Statistics South Africa). In terms of its contribution to the economy, recent studies estimate this to be in the billions of rands. For example, it is estimated that informal food businesses contribute R87 billion a year and the backroom rental industry R30 billion annually (Hogg, 2020, cited in Thwala et al, 2023).

Innovation is integral to the survival and growth of informal sector businesses. Many survive because they are able to adapt quickly to meet the needs of the markets they serve. However, despite operating for several years, many businesses remain stuck in survivalist or necessity-driven business evolution pathways (Petersen and Kruss, 2021). They have uncertain levels of income, may support one or more families, and survive from crisis to crisis. Many do not thrive, and this limits their ability to contribute significantly to expanded livelihood opportunities and decent employment creation in local economies.

A policy commitment to promoting innovation in the informal sector and micro, small and medium enterprises (MSMEs) is articulated in the White Paper on Science, Technology and Innovation (2019) and the Science, Technology and Innovation Decadal Plan 2022–2032. Recognising the importance of the local sphere, support to the informal sector is related to plans for local economic development and strengthening local systems of innovation (STI Decadal Plan 2022-2032, chapter 6). Direct support for informal businesses is the responsibility of the national Department of Small Business Development (DSBD), through its National Integrated Small Enterprise Development (NISED) Masterplan and National Informal Business Upliftment Strategy (NIBUS), which is currently under revision. There is potential to strengthen alignment between the DSTI and the DSBD to improve development trajectories in the informal sector and within local communities.

This report aims to contribute to the promotion of informal sector innovation to support livelihoods, job creation and stronger local systems of innovation. It shares the findings of the second Innovation in the Informal Sector (IIS) survey conducted by the Centre for Science, Technology and Innovation Indicators. The IIS survey is based on a novel methodology that adapts and extends the international innovation measurement guidelines for the informal sector. The methodology enables data collection across the range of industries found in a selected geographic location, providing insight into the scale, nature, barriers, drivers and outcomes of innovation across industries.

Based on the understanding that informal sector innovation is deeply connected to the local context, the IIS survey also covers contextual data such as access to basic services. Therefore, using the IIS survey data, it is possible to analyse the link between innovation in informal businesses and their local context, and to map business evolution pathways at the local level. Recognising that change takes place at a much faster rate within the informal sector than the formal sector, the reference period used was two calendar years (2021 and 2022). This contrasts with innovation surveys of formal businesses that typically employ three-year reference periods to capture the changes that businesses implement.

Distinguishing features of this survey round

The first IIS survey was undertaken in Mpumuza, also known as Sweetwaters, a peri-rural area in Msunduzi municipality, KwaZulu-Natal. The second survey studied innovation by informal businesses in Philippi, a large township in the City of Cape Town metropolitan municipality, Western Cape. The data from the two surveys allows for comparative analysis to better understand innovation in the South African informal sector which has high concentrations in townships and rural areas.

The 2021–22 IIS Survey undertaken in Philippi used an updated questionnaire reflecting new theoretical and empirical research into the nature of economic activity and innovation in the informal sector in South Africa and on the continent. Research on business evolution and innovation informed the development of a new set of indicators based on a framework for measuring formalisation capability created by CeSTII (Petersen et al, 2024).

Adaptations to the questionnaire included new questions assessing the impact of recent South African challenges, such as loadshedding and the COVID-19 pandemic. Questions addressing general business characteristics and access to basic services were refined to better align with Statistics South Africa's Survey of Employers and the Self-employed (2017) to improve comparability and standardisation. Overall, the questionnaire was also simplified and shortened based on feedback from the implementation of the first survey. A detailed description of the methodology and instrument development is included in section 2.

2. METHODOLOGY

Photo credit: The Safety Lab

The Innovation in the South African Informal Sector (IIS) Survey is based on a framework that builds on and extends the guidelines of the OECD's Oslo Manual. The definition of innovation in the latest version of the Oslo Manual (2018) was found to be suitable for the purposes of measuring innovation in the informal sector:

> *"…innovation is a new or improved product or process (or 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)."*

While the Oslo Manual provides useful insights for measuring innovation in the informal sector, the conceptual underpinning and methodological recommendations for the CIS-type surveys that are used for measuring innovation in the formal sector in South Africa are not suitable. A survey of innovation in the informal sector in South Africa has to take into account 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 Survey therefore adopted a framework developed specifically for studying innovation at the local level, a Local Innovation and Production Systems (LIPS) framework, which was further adapted for the informal sector in South Africa. The survey instruments, data collection methods and data analysis presented in this report is based on the adapted LIPS framework (see Figure 2.1).

While the value added by informal sector economic activity is relatively low, compared to that of the formal sector, an undervalued feature of the informal sector is its function as a learning environment for entrepreneurs, other business owners and employees. Therefore, the networks for developing such learning in a systemic fashion within informal sector businesses is a critical explanatory variable. The use of a classification that is suited to the LIPS approach as a means of disaggregating results provides insight in this latter respect (see below for a description of the Local Innovation and Production Classification).

Local Innovation and Production Systems framework

The Local Innovation and Production Systems approach was introduced by innovation scholars at the Brazilian Research Network on Local Innovation and Production Systems (RedeSist) at the Federal University of Rio do Janeiro, Brazil. The LIPS framework integrates innovation systems and development approaches for studying innovation processes. A LIPS is defined as:

> *"…(a) group(s) 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 a potential to generate the increase of productive and innovative capabilities (Lastres and Cassiolato, 2005: 7).*

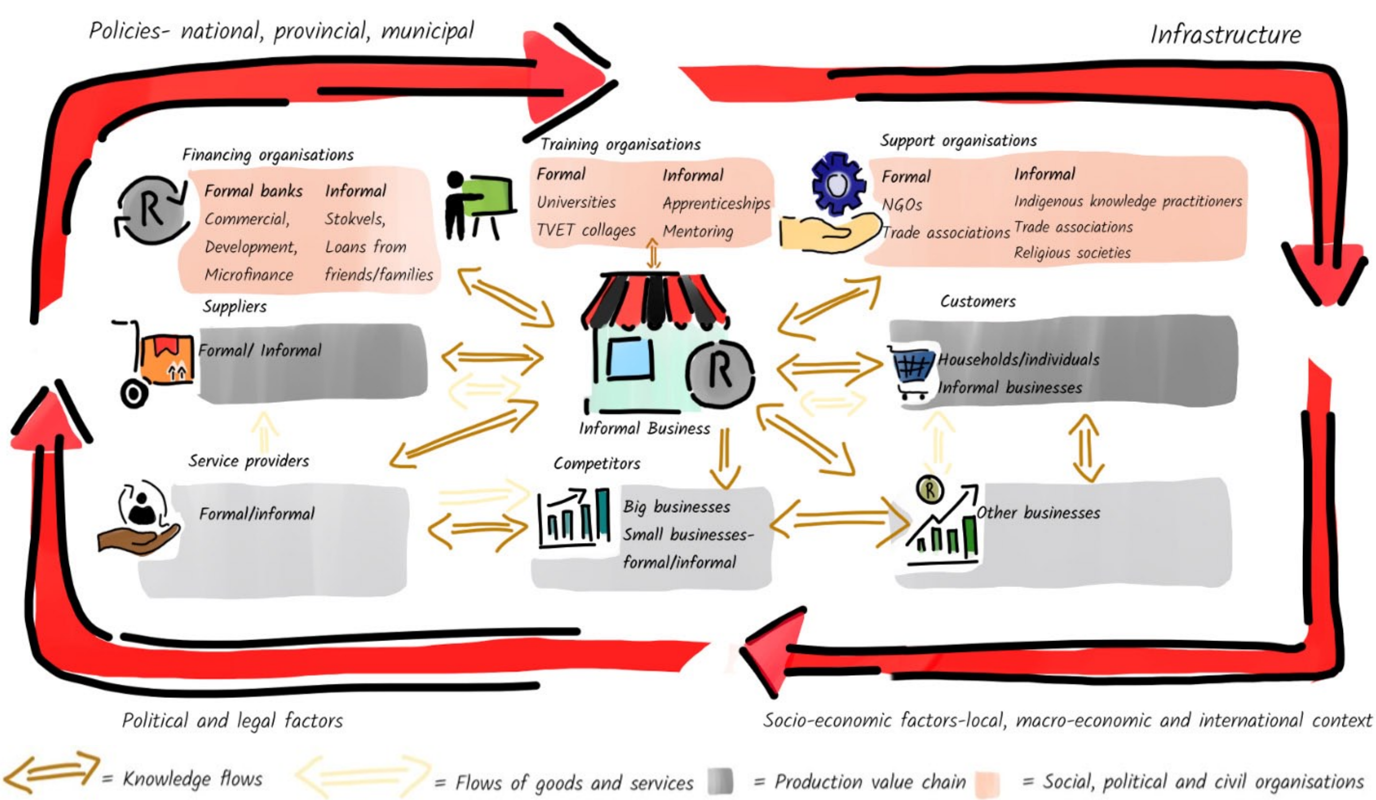
The LIPS framework emphasises the following:

- Territorial dimension – as a specific focus of analysis and policy;
- Link between micro-, meso- and macro-dimensions;
- Diversity of activities and actors – economic, political and social;
- Interactive learning – creation, assimilation and use of knowledge – innovation;
- Governance – power relations and coordination among actors and activities;
- Embeddedness – 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 particular territory (Lastres and Cassiolato, 2018).

Situated at the intersection between the innovation systems perspective and Latin American structuralism, the building blocks of the LIPS framework are the broader understanding of innovation, a focus on social, economic and political agents and contexts, a systems approach and observance of micro-, meso- and macro-relationships (Cassiolato et al, 2017). Furthermore, the framework draws attention to the set of economic, political and social actors and their interactions in different territorial layers, including the local, the regional and the global. The focus is on studying the linkages among a range of actors involved in interrelated economic activities, from firms producing goods and services; suppliers of raw materials, equipment and other inputs; distributors and traders; workers and consumers; organisations geared toward capacity building, training of human resources, information, research, development and engineering; support, regulation and financing; cooperatives, associations, trade unions and other representative bodies and policy design and implementation actors. The LIPS framework makes the unit of analysis the set of agents at the collective level. This goes beyond individual organisations (companies), sectors or production chains, and establishes a close relationship between the territory and its economic activities (Cassiolato et al, 2017).

The IIS Survey builds on the LIPS approach and factors in the peculiarities of the informal sector in South Africa, acknowledging a broad range of new actors and key stakeholders, informal linkages among these actors and stakeholders, as well as the unique socio-cultural, political, institutional and technological landscape of the continent. The LIPS framework adopted for the IIS Survey is illustrated in Figure 2.1.

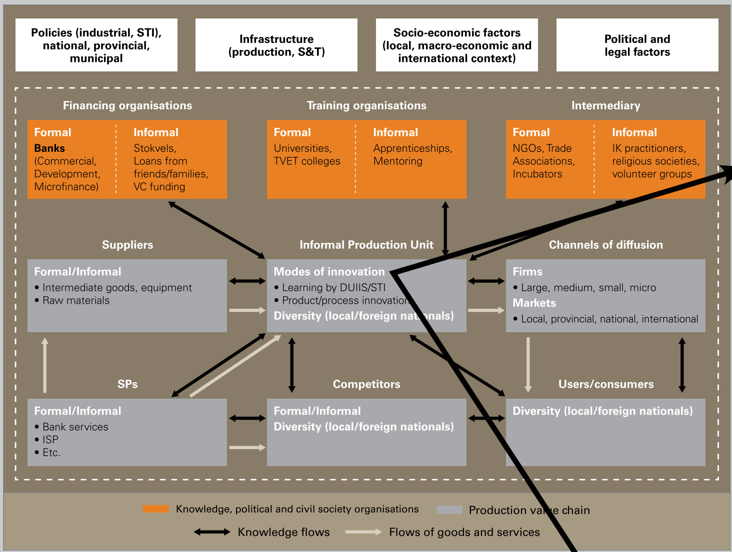
Figure 2.1: Local Innovation and Production Systems (LIPS) framework adapted for the informal sector



Source: CeSTII (2021, based on Cassiolato et al, 2017 and de Beer and Wunsch-Vincent, 2013; illustrated by Tebogo Matshana)

The IIS Survey employed a novel mixed methods methodology to measure innovation in the informal sector (Figure 2.2). This is based on the LIPS framework and 'small area census' methodology (Charman et al, 2017). Small area census methodology was designed to study economic activities in the informal sector and includes a survey component complemented by community-based participatory research (CBPR) techniques. CBPR techniques are suitable for research with hard-to-reach communities and to explore complex concepts and processes such as innovation. CBPR was also used to inform the design of the survey (see CeSTII, 2021).

Figure 2.2: Mixed methods methodology for measuring innovation in the informal sector



How does innovation by informal sector businesses take place at a local level?

Survey Questionnaire

#1 - What are the main inputs and outcomes? Economic, social, environmental?

#2 - What are the main types of innovation that take place?

#3 - What are the main mechanisms and strategies for learning?

#4 - Which actors, whether formal or informal, contribute to learning?

#5 - What are the main sources of information?

Interview Schedule

#6 - How is formal and informal knowledge acquired, used and diffused?

#7 - Which forms of knowledge are valued most – scientific, traditional/indigenous or 'popular' knowledge in the community?

Digital Storytelling

Q: Tell a true story about a time when you decided to do something different in the way that you run your business and what happened.

Source: CeSTII (2021)

Survey design

For the first round of the IIS Survey (2017–18), the questionnaire was developed in five stages (CeSTII, 2021):

- **Stage 1**: Gathering existing surveys of business and innovation, to identify suitable variables and questions for the IIS Survey and to develop a contact listing tool.
- **Stage 2**: Consult experts on the measurement of business innovation and on surveying economic activities in the informal sector. This stage also included a further review of the literature as well as case study research based on a qualitative research technique involving digital storytelling.[1]

1 The digital storytelling workshop was conducted as part of a companion study on knowledge flows between formal knowledge producers and informal sector actors in Philippi. The Philippi case study was part of a larger project funded by the National Research Foundation (NRF), from 2017 to 2019, under its community engagement programme. To date, more than 20 digital stories have been co-created with informal business owners in Sweetwaters and Philippi, covering a range of sectors.

- **Stage 3**: Develop draft survey questionnaire. A draft questionnaire on innovation in the informal sector was developed from the existing list of questions compiled in the two previous stages, which was further refined based on a second digital storytelling workshop.
- **Stage 4**: Test the validity of the survey questions through cognitive testing.
- **Stage 5**: Finalise survey questionnaire. The final version of the questionnaire was converted to an online survey format using the online survey platform, REDCap, enabling the collection of data using mobile technology. A final version of the questionnaire is included in section 4.
- **Stage 6**: Updating the questionnaire before each survey round based on new insights emerging from theoretical and empirical literature. This strengthens its grounding in the relevant context by incorporating feedback from the field and changing insights from policy.

The questionnaire administered for the 2021–22 IIS Survey in Philippi was updated based on new research and insights from the literature, policy consultation, and feedback from the implementation of the 2017–18 IIS Survey. The IIS community of practice played an important role in keeping the questionnaire updated. It includes statisticians and measurement practitioners in Africa, including the National Centre for Technology Management (NACETEM) that piloted an IIS Survey in Nigeria, innovation and small business development policymakers in South Africa, informal sector stakeholders, and innovation scholars.

Specifically, the section on business evolution in the 2021–22 IIS Survey of Philippi is based on cutting-edge research on informality and the role of innovation in the survival and growth of informal businesses in South Africa (Mustapha et al, 2022). This research informed the development of a new set of indicators based on a framework for measuring formalisation capability created by CeSTII (Petersen et al, 2024). The questions on previous work experience now distinguishes work in the same industry, formal sector and informal sectors to inform a better understanding of types of knowledge and learning.

The questionnaire also included questions relating to recent challenges in the South African context, including loadshedding and the impact of COVID-19 on informal businesses. Questions covering general business characteristics and access to basic services were refined to better align with Statistics South Africa's Survey of Employers and the Self-employed (2017) for improved comparability and standardisation. Based on feedback from the first survey round, the language was simplified and questions found not directly relevant and poorly responded to were removed.

Box 2.1 Description of the digital storytelling workshops that informed the survey design

Digital storytelling is a two- to five-minute audio-visual clip that combines photographs, voice-over narration, and other audio (Lambert, 2009 cited in de Jager et al., 2017). As 'stories are what we do as humans to make sense of the world' (Lambert, 2013) this methodology allows for diverse perspectives to emerge based on different focus themes or questions.

Digital storytelling is a novel method for conducting research on innovation activities and has been found to be useful for collecting fine-grained contextualised data on economic activities in the informal sector (Charman et al, 2017; Charman and Petersen, 2018). For the purposes of the IIS Survey, we sought to understand the economic and innovation activities of informal sector businesses by asking participants to reflect on their experiences of conducting business. The guiding question informal sector business owners were asked to address was: ***Tell me a TRUE story of a time when you did something different in the way that you run your business and what happened***. Through an intense participatory process, the facilitators worked with each participating informal sector business owner to select and clarify the 'story' they wished to share. The aim was to help each 'storyteller' connect with how they felt about their experiences of conducting business in the township, and to identify a key moment of change in their businesses and how they dealt with this change. The tools that the workshops employed included the use of crayons, paints and clay for participants to illustrate their stories. The story that participants chose was open to them, except for basic guidelines on story construction techniques. This freedom allowed for reflection on the nature of business changing events, and how innovation takes place in micro and small businesses. The project team worked with the Sustainable Livelihoods Foundation to develop a detailed programme for the workshop in Philippi and adapted that programme for the workshop in Sweetwaters. The 15 digital stories produced were factual and narrated by informal sector business owners, in their own words. They can be accessed at https://informalbizinnovationhub.hsrc.ac.za.

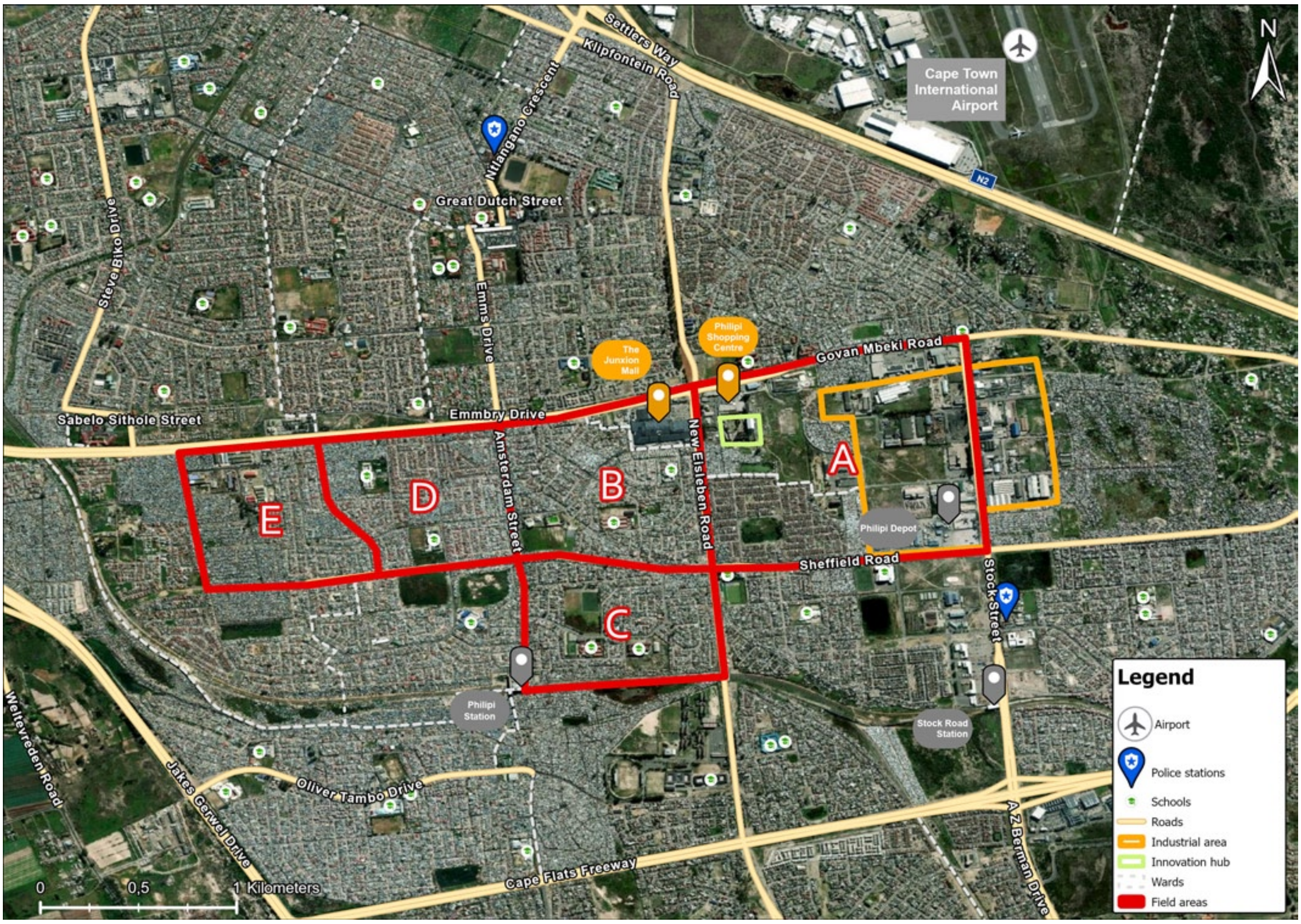
Frame, sample selection and fieldwork

Philippi township study area

The Innovation in the Informal Sector Survey was designed to capture innovation in South African local settings where informal economic activity tends to be concentrated in townships, rural areas and remote towns. For each survey round, the study area is selected by following best practice guidelines for conducting a small area census.[2] This is aligned with the LIPS approach as it selects a local contiguous area and surveys the businesses within it. While it is possible to select a study area based on municipal wards only, the preferred method considers natural boundaries including topography and the location of main roads that define the region of economic activity.

The second survey was conducted in Philippi, one of the largest townships on the Cape Flats, located about 20 kilometres from the Cape Town city centre, between the N2 highway and Cape Town International Airport (Figure 2.3). The Cape Flats is a low-lying, flat area in Cape Town, known for its high-density informal settlements and history of socio-economic challenges stemming from South Africa's apartheid history. Philippi is surrounded by other large townships including Nyanga, Gugulethu, Mitchells Plain and Crossroads. The study area spanned 3,28 square kilometres across four municipal wards (wards 34, 35, 80 and 88) in Philippi East and included industrial, mixed commercial and residential areas, to capture the range of informal economic activities underway in the township.

Figure 2.3: Study area in Philippi East, Cape Town, Western Cape



Note: Area A = Industrial, Area B = Mixed Commercial, Area C = Residential, Area D = Residential, and Area E = Residential.
Source: Motolwana, HSRC, 2024, adapted from The Safety Lab, 2023

2 Charman et al., 2017.

Excluding housing, the few developments in the area are very visible and large, and include a transport interchange, two malls and shopping centres, two primary schools, a high school, a police station, a sports complex, and Philippi Village, a township innovation hub and business park surrounded by several informal settlements including Seskhona, Siyangena and Malema. Philippi industrial area has seen waves of investment and disinvestment over the last 30 years and there are several factories and warehouses operating in the area (City of Cape Town, 2021). Each day, traders can be seen along the streets, setting up carts and tables while others use the ground to carefully lay out clothing and other goods for sale to the community.

Why Philippi was chosen for the second IIS survey

Philippi township was established during the apartheid era, in the 1970s, as a designated area for black residents under the Group Areas Act. It is a poor township area in which a large proportion of the working age population is unemployed (38%), and most households (78%) report a monthly income of R3 200 or less, making them eligible for subsidised housing (Anderson et al, 2009; City of Cape Town, 2013; HHO Africa, 2015). Unemployment is higher than the rest of Cape Town and household income is lower. The majority of the population of over 200 000 is black African (97%) and isiXhosa-speaking, and almost half (45%) are between 15 and 34 years, with 33% holding at least matric and 49% having completed some secondary schooling (City of Cape Town, 2013).

In the early 2000s, the City of Cape Town municipality built road links to the railway line and established a long-distance bus terminus and taxi rank. Philippi thus became a major regional node for bus transport to and from the Eastern Cape province. Migration from the rural areas, particularly the Eastern Cape as well as countries in the Southern African Development Community (SADC) has continued, resulting in a very densely populated township. Trends indicate that a large proportion of the population are migrants who have moved to Cape Town in search of employment opportunities (Haysom et al, 2017). Of concern is that Cape Town's labour market favours those with skills, whereas many new migrants tend to be semi-skilled or unskilled and are therefore absorbed into the informal economy. In recent years, crime and extortion syndicates have increased, impacting on livelihoods and quality of life (PEDI, 2024).

Figure 2.4: Fence erected to protect a business, Philippi

Source: The Safety Lab (2023)

Informal production unit

Informal sector enterprises are commonly defined as all private unincorporated enterprises that produce at least some of their goods and services for sale or barter, and that are not registered for tax or a business licence, or do not keep formal accounts (EC et al, 2009). An unincorporated enterprise is a business that does not possess a legal identity separate from that of its owner. While this definition may describe many businesses operating in the informal sector, it does not cover the full range of businesses. For example, businesses may be registered and keep formal accounts, but are similar in character to unincorporated enterprises in the informal sector in that they operate from a shipping container or makeshift premises with limited or no access to basic amenities and mainly serve the low-income market in the local area.

The IIS Survey thus used a more bottom-up definition, based on the characteristics identified above as well as how the business owners and others in the local area described the businesses (i.e. informal or formal). Specific research techniques, including the small area census method used for developing a listing of informal businesses in the study area and CBPR methods, were selected to facilitate such an understanding.

This conceptualisation is in line with that of the International Labour Organization (2013), which considers registration as well as how a business is organised and carries out its activities (Table 2.1).

Table 2.1: ILO criteria for defining informal sector enterprises

Criterion	Purpose
1. Legal organisation: enterprise not constituted as a legal entity separate from its owner(s)	Identification of unincorporated enterprises, that is, enterprises that are not registered as legal entities.
2. Ownership: enterprise owned and controlled by member(s) of household(s)	Identification of household unincorporated enterprises or unregistered enterprises that are owned by one or more members of a household.
3. Type of accounts: no complete set of accounts, including balance sheets	Exclusion of quasi-corporations from household unincorporated enterprises
4. Product destination: at least some market output	Identification of household unincorporated enterprises with at least some market production: exclusion of household unincorporated enterprises producing goods exclusively for own final use by the household.
5. Kind of economic activity	Exclusion of households employing paid domestic workers; possible exclusion of enterprises engaged in agricultural and related activities.
6. Number of persons engaged/employed/ employees employed on a continuous basis: fewer than 'n'. and/or 6.1 non-registration of the enterprise, and/or 6.2 non-registration of the employees of the enterprise.	Identification of informal sector enterprises as a subset of household unincorporated enterprises with at least some market production.

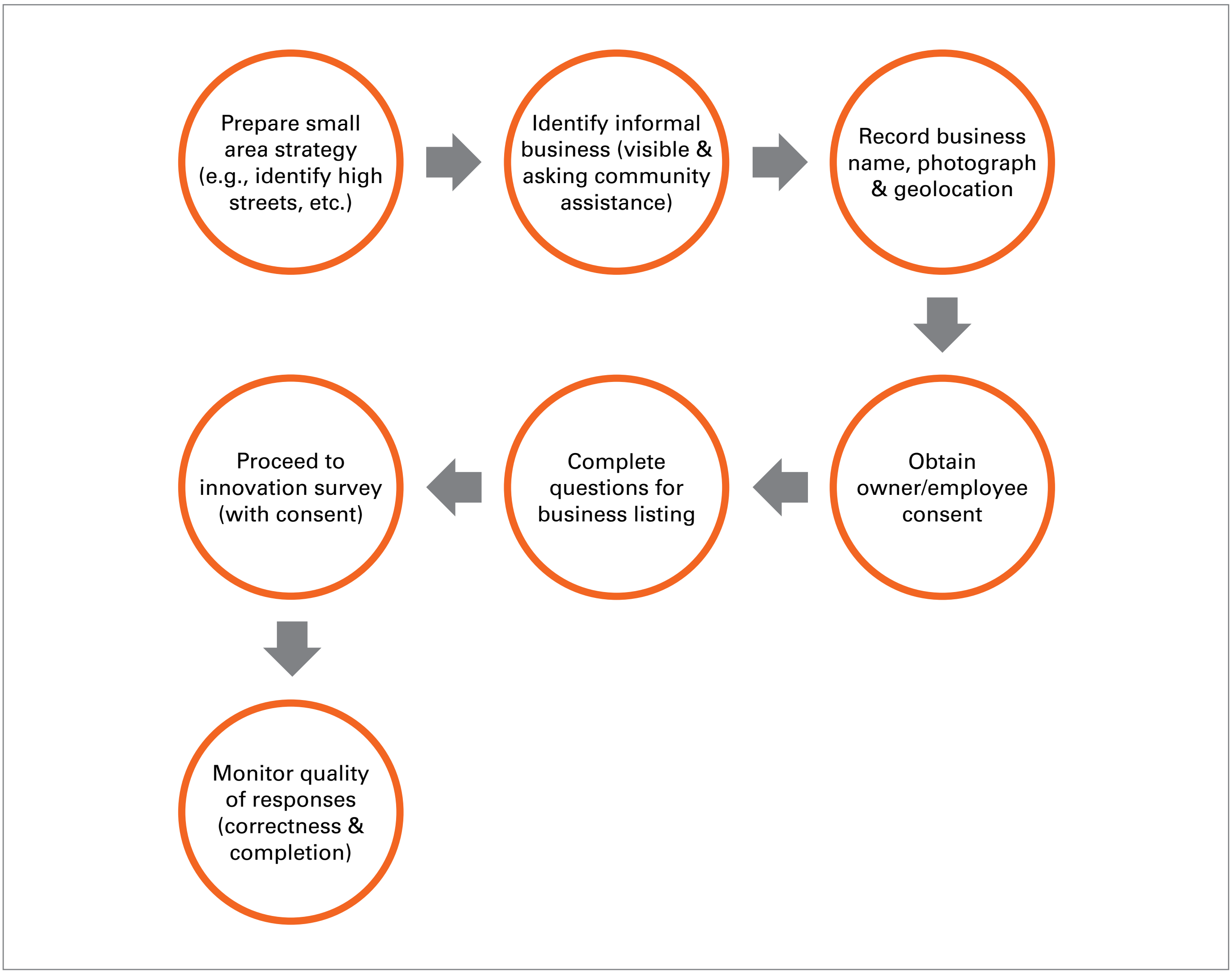
Source: Adapted from the ILO (2013)

Developing a frame

A comprehensive list of businesses in the informal sector in South Africa, particularly at the area level, could not be found. The first step was therefore to conduct a census of businesses in the study area.

Based on the LIPS framework and consultations with community-based research experts at the HSRC and informal sector experts, an area-based approach was adopted. The small area census method (Charman et al, 2015), as a well-established and robust method for developing a listing of informal businesses in a local area, was used for the 2021–22 IIS Survey in Philippi and is recommended for future surveys (see Figure 2.5). The small area census methodology includes creating an initial list of businesses in the study area based on reports by community members, cleaning the list, and verifying the businesses to inform the business listing.

Figure 2.5: Process for conducting a census of businesses in a selected local area



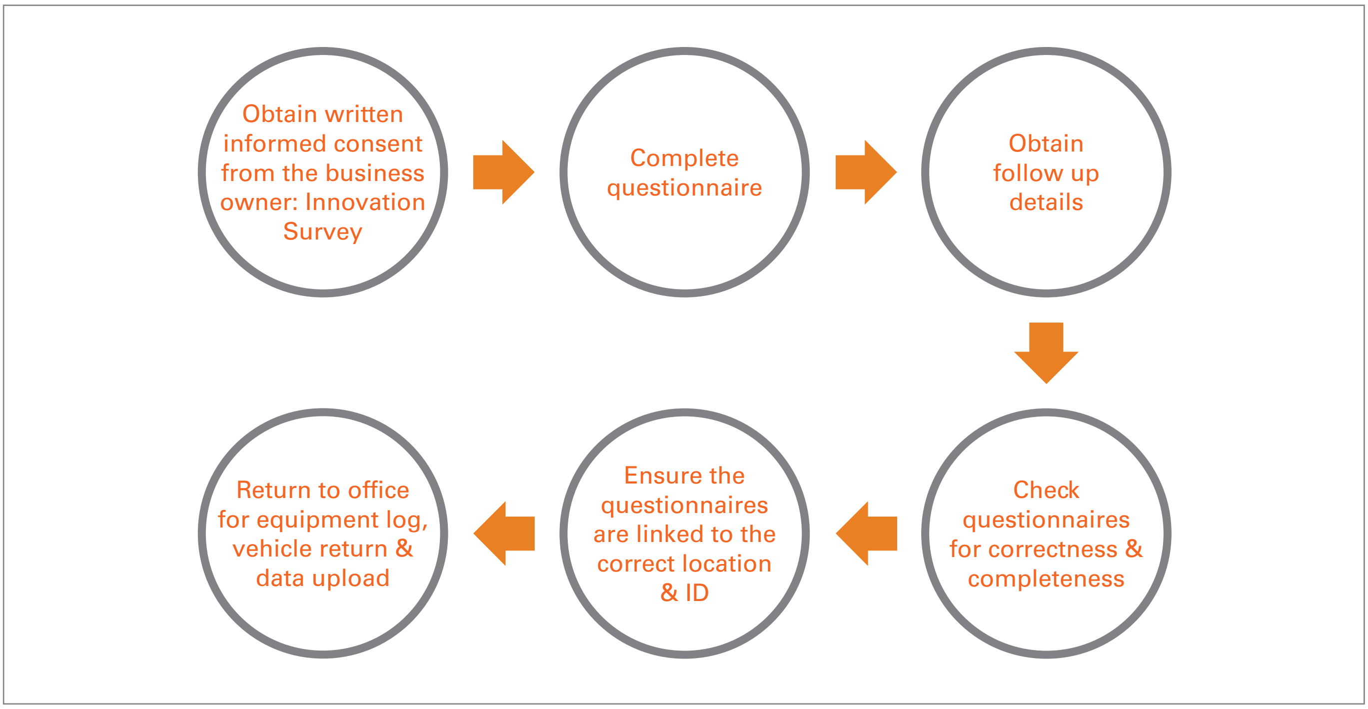
Source: CeSTII (2021)

Prior to administering the informal business census and innovation survey, consultation meetings are held with community gatekeepers and others with strategic information about the local area. The meetings are important for informing key leaders in the area, such as the elected ward councillors, traditional leaders and street committees, of the study and to negotiate access. In consultation with community representatives, high streets, high foot-traffic locations and spaces where informal economic activities take place are identified. These locations are used as starting points for walking and driving through the community and asking people about businesses in the area. As soon as one informal sector business is found or mentioned, the data collectors proceed directly to the site. With the use of a GPS device, the business's position and location is geocoded. Then with the consent of the business owner, the business listing questions are completed (see section 4). The purpose of this two-step process is to develop an understanding of how the community perceives informality, and to generate a spatial representation of informal sector businesses. Through this process, a list of businesses, with a geocoded position and location, and an indication of economic activity is produced.

Innovation survey fieldwork

Fieldwork for the 2021–22 IIS Survey in Philippi was conducted from March to June 2023. With the use of mobile technology, the questionnaire was administered through face-to-face structured interviews with informal sector business owners at their business premises and at times convenient for them. On the few days that it rained, interviews were conducted telephonically. In the study area, the roads became muddy and difficult to navigate on rainy days. Figure 2.6 illustrates the IIS Survey fieldwork process. Of the 1 515 informal sector businesses identified and contacted, 1 008 completed questionnaires were returned, after removing duplicates.

Figure 2.6: Fieldwork process for administering the Innovation in the Informal Sector Survey instrument



Source: CeSTII (2021)

Quality indicators of survey coverage, fieldwork and analysis

Non-response is the failure of a survey to collect the data on all survey variables, from all the units designated for data collection in a sample (Sarndal, Swensson and Wretman, 1992). Response may be of two types – unit response or item response. Response is monitored with two quality indicators, quantified by two metrics for each type.

Unit response

The unit response rate is the ratio of the number of units that have provided data, at least on some variables over the total number of units designated for data collection. The response rate was defined as the proportion of units designated for collection that responded to both the verification and innovation survey tools.

The different categories of unit non-response that occur in a survey include out-of-scope units, refusals and unavailable units. Out-of-scope units are those that should not have been included in the sample from the outset.

$$\textbf{Response rate} = \frac{\text{responses}}{(\text{responses} + \text{non–response}) - (\text{out–of–scope})}$$

Due to the design of the innovation survey, which is based on collecting data on businesses in a geographic area, there were no out-of-scopes. The main obstacles to response were the unavailability of some business owners to be interviewed in the field at all times of the day, including business hours, and high levels of competition, crime and extortion that affected the willingness of business owners to commit sufficient time to complete the survey. For these respondents, alternative times had to be arranged but survey questionnaires were not always successfully completed (see Table 2.2)

Table 2.2: Unit response

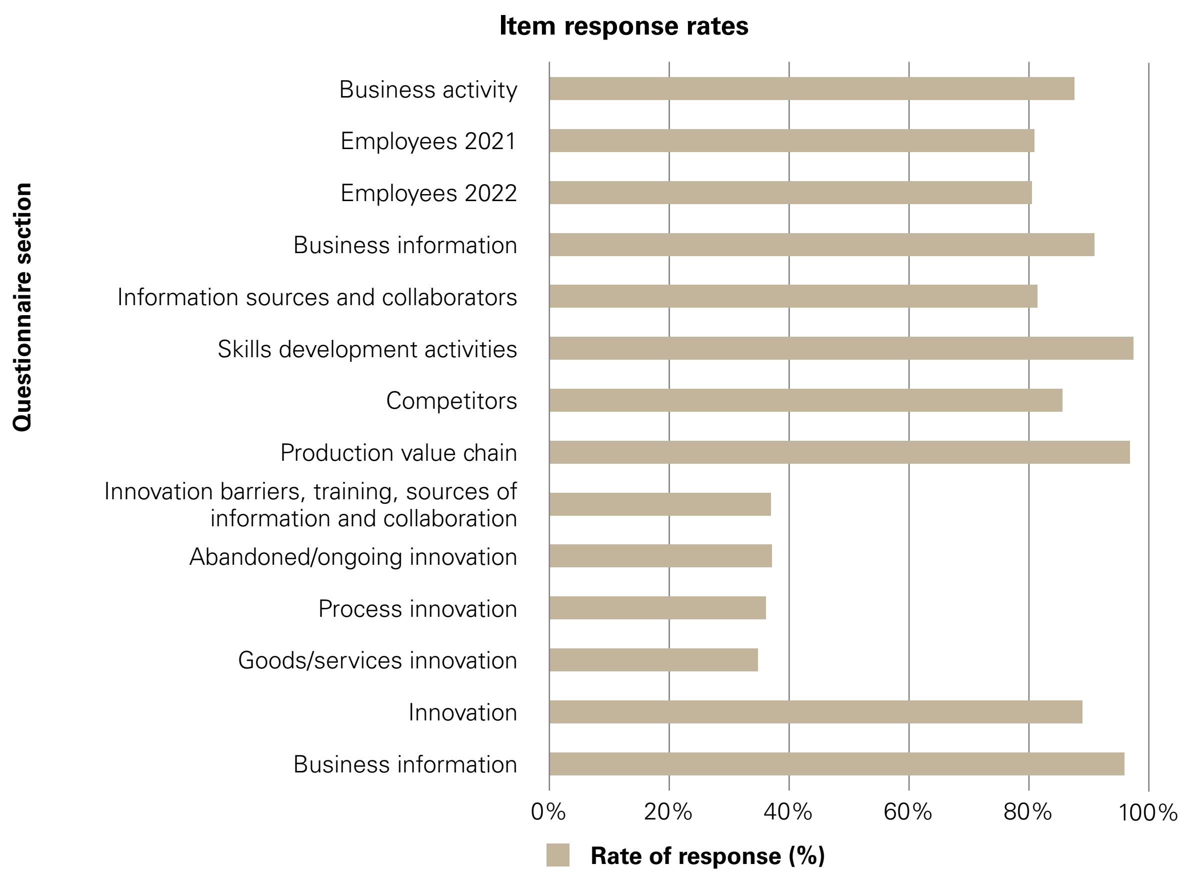
	Number
Total number of businesses contacted	1515
Total number of businesses that completed the survey	1008
Response rate	66.5%
Total number of businesses after cleaning the dataset	970

Item response

An item is a specific survey variable. Item response rate is the number of responses to a particular survey variable as a proportion of the total possible number of responses for that item. To summarise the item response, we calculated response rates for each of the survey sections, made up of several items in each case in an analogous fashion.

The survey comprised 14 sections. The item response data for each section is displayed in Figure 2.7.

Figure 2.7: Item response per section



Classification of economic activities

Two approaches to classifying economic activities were used, a standardised method based on international best practice, and a method that used the natural boundaries of local innovation and production networks to reveal the key economic activities in the selected study area. The latter approach is better aligned with the LIPS methodology. It allows for the development of insights pertinent for the informal sector: the relation between production activities and the local territory – that is the 'localness' of production activities – as well as potential learning and competence-building networks.

For coherence and comparability with other South African innovation and economic survey data, Stats SA's Standard Industrial Classification of all Economic Activities (Seventh Edition) framework was used, as a first step, to classify the economic activities of the businesses covered by the IIS Survey. In the most recent edition of the SIC, based on ISIC Rev.4, Stats SA (2012: 250) recommends an alternative aggregation that is considered more suitable for the analysis of economic activities in the informal sector. The informal sector businesses were firstly grouped according to this alternative aggregation, which allowed for an initial overview of economic activities in the study area and the identification of key economic activities.

Secondly, drawing on the LIPS framework, the informal sector businesses were grouped into production networks covering the range of activities from the production of raw materials and other inputs into the final production of goods and services at the local level. These two steps are described below.

The challenge of collecting SIC in the field

Assigning SIC codes to businesses in the informal sector was a major challenge in the absence of a reliable listing of informal sector businesses. The initial plan was to have the classification completed by fieldworkers daily, based on the data collected through the survey tool and field notes. This was not possible due to restrictions related to the online survey format and the capability of the fieldworkers. The initial SIC codes were therefore recorded by the fieldwork coordinator after the completed questionnaires were returned. These classifications underwent a two-step verification to ensure that businesses were assigned the most suitable SIC code. The fieldwork coordinator assigned the SIC codes based on the data collected by the fieldworkers. The research team checked and verified the data. Where further clarification was required, follow-up calls with the survey respondents were conducted after the conclusion of the fieldwork period.

The final SIC codes were informed by this combination of data:

- description of the main products,
- the type of business, and
- the name of the business.

This combination of data was considered more reliable than using the description of the main products alone, particularly when these descriptions did not include sufficient detail. In the instances when conflicting information was provided, the variables containing the most consistent description were used, based on these guidelines:

- First, assign the SIC code based on the description of the main goods and services offered by the business.
- Second, use the business type and business name variables to infer the economic activity if these two variables were consistent, and differed from the main goods and services description.

Considering the complexity of economic activities in the informal sector, differentiating the main economic activities from secondary and ancillary activities was not always simple. The following rule was used: the economic activity that generated the most income was identified as the main economic activity.

Based on the process described, it was possible to categorise the economic activities in the study area according to standardised aggregates. However, while the SIC aggregation recommended for the informal sector facilitates comparability, the standardised aggregates may not adequately represent the dynamics of economic activities at the local level. For example, hair salons and barbershops are typically significant in township economies similar to the study area but, based on SIC, are captured as 'Other personal service activities'. Another challenge was to classify the economic activities of businesses offering personal, single services such as hemming trousers and repairing handbags. Also, a large proportion of informal retail businesses in township economies operate from a fixed location, and often a fixed structure. The recommended SIC category of 'Retail trade not in stores' may thus not be helpful (see Table 2.3).

Table 2.3: Alternative classification of economic activities based on SIC 7 recommendation for the informal sector

Category	Title	SIC sections	SIC divisions	SIC groups	SIC classes
I	Agriculture, forestry and fishing	A	01–03	011–032	0111–0322
II	Mining and quarrying, manufacturing, electricity, gas and water supply, waste Management	B,C,D,E	05–39	051–390	0510–3900
II	a of which: Manufacturing	C	10–33	101–332	1010–3320
III	Construction	F	41–43	410–439	4100–4390
IV	Wholesale and retail trade	G*	45,*46, 47	451, 453, 461–479	4510, 4530, 4910–4799
IV	a of which: Retail trade not in stores*	G*	47*	478, 479*	4781–4789, 4799
V	Repair of motor vehicles and motorcycles; repair of computers and personal and household goods	G,*S *	45,*95	452, 454, 951–952	4520, 4540, 9511– 9529
VI	Transportation and storage	H	49–53	491–532	4911–5320
VII	Accommodation and food service activities	I	55–56	551–563	5510–5630
VII	a of which: Restaurants, mobile food service activities and event catering	I*	56*	561, 562*	5610, 5621
VIII	Professional, scientific and technical activities; administrative and support service activities; arts, entertainment and recreation	M,N,R	69–82, 90–93	691–829, 900–932	6910–8299, 9000–9329
IX	Education; human health and social work activities	P,Q	85–88	851–889	8510–8890
X	Other personal service activities	S*	96	960	9601–9609
XI	Other activities	J,K,L,S*	58–68, 94	581–682, 941–949	5811–6820, 9411– 9499

* Denotes split of a section or group.
a Not including retail trade via mail order houses or via internet

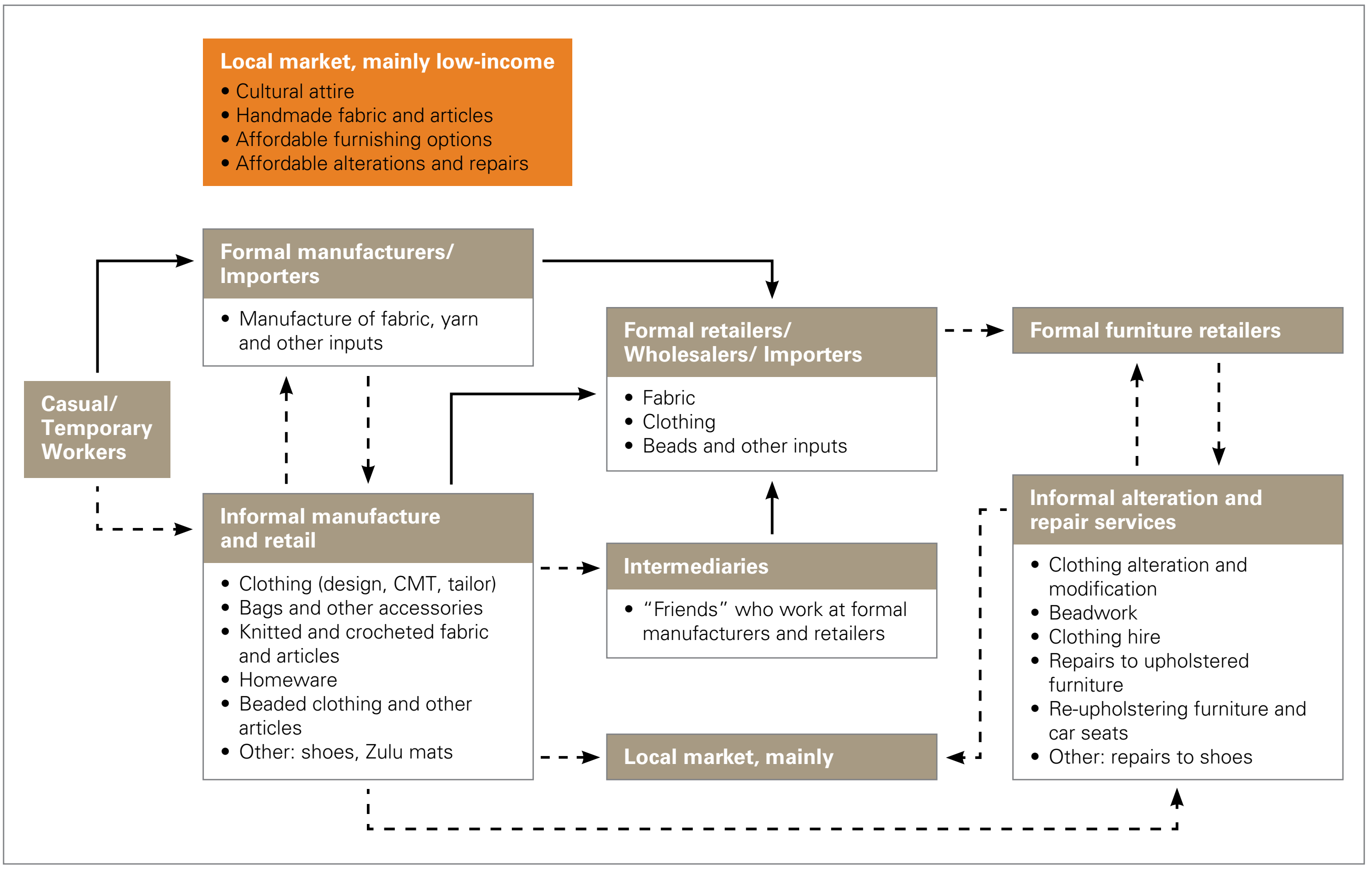
Source: Stats SA SIC 7, 2012: 258

Alternative aggregation for the informal sector

To better capture 'real production structures' at the local level, an alternative aggregation was used based on the LIPS framework (Lastres, 2012: 4). These aggregates are referred to as 'local innovation and production classification' (LIPC) categories (CeSTII, 2021). Table 2.4 includes the final LIPC categories identified through the IIS Survey, with the corresponding SIC classes. A detailed list of the LIPC categories is provided in Appendix 1.

The LIPC categories are informed by an analysis of the production value chains identified through the IIS Survey, based on the SIC codes, or by an identification of businesses that would form part of the learning network within that production value chain. Figure 2.8 provides an example of the value chain analysis that informed one LIPC of the 14 identified through the first round of the IIS Survey.

Figure 2.8: Wearing apparel and homeware value chain



Source: CeSTII (2021, based on van der Westhuizen, 2006 and 2017–18 IIS Survey data)

Informal sector businesses with related production activities were grouped together to form an initial set of categories. The final LIPC categories were informed by a review of the literature on economic activities in the informal sector in South Africa and Africa. When literature on the informal sector was not available for an economic activity, literature on the formal sector was consulted. Interviews conducted with informal sector businesses as part of the case study research component of the IIS survey project were analysed to inform the final LIPC categories.

The aggregation thus allows for the analysis of economic activities in the informal sector that goes beyond a focus on an individual business or on specific industrial sectors. Rather, the focus is on local systems that may be interlinked and include interaction and feedback between producers and users of related goods and services. The LIPC also allows for the identification and analysis of support structures and services important for competence building at the local level (see Category M, Table 2.4). The potential value of this alternative LIPC aggregation is further explored through more in-depth quantitative and qualitative data analysis.

Table 2.4: LIPC concordance with SIC classes

Category	Title	Sub-category titles	SIC classes
A	**FOOD SERVICES**		
A.1	Animal and fresh produce production	Animal production; fruit and vegetable growing; mixed farming	1440; 1450; 1130; 1500
A.2	Bakery products	Manufacture and retail of cakes and other bakery products	10710
A.3	Wholesale and retail of food, beverages and tobacco	Wholesale and retail of live animals, meats, eggs; retail of fruit and vegetables; liquor retail; spazas, mobile tuckshops and house shops; traditional cigarette seller	47710; 47790
A.4	Food and beverage service activities	Events catering and catering equipment rental; fast food cafes/take-aways; other restaurant and mobile food service activities; taverns/shebeens	56210; 56101; 56109; 56300
A.5	Other food service and related activities	Cooling services; rental of gas stoves (household), hubbly bubblies	77100; 77290
B	**BUILDING SERVICES**		
B.1	Construction of buildings	Construction of buildings; bricklaying; roofing; construction of prefab buildings (mainly of wood) and mobile homes	41000; 43909; 16220
B.2	Electrical, plumbing and other construction installation activities	Electrician; plumbing and air-conditioning installation	43210; 43220
B.3	Building completion and finishing	Plastering and painting; carpentry; tiling; ceiling fitting; glazing and door fitting; fencing construction	43301; 43302; 43309
B.4	Other building service and related activities	Boiler maker; welding; manufacture of clay building materials; retail sales of building materials; transport of prefab buildings (mainly of wood), mobile homes, building material	43909; 23920; 47790; 49230
C	**HAIRCARE & COSMETICS**		
C.1	Hairdressing and beauty treatment	Hairdressing; beauty treatment	96021; 96022
C.2	Retail of hairstyling articles	Wig selling	47790
C.3	Retail of cosmetics and perfume	Perfume sales; cosmetics sales	47790
D	**WEARING APPAREL & HOMEWARE**		
D.1	Manufacture and retail sale of clothing and accessories	Dressmaking/tailors; clothing selling; fashion design; traditional attire and beads selling; bags, caps selling; retail in jewellery and related accessories	14100; 47720; 74100; 47790
D.2	Manufacture, repair and retail sale of footwear	Shoemakers; shoe repairs; shoe sellers	15200; 95230; 47720
D.3	Manufacture, repair and retail of homeware	Upholstery repairing; retail sale of linen and fabric; retail of rugs, towels, bathroom accessories, etc.; manufacture of traditional rugs/carpets; manufacture of made-up furnishing articles: curtains, blinds, bedspreads etc.; manufacture of pottery and other porcelain and ceramic products	95240; 47720; 47790; 13930; 13921; 23930

Continues overleaf...

Category	Title	Sub-category titles	SIC classes
E	**VEHICLE REPAIRS & MAINTENANCE**		
E.1	Maintenance and repair of motor vehicles	Mechanical repairs and maintenance; panel beating services; auto electrical services; repairs of tyres; repair of vehicle canopies; car washing services	45200
E.2	Sale of motor vehicle parts and accessories	Retail of tyres; retail of car seat covers	45300
F	**ACCOMMODATION**	Landlord (long-term rental); other accommodation	68100; 55900
G	**METALWORK**		
G.1	Manufacture and repair of fabricated metal products	Fencing, welding and other steel work; installation of motorised gates; manufacture of metal containers; manufacture of windows and other structural metal products	33110; 43210; 25991; 25119
G.2	Repair of household appliances	Domestic refrigerator repairing services	95220
G.3	Recycled materials (metal)	Recycling (metal)	46691
H	**TRANSPORT SERVICES**		
H.1	Passenger transportation	School bus transportation; meter taxi; other road transport (passenger)	49223; 49222; 49229
H.2	Leasing and renting of motor vehicles and road transport equipment	Leasing of motor vehicles; leasing and renting of road transport equipment	77100; 77301
I	**CREATIVE ARTS & ENTERTAINMENT SERVICES**		
I.1	Creative arts	Visual artists and other creative arts activities; specialised design activities; photography services	90000; 74100; 74200
I.2	Entertainment services	Entertainment (DJ, music); sound engineering	90000; 59200
I.3	Retail and rental of entertainment equipment and related activities	Retail sale of music and video recordings; renting of sound equipment	47790; 77309
J	**TRADITIONAL HEALERS**	Traditional healing; herbal/traditional medicine retailing	86900; 47790
K	**DAYCARE & PRE-SCHOOL EDUCATION CENTRES**	Daycare and pre-school education centres	88900
L	**ELECTRONICS REPAIRS, MAINTENANCE & RETAIL**	Repair of computers; repair, installation and maintenance of television, radio receivers, sound systems; repair and maintenance of cellular phones; retail of electronics	95110; 95210; 95120; 47790
M	**BUSINESS SUPPORT SERVICES**		
M.1	Marketing support	Media businesses	73100
M.2	Financial support	Loan sharks/microlenders	64920
M.3	Other business support services and related activities	Internet café; photocopying, document preparation, other office support	61900; 82190
N	**FURNITURE MANUFACTURING, REPAIRS & RETAIL**	Furniture manufacturing; furniture repairs; furniture retail	31000; 95240; 47790

Continues overleaf...

Category	Title	Sub-category titles	SIC classes
O	OTHER PRODUCTS		
O.1	Home-based industries	Avon/Inuka products selling; Herbalife/Green World products selling; Tupperware selling	47890
O.2	Retail of other products	Wood selling; selling airtime; retail of electrical household appliances; retail of household fuel oil, bottled gas, coal and fuel wood; retail of cleaning products; retail of health supplements; other retail sales (e.g., brooms, mops, children's games and maps)	47790
O.3	Home maintenance services	Gardening services	81300
O.4	Funeral and related services	Funeral and related activities	96030
O.5	Other personal services	Laundry, washing and (dry-) cleaning of textile- and fur products; repair of other personal and household goods (e.g., key cutting); other personal service activities (e.g., security, cleaning)	96010; 95290; 96090
O.6	Other education and related services	Other education (e.g., learners licence support, driving school); other sports activities (e.g., coaching soccer)	85490; 93190
O.7	Waste management and recycling	Waste picking and recycling	38300
O.8	Other services	Renting of brush cutting machines, welding equipment	77309
O.9	Other manufacturing	Soap manufacturing	20230

Source: CeSTII (2021, based on 2017–18 IIS Survey data, updated based on 2021–22 IIS Survey data)

Data processing and analysis

The raw data was extracted from REDCap. Several data cleaning and editing processes were run on the raw data prior to constructing the summary data tables. These processes involved the identification of duplicates and units without a SIC or LIP classification. These non-eligible duplicates were removed from the collected data set. The business listing data and innovation survey data were merged into one data set. Only innovation survey data that were successfully merged with the business listing data were considered as full responses. The rest were counted as non-response. Outliers were detected on non-categorical variables. These outliers were removed from the calculation of estimates for those non-categorical variables where they occurred. There were several missing data items imputed from logical rules.

Details of the data processing and analysis are described in section 4.

3. FINDINGS

Photo credit: Il-haam Petersen

This section presents findings from the 2021–2022 Innovation in the South African Informal Sector Survey, Philippi. First, key indicators are reported including the rate, intensity and distribution of innovation as well as the location of customers and suppliers reflecting locally embedded production value chains. Second, indicators related to each dimension covered by the survey, including the characteristics of informal businesses in the study area, nature of informality, and broader characteristics of employment, value added and productivity are presented. Third, the nature of innovation is described, followed by sources of information, knowledge flows and collaboration, marketing and intellectual property protection.

The accompanying data tables, labelled D.1 to D.112, are available for download in MS Excel format from CeSTII's website (https://hsrc.ac.za/divisions/centre-for-science-technology-and-innovation-indicators/).

Innovation activity of the business can take on any or all three of the results given below (OECD, 2018):

a. Result in an innovation (product or process).
b. Be ongoing without an innovation.
c. Be aborted, discontinued, or put on hold.

This report refers to incomplete innovation, successful innovators, and non-innovators:

- **Incomplete innovation** refers to innovation activities that do not result in an innovation (product or process), but that are either ongoing or aborted, discontinued, or put on hold.
- A **successful innovation** is a (product or process) innovation that has been realised within the reference period. Note that a successful innovator can also have incomplete innovation.
- A **non-innovator** has no innovation (product or process) but may have incomplete innovation.

KEY STATISTICS

of the Innovation in the Informal Sector Survey Philippi, 2021 – 22

Food services	Haircare & cosmetics	Apparel & homeware
47.8%	14.6%	11.9%

Started due to **unemployment**

82.5%

Totally **informal**

97.7%

Business age

≥ 3 years

57.2%

> 10 years

20.8%

Turnover

≤ R36 000

79.9%

Employees

1 717

Average per business

1.8

Completed school

29.7%

Novelty of innovation

New to the:

- **firm** 58.6%
- **industry** 43.7%
- **local area** 41.7%

Innovation rate

35.0%

Product innovation 32.5%

Process innovation 33.8%

Barriers to innovation

Crime	53.1%
Protest action	21.9%
Cost of compliance	21.9%
Technology	19.8%

Modes of innovation & learning

Doing	Using	Interacting	STI
46.2%	67.9%	63.4%	18.7%

Key indicators

Innovation intensity

Innovation intensity is defined as the proportion of employees that were involved in successful innovation activity, expressed as a percentage. The innovation intensity for the Philippi study area was 40,9% (see Table D.23 Innovation intensity, by LIPC, 2022).

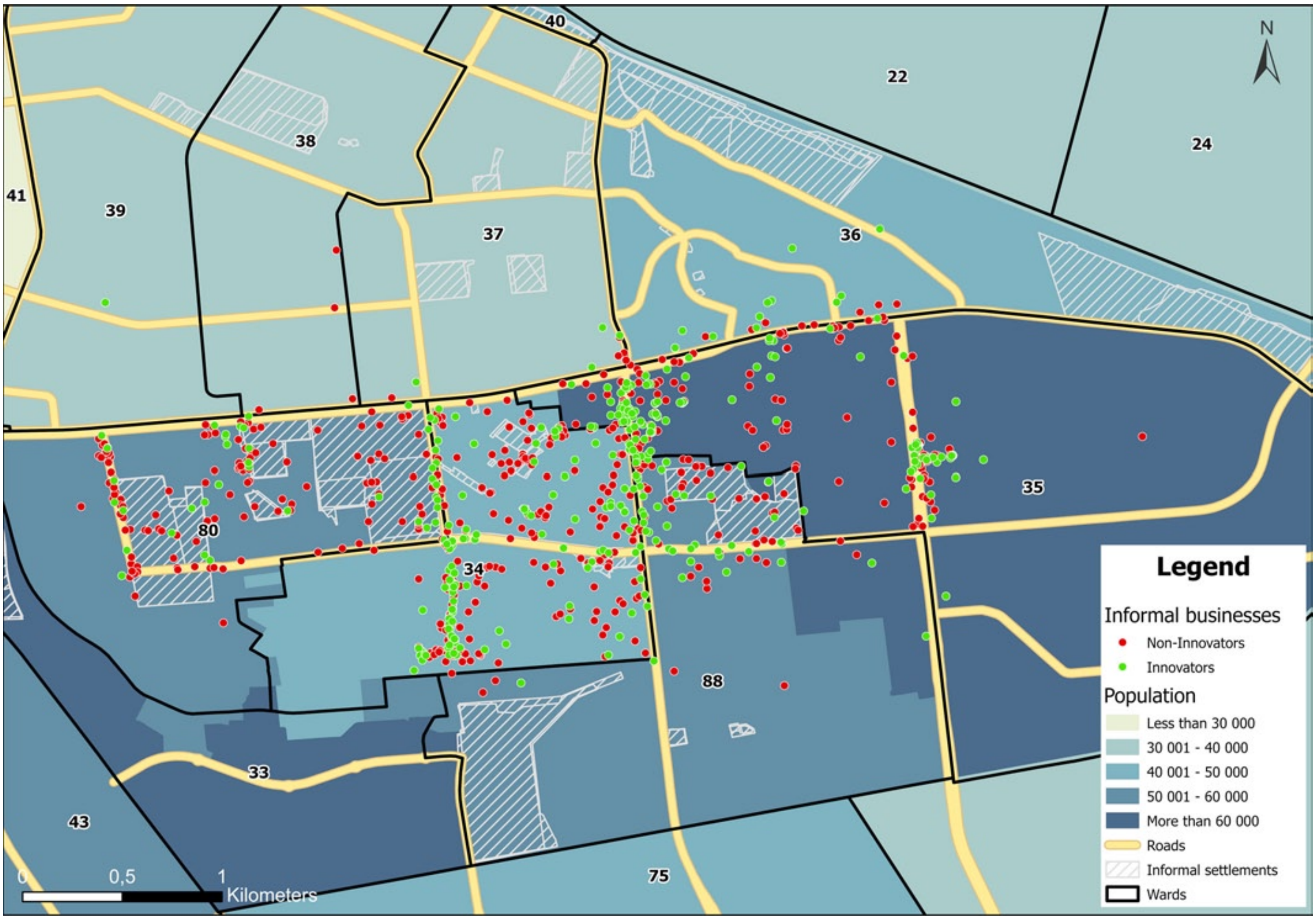
Innovation rate

The innovation rate measures the fraction of successful innovators in the population, excluding abandoned or ongoing innovation activity. The innovation rate for Philippi was 35,03%. The product innovation rate (32,47%) was slightly lower than the process innovation rate (33,78%) (see Table D.27 Product innovation rate, by LIPC; Table D.36 Process innovation rate, by LIPC).

Distribution of innovating businesses

The spatial distribution of successful innovating businesses in the Philippi study area is illustrated in Figure 3.1. The innovators tend to be clustered close to the main streets.

Figure 3.1: Spatial distribution of informal sector business innovation the Philippi study area, 2021–22



Source: Motolwana, HSRC (2024)

The Local Innovation and Production Classification (LIPC) groups locally operating businesses by sectors that are linked by production as well as learning processes. These are the fundamental elements that are essential for effecting change towards the sustainable growth of the LIPS, at the system level.

Table 3.1 presents indicators that partially describe the state of the LIPS identified, highlighting the local embeddedness of production.

Table 3.1: Selected indicators of innovation, by LIPC

Local Innovation and Production Classification (LIPC)[a]	Proportion of customers located inside neighbour-hood	Proportion of suppliers located inside neighbour-hood	Innovation rate	Product innovation rate	Process innovation rate	Proportion of business owners that finished school[b]	Proportion of employees that finished school
	%	%	%	%	%	%	%
Food services (47,84%)	49,46	47,20	28,91	27,21	28,42	53,23	27,28
Haircare and cosmetics (14,64%)	39,01	42,96	43,66	40,14	40,85	64,79	30,74
Wearing apparel and homeware (11,86%)	53,10	43,48	33,63	33,04	31,86	55,65	30,86
Vehicle repairs and maintenance (5,88%)	46,43	45,61	36,84	31,58	36,84	63,16	31,16
Other products[c] (3,81%)	27,78	48,65	32,43	32,43	29,73	70,27	31,34
Building services (3,30%)	46,90	46,90	58,06	48,39	53,13	59,38	37,33
Furniture manufacturing, repairs and retail (2,58%)	33,33	60,00	66,67	62,50	68,00	64,00	21,88
Traditional healers (2,58%)	58,33	48,00	36,00	36,00	36,00	52,00	39,47
Metalwork (2,37%)	31,82	56,52	56,52	43,48	56,52	52,17	20,83
Electronics repairs, maintenance and retail (1,86%)	31,25	38,89	44,44	44,44	38,89	55,56	39,13
Daycare and pre-school education centres (1,44%)	71,43	42,86	35,71	28,57	35,71	64,29	52,00

Continues overleaf...

a Proportion of economic activity in the sample.

b This includes school leaving certificate (matric) or equivalent, diploma or certificate, primary degree, and postgraduate diploma or degree.

c Home-based industries include selling Avon/Inuka, Herbalife/Green World and Tupperware products; retail of other products including wood, airtime, household fuel oil, bottled gas, coal and fuel wood, cleaning products, health supplements, other retail sales (e.g. brooms, mops, children's games and maps); home maintenance services (e.g. gardening services); funeral and related services; other personal services including laundry, washing and (dry-) cleaning of textile and fur products, repair of other personal and household goods (e.g. key cutting) and other personal service activities (e.g. security, cleaning); other education and related services (e.g. learner licence support, driving school, coaching soccer); waste picking and recycling; renting of brush-cutting machines and welding equipment; and soap manufacturing.

Local Innovation and Production Classification (LIPC)[a]	Proportion of customers located inside neighbour-hood	Proportion of suppliers located inside neighbour-hood	Innovation rate	Product innovation rate	Process innovation rate	Proportion of business owners that finished school[b]	Proportion of employees that finished school
	%	%	%	%	%	%	%
Business support services (0,82%)	62,50	50,00	25,00	25,00	12,50	50,00	54,55
Transport services (0,41%)	25,00	25,00	0,00	0,00	0,00	75,00	50,00
Accommodation (0,31%)	100,00	33,33	0,00	0,00	0,00	0,00	0,00
Creative arts and entertainment services (0,31%)	66,67	100,00	0,00	0,00	0,00	66,67	66,67
Total	**46,91**	**46,19**	**35,03**	**32,47**	**33,78**	**57,01**	**29,70**

Characteristics of informal businesses in Philippi

The most common informal businesses in Philippi occur in three LIPC categories: Food (47,84%), Haircare and cosmetics (14,64%) and Wearing apparel and homeware services (11,86%). The smallest LIPC categories, namely Business support services, Transport services, Accommodation, and Creative arts and Entertainment services, contributed less than one percent each to the overall number of businesses (see Table D.1: Number of enterprises, by LIPC).

Less than a third (27,46%) of the businesses surveyed belong to a cluster of businesses. More than a third (42,76%) of the businesses in the area were less than three years of age; and the majority were at least three years old (57,24%), with 20,78 % older than ten years. The year 2020 was the most common year for starting a business in the area. [See Table D.2 Percentage of businesses that are part of a cluster, by LIPC; Table D.9 Percentage distribution of age of business, by LIPC (percentages)].

The majority of businesses were started due to the business owner being unemployed (82,47%) and to meet basic family needs (36,29%). A small proportion (15%) started the business because they liked the activity, had the skills, or wanted to spend more time with their family. [See Table D.11 Reasons for starting up a business, by LIPC (percentages)].

The biggest challenges reported by businesses were too few customers (60,10%), or too much competition (57,84%). Less than one-fifth (16,44%) had to close their business for a period of time, with a few reporting closing due to loadshedding (0,82%) or COVID-19 (6,39%). (See Table D.16 Difficulties in selling goods and services, by LIPC).

The most prevalent communication facility was the use of a cellular telephone (83,09%). WhatsApp was the most common social media tool used by businesses, with 32,89% using WhatsApp to communicate with customers, followed by Facebook, used by 24,95% of businesses. [See Table D.18 Services available to business (telephone and toilet facilities), by LIPC (percentages), 2022; Table D.19 Social media presence, by LIPC, 2022].

Informality and readiness to formalise

Readiness to formalise can be assessed by determining a business's state of informality, based on key indicators of formality including firm size, business registration, regular and accurate management of accounts, fixity of workplace, access to credit, tax compliance, and employees registered for social security benefits (Benjamin and Mbaye, 2012; Mbaye and Gueye, 2020; Petersen et al, 2024). The indicator framework in Table 3.2 is based on a bottom-up understanding of informality as a multidimensional rather than a binary construct defined by business registration. This is in line with the approach of the International Labour Organization. For instance, a business that is registered could still be defined by the owner as informal, based on business infrastructure, compliance beyond business registration, firm size and business management capabilities.

Table 3.2: Indicator framework for measuring formalisation capability

Dimension	Category	Indicator	Description
Compliance with regulatory frameworks	Registration status	Registered formal business	The business is registered with the relevant authority. In South Africa, this is the Companies and Intellectual Property Commission (CIPC).
		Business permit or licence	The business is registered with the local municipality and has obtained a business permit or licence to operate.
	Taxation	Registered for company tax	The business is registered for tax. In South Africa, tax registration is through the South African Revenue Service (SARS).
	Employee benefit	Provide employee benefit	All or some employees are registered for social benefits such as through the Unemployment Insurance Fund (UIF), pension fund, and medical aid.
Financial management	Maintenance of financial statements	Business bank account	The business has a bank account. It does not have to be a business account considering the relatively high monthly costs.
		Maintains regular accounts	The business maintains regular, accurate accounts and financial statements. It has certified statements, annual accounts, and/or a registry of revenue or expenditure.
	Access to external finance	Received external finance	The business has received a bank or microfinance loan within the last five years. This includes the range of finance options available to businesses: commercial banks or other private sector organisations, government and NGOs. It excludes financial support from informal sources such as friends and family.
Infrastructure	Access to business premises	Fixed premises	The business operates from fixed premises rather than the operator's home or a public space used as a working premises or being mobile.
Business growth	Firm size/employing	Firm size	The size of the business, with fewer than five employees being characteristic of informal enterprises. This can be further broken down: own-account workers, nano enterprises with two to three employees, and micro enterprises are those with four to five employees.
		Employing informally	All or some employees are unpaid and/or hired on a part-time basis.
		Employing full-time	All or some employees are hired on a full-time basis.
	Business expansion	Changed business structure	The business has sold, closed, or outsourced parts of the business.
		Employed full-time manager	The business hired someone to manage the business. The business is therefore managed by an employee other than the business owner.
		New branches	The business established new branches in other geographical areas, typically within the country.

Source: Petersen et al, 2024, adapted from Mustapha et al, 2022, Petersen et al, 2023 and Mbaye and Gueye, 2020.

A very small proportion (4,95%) of the businesses were registered with 1,13% registering in the survey period (2021–22). However, based on the indicators of informality, none met the criteria to be classified as formal businesses and only one was classified as semi-formal. The majority of the businesses met the informality criteria for 13 of the 14 indicators, meaning that 97,73% were totally informal. [See Table D.23 Business Evolution between 2021 and 2022 (percentages)].

Between 2021 and 2022, a small proportion of Philippi's informal businesses started employing staff on a full-time (13,30%) or part-time (17,63%) basis, but only 1% of the businesses registered employees for benefits such as unemployment insurance or health insurance. About 5% registered for tax and with the local municipality. The businesses reported improved financial management with one-fifth (20,00%) opening a bank account and 6,60% starting to keep regular, accurate accounts and financial statements.

Access to basic infrastructure and services was poor. A quarter (25,57%) had no access to piped water and 30,72% accessed a shared tap more than 200 metres from the business. More than a third had no access to electricity (35,46%), and a few (5,36%) accessed electricity unpaid or used a generator or solar power (1,03%). Almost half (44,23%) did not have access to a toilet facility. [See Table D.17 Services available to business, by LIPC (frequencies – % of total), 2022; Table D.18 Services available to business (telephone and toilet facilities) by LIPC (percentages), 2022].

Employment, value added and productivity in the Philippi study area

The businesses in the study area employed 1 717 persons in 2022, an average of 1,79 employees per business. The proportion of employees that had finished school was 29,70%. Almost half (48,87%) of the informal sector business owners had a school leaving certificate (matric), or an equivalent. About a third (29,18%) did not complete primary school. There were slightly more female-owned businesses (51,08%), and female-owned businesses dominated Food services (57,76%) and Wearing apparel and homeware (58,26%).

The typical informal sector entrepreneur in the Philippi study area was an isiXhosa-speaking (90,82 %) Black African (98,56%) South African citizen (83,61%) between the ages of 36 and 40 years (37,81%). About a quarter (25,72%) of the businesses were youth-owned, with owners aged from 17 to 36 years. Most spoke English as a second language (84,12%). [See Table D.3 Number of employees and (mean) average, by LIPC (2022); Table D.54 Education levels of employers, by LIPC (percentages); Table D.55 Employees who completed schooling, by LIPC; Table D.20 Owner's nationality and citizenship, ethnicity, gender, and age, by LIPC (percentages), 2022; Table D.22 Languages spoken at work, by LIPC (percentages), 2022]

A small proportion (8,87%) of the business owners had skills developed within the formal sector. About a third (29,36%) of employees obtained skills by learning to use new equipment or raw materials; other skills were developed by employees through colleagues (17,06%) or employers that encouraged employees to solve problems (19,71%). Many employees learnt new skills through copying large formal businesses (18,74%). [See Table D.56 Formal sources of skills development, by LIPC (frequencies and percentages); Table D.58 Informal sources of skills development by LIPC (percentages)].

Most (79,9%) of the informal sector enterprises in the Philippi study area generated a turnover of R36 000 or less in 2022 with most reporting annual earnings between R9 001 and R18 000. That means that the gross monthly earnings for most businesses were between R750 and R1 500. [See Table D.7 Gross earnings, by LIPC 2021 and 2022].

Indicators of informal sector business innovation

Product innovation

The majority of innovation activity in all businesses (including informal sector businesses) occurs as a result of day-to-day activities within the business. In Philippi the most prevalent innovation mode was from employees 'learning by using' (96,50 %), followed by doing everyday working tasks including working with new tools, machinery and equipment (79,0%) and technology (51,96%), training staff (50,00%), learning on-the-job (23,62%) and informal experimentation leading to unexpected discoveries (38,39%). Imitating the products of formal businesses formed 46,13% of innovation activity. Interacting with other businesses and suppliers (51,40%) and search activities (40,78%) were also prevalent innovation activities. Appealing to technical and specialised STI knowledge from universities, research organisations and colleges were less prevalent learning activities (12,63%).

Most businesses stated that the source of knowledge for innovation was that it was 'common knowledge' (38,42%). A small proportion (9,59%) used traditional knowledge. Other common sources of knowledge for innovation by the business unit were the adoption of methods originally developed by other businesses or organisations (17,89%), working with other businesses and organisations (15,84%) or mainly by the business itself (15,54%). [See Table D.30 Product innovation creator, by LIPC (frequencies)].

To benefit from their introduction, the novelty of innovations depends, firstly, on their exposure to customers or businesses in the local region (for example, the street in which trade takes place). While very few innovations were new to the world (0,29%), some were reported to be new to the country (14,29%), several were new to the local area (41,7%) or new to the industry (43,7%) and business (58,6%). [See Table D.32 Novelty level of product innovations, by LIPC (frequencies)].

Process innovation

The proportion of businesses that implemented new processes was 33,78%. Of these process innovations, 81,90% were marketing innovations and 61,66% were organisational innovations. [See Table D.36 Process innovation rate, by LIPC; Table D.35 Percentage of process innovators that have marketing/organisational innovation, by LIPC].

As with product innovations, most businesses stated that the source of knowledge for process innovation was that it was 'common knowledge' (39,48%). Other major sources of knowledge for process innovation were the business unit, either by working with (15,85%) or adapting methods originally developed by other businesses or organisations (15,85%), or mainly by the business itself (18,73%). [See Table D.36 Process innovation creator, by LIPC (frequencies)].

Incomplete innovation

A sizable proportion of innovative informal sector businesses had innovation activities that were ongoing or had been abandoned within the two-year reference period. Incomplete product innovation was 60,74% and incomplete process innovation 55,05%. [See Table D.38 Incomplete innovation (abandoned, ongoing), by LIPC].

Innovation barriers

The following barriers to innovation had a medium to high effect on the innovation activities of more than 20% of businesses: high crime (53,13%), lack of access to modern technology (7,22%), protest action and crises inside the community (21,87%) and the high cost of ensuring quality and complying with national standards (21,87%). Other barriers that affected innovation activities for more than a year related to access to technology, including rapid changes in technology (19,78%), the cost of acquiring modern technologies and tools (18,62%), and the high cost of imported modern equipment (17,79%). (See the tables in D.2.5 Barriers to innovation).

Access to finance, 'red tape' and access to suppliers were reported as medium to high barriers by a smaller proportion of businesses. Barriers included difficulty in getting loans (for innovation) from commercial banks (17,76%), unwillingness on the part of commercial banks and other financial or credit institutions to fund businesses with low turnover (11,92%), unavailability of funding from family or friends (15,63%), red tape in registering innovations (e.g., patents, copyrights) (16,62%), and distance from sources of raw materials (17,26%).

Most businesses surveyed reported the following barriers as having no to low effect on their innovation activities: poor interaction between businesses and knowledge institutions (83,88%), unwillingness of competitors to share information and knowledge (88,89%), lack of business clustering (90,81%), fierce competition in the industry (90,19%), unwillingness of competitors to work together (93,50%), distance from the market (85,48%), poor access to broadband/internet (87,50%), lack of access to basic services (88,22%), the business owner does not see the need to innovate (90,63%), the business owner does not like change (92,90%), high employee turnover (91,26%), high cost of training of workers (84,76%), poor/irregular training (91,87%), lack of people who can manage workers adequately (93,13%), and frequent changes in public policies and government (93,88%).

Technological capability for innovation

Enabling activities for innovation within the informal sector were mostly from bringing in tools, machinery and equipment (28,14%) and sourcing new suppliers of raw materials and tools (22,81%). Changing or upgrading tools and equipment (17,95%), bringing in internet facilities and other devices (17,63%), making changes to buildings or infrastructure (16,70%), and bringing in 'know-how' or other types of knowledge (16,17%) were other activities geared to developing technological capability. [See Table D.60 New knowledge, raw materials and tools and changes to infrastructure (percentages)].

The most prevalent modes of innovation were learning by using (67,9%) and interacting (63,4%), followed by learning by doing (46,2%) and searching (24,6%). Less than a fifth (18,7%) used imitating and STI modes. [See Table D.27: Innovation mode, by LIPC (percentages)].

Sources of information, knowledge flows and collaboration

Informal sector businesses collaborate to access information (45,36%) or to sell more goods (47,63%), potentially to access new markets (10,21%) and find new ways to get goods and services to customers (24,02%). Other reasons for collaborating were to access critical expertise (8,66%), experimentation (11,03%) and sharing the cost of developing new goods or services or processes (17,84%). [See Table D.62 Reasons for collaborating, by LIPC (percentages)].

Although the majority of businesses did not interact within their own business (74,97%) or other businesses in their cluster (70,63%), 7,55% reported interacting internally and 7,45% with other businesses in their cluster at least once a month on average. Similarly, most businesses did not interact with suppliers (66,60%) between 2021 and 2022, but 18,0% interacted at least once a month with suppliers. Less than half of the businesses (40,60%) interacted with their competitors between 2021 and 2022. [See Table D.63 Strength of interaction with knowledge sources (internal, clusters), by LIPC (frequencies); Table D.65 Strength of interaction with knowledge sources (suppliers), by LIPC (frequencies); Table D.69 Strength of interaction with knowledge sources (competitors), by LIPC (frequencies)].

On average, the most frequent interactions occurred between businesses and customers (61,89%), with 45,48% of businesses interacting with customers at least once a month, and only 38,11% reporting no interaction with customers over the two-year reference period. [See Table D.67 Strength of interaction with knowledge sources (customers), by LIPC (frequencies)].

Interaction with actors outside the production value chain was even less frequent, with the bulk of businesses reporting no interaction with NGOs (86,25%), research organisations (88,10%), higher education institutions and staff (87,63%) or TVET and other technical colleges (88,28%). There was also little interaction with printed or published matter (86,40% reported no interaction), community-based organisations or groups (84,98%) or trade/professional associations (88,29%). However, more than a quarter of the businesses (26,25%) reported interaction with indigenous knowledge practitioners at least once or twice every six months. [See Table D.71 Strength of interaction with knowledge sources (NGOs), by LIPC (frequencies); Table D.73 Strength of interaction with knowledge sources (research organisations), by LIPC (frequencies); Table D.77 Strength of interaction with knowledge sources (universities), by LIPC (frequencies); Table D.83 Strength of interaction with knowledge sources (community-based organisations), by LIPC (frequencies); Table D.85 Strength of interaction with knowledge sources (trade associations), by LIPC (frequencies); Table D.81 Strength of interaction with knowledge sources (IKS), by LIPC (frequencies)].

Most businesses did not interact with government departments (87,17%) and extension workers (88,37%). Few received support through government programmes for training (6,08%), access to equipment or facilities (0,72%), access to ICT infrastructure (0,21%), support for marketing (11,34%), SEDA incubation programme (0,31%), or other incubation or mentoring (0,62%). [See Table D.75 Strength of interaction with knowledge sources (government), by LIPC (frequencies)].

The majority (92,68%) of the businesses reported receiving no financial support in 2021 and 2022. Around a third (31,20%) interacted with family and friends with regard to loans. Only 13,17% of the businesses reported accessing banks, 12,03% interacted with angel investors or venture capital organisations, and 19,27% interacted with microlenders (loan sharks) and stokvels. [See Table D.87 Main sources of business funding, by LIPC (frequencies); Table D.91 Strength of interaction with funding sources (venture capital organisations), by LIPC (frequencies); Table D.93 Strength of interaction with funding sources (stokvels and loan sharks), by LIPC (frequencies); Table D.95 Strength of interaction with funding sources (friends and family), by LIPC (frequencies)].

Marketing

The primary means of marketing businesses was through word-of-mouth (68,04%) or telling family and friends (55,77%). Using the internet (12,89%) was a less prevalent marketing strategy, along with the use of newer and bigger signs (24,02%), and moving the business closer to customers (35,88%). [See Table D.101 Marketing strategies, by LIPC (percentages)].

Intellectual property protection

Informal sector business owners are aware of the value of the intellectual property (IP) that they construct. However, strategies involving devices such as patents, which are common in R&D performing business in the formal biotech industry, for example, are not appropriate to the informal context. Close to a third (31,51%) of the businesses employed strategies to protect IP. Of these 31,74% used division of duties, 31,98% used secrecy, 30,19% documented IP in diaries, 25,73% made designs too difficult to copy, 29,56% selectively shared information with employees, and 29,09% retained skilled employees in order to protect IP. Few business owners (9,74%) were aware of IP protection laws. The majority (97,71%) did not get IP-related support, but for those that did, trade associations played a vital role (1,56%). [See Table D.110 Awareness of IP legislation and sources of support for IP protection, by LIPC; Table D.111 IP protection mechanisms of businesses, by LIPC; Table D.112 IP protection mechanisms of businesses that do protect IP, by LIPC].

4. GUIDE TO THE DATA TABLES

The accompanying data tables for this report (labelled Table D.1 – D.112) are available for download in MS Excel format: https://hsrc.ac.za/about-cestii/measuring-innovation-capacity/innovation-in-the-south-african-informal-sector-survey/.

Data table categories

- D.1 Business characteristics
- D.1.1 General business characteristics
- D.1.2 Business infrastructure
- D.1.3 Demographics of enterprise owners and employees
- D.1.4 Business evolution
- D.2 General characteristics of innovation
- D.2.1 Basic description of innovation
- D.2.2 Product innovation (new products, significantly improved products)
- D.2.3 Process innovation
- D.2.4 Incomplete innovation
- D.2.5 Barriers to innovation
- D.3 Education and training of employers/employees
- D.3.1 Education levels
- D.3.2 Training sources
- D.4 Technological capability for innovation
- D.5 Sources of information, knowledge flows and collaboration
- D.5.1 Knowledge sources and innovation intermediaries
- D.5.2 Funding sources
- D.5.3 Production value chain
- D.6 Innovation outcomes
- D.7 IP protection

Data processing and analysis

This section provides detailed information on the data tables including the specific survey questions, and the data processing and analysis procedures. The survey questions can be found in the Innovation in the Informal Sector Survey instrument below.

Table name	Question number and short description	Calculations	Additional comments/ cleaning editing/issues
SECTION 1. Business characteristics			
D.1.1 General business characteristics			
Number of enterprises, by LIPC			
Percentage of businesses that are part of a cluster, by LIPC	B38.1 Does your business belong to a group of other businesses doing the same work as your business?		
Number of employees and (mean) average employee size, by LIPC (2022)	B49.1 How many people were working in the business in 2022?		Outliers were removed from the Female employees variable (2022) and the Male employees variable (2022).
Number of employees and (mean) average employee size, by LIPC (2021)	B50.1 How many people were working in the business in 2021?		As above
Percentage of female employees, by LIPC (2022)		Female employees / total number of employees * 100	
Turnover, by LIPC (2022)	B57. Approximately how much money did your business make from selling your good or service during 2022 (South African rands)		
Turnover, by LIPC (2021)	B58. Approximately how much money did your business make from selling your good or service during 2021 (South African rands)		
Frequency distribution of age of business, by LIPC	B3.3 What year was the business started? Enter year only (e.g. 2023)		
Reasons for starting up business, by LIPC	B4. What was the main reason you started in this business?		
Times of operation by LIPC	B3.4 When are the operating hours of this site?		
Location of business, by LIPC	B1.6 Business location		
Difficulties in selling goods and services, by LIPC	B5. Which difficulties are you facing in selling your goods/services?		
Services available to business (water, telephone and toilet facilities), by LIPC	B52. Infrastructure and service providers		
Social media access, by LIPC	B55. Do you use the following to market your business? • Facebook • WhatsApp • Twitter • Business website ("Google") • Instagram • TikTok • Other (Specify)		

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Table name	Question number and short description	Calculations	Additional comments/ cleaning editing/issues
Owner's nationality and citizenship, ethnicity, gender, and age, by LIPC	B42 In which country was the owner born?		
Languages spoken at work, by LIPC	B46 Which language do you speak most often in the workplace?		
D.1.4 Business evolution			
Types of demographic events	B61.1 Start employing people (part-time or unpaid)? B61.2 Become registered with CIPC - Companies and Intellectual Property Commission B61.3 Become registered for tax with SARS South African Revenue Service? B61.4 Move to fixed premises? B61.5 Start employing full-time employee(s)? B61.6 Sell, close or outsource parts of your business? B61.7 Start keeping regular accurate accounts and financial statements? B61.8 Open a business bank account? B61.9 Get a person to manage the business other than the owner? B61.10 Establish new branches in other areas? B61.11 Receive a bank loan or micro finance? B61.12 Registered employees for benefits like UIF, pension fund or health insurance? B61.13 Become registered with the local municipality (business permit or licence)?		
SECTION 2. General characteristics of innovation			
D.2.1 Basic description of innovation			
Innovation rate, by LIPC	Enterprises with either product or process innovations put to use within the reference period	Calculated innovation rate: successful innovators / all enterprises *100	Checked and corrected consistency across the innovation variables. If 'yes' to any of the options in 'B6 During the last two years (2021 to 2022), did your business do anything differently from the way it always does?' then 'B8 Did you answer No to all of the above?' should indicate innovation activity. Similarly, if 'no' to any of the questions in B6 then B8 should indicate no innovation activity.

Continues overleaf...

Table name	Question number and short description	Calculations	Additional comments/ cleaning editing/issues
Innovation intensity, by LIPC	B7.2a How many employees were involved in helping you do things differently? MALES AND B7.2b How many employees were involved in helping you do things differently? FEMALES AND B49.1 How many people were working in the business in 2022?	Calculated variable: innovation intensity = employees involved in innovation/employees in 2022*100 (i.e. as a percentage)	Employees involved in innovation= sum of male and female employees involved in innovation. If missing or zero, and business is innovative, then replaced missing or zero by 1. Innovative employees cannot be greater than the total number of employees.
Innovation mode, by LIPC	DUIIS mode: Learning by doing, using, interacting, imitating and searching; STI mode. Questions: B6. Innovation activities During the last two years (2021 to 2022), did your business do anything differently from the way it always does? B15. Knowledge used: What kind of knowledge did you use to develop these new goods/services? (Select all that apply); B18.3 What kind of knowledge did you use to develop these new methods? (Select all that apply); B35. During the two years (2021 to 2022), did the business engage in any of the following skills development activities?; B36. During the two years (2021 to 2022), how often did you interact with the following as sources of information in your innovation activities?	**Learning-by-doing** (Yes = 1, No=0) (any of the following): B6.1 Bring in tools, machinery and equipment for the purpose of changing what the business produces or how it produces it; B6.2 Bring in internet facilities and other devices to improve how the business does business; B6.3 Look for and use new sources of supply of raw materials and tools that are cheaper and/ or better than old sources of supply; B6.5 Train staff to introduce changes in the goods and services you sell, or how you do business; B6.6 Make changes to buildings/vehicles as well as other infrastructure for better running of the business; B6.8 Change/ upgrade technology (tools & equipment); B6.11 Engage in a formal apprenticeship system (with certification at the end); B6.12 Engage in on-the-job learning usually from a supervisor at work (without certification at the end of the training); B6.13 Encounter "happy accidents" (unexpected discovery) during production; B35.4 Encouraged employees/ apprentices to solve problems on their own; B35.5 Encouraged employees/apprentices to implement their own ideas in running the business; B36.1 Internal sources (a) Sources within your business	

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Table name	Question number and short description	Calculations	Additional comments/ cleaning editing/issues
		Learning-by-using (Yes = 1, No=0) (any of the following): B6.7 Find out if customers are satisfied with the current product; or if the customers are interested in new products or are willing to pay for it; B15.8 Product Innovation – knowledge used – learning while conducting everyday business operations (e.g. customer feedback, and experimentation); B18.3.9 Process Innovation – knowledge used – learning while conducting everyday business operations (e.g. customer feedback, and experimentation); B36. During the two years (2021 to 2022), how often did you interact with the following as sources of information in your innovation activities? B36.2 Market resources (b) Customers	
		Learning-by-interacting (Yes = 1, No=0) (any of the following): B36. During the two years (2021 to 2022), how often did you interact with the following as sources of information in your innovation activities? B36.1 (b) Sources within other businesses connected to your business (i.e. a cluster); B36.2 Market resources (a) Suppliers of tools, equipment, raw materials, components or software (c) Competitors or other businesses in your sector; B36.3 Institutions (a) NGOs (b) Research organisations (e.g. HSRC) (c) Government sources (departments, regulatory bodies and agencies such as Department of Small Business Development, Department of Trade and Industry etc.) (d) University departments, research laboratories, etc.; B36.4 Financial sources (a) Commercial banks, microfinance banks (b) Stokvels, loan sharks (c) Friends and family for loans d) Venture capital organisations, angel	

Continues overleaf...

Table name	Question number and short description	Calculations	Additional comments/ cleaning editing/issues
		investors; B36.5 Training sources (a) University through outreach programs, workshops, diplomas, certificates, etc. (b) TVET colleges and other technical colleges (c) Larger firms through mentorship (d) Organisations that provide other forms of mentorship; B36.6 Support (a) Incubators (b) Service providers (IT support) (c) Extension workers (e.g. from government, university); B36.7 Other sources (d) Graduate students, university lecturers (f) Indigenous knowledge practitioners (g) Informal groups such as religious groups, civil society, community associations, etc. (h) Professional and trade associations (formal or informal); B6.10 Bring in know-how or other types of knowledge from other businesses or organisations	
		Learning-by-searching (Yes = 1, No=0) (any of the following): B6.9 Search for new knowledge from sources such as the internet, searching for popular brands by competitors, consultants; B15.9 Product Innovation – knowledge used – searching for knowledge from information supplied through internet, popular brands; B18.3.10 Process Innovation – knowledge used – searching for knowledge from information supplied through internet, popular brands; B36.7 (e) Business websites, searchable databases, catalogues, brochures, magazines, newspapers	
		Learning-by-imitating (Yes = 1, No=0): B35.3 Learned by trying to understand and imitate/copy goods and services, and business practices (processes) of large formal enterprises	

Continues overleaf...

Table name	Question number and short description	Calculations	Additional comments/ cleaning editing/issues
		STI mode (Yes = 1, No=0) (any of the following): B36. During the two years (2021 to 2022), how often did you interact with the following as sources of information in your innovation activities? B36.3 Institutions (b) Research organisations (e.g. HSRC) (d) University departments, research laboratories, etc.; B36.5 Training sources (a) University through outreach programs, workshops, diplomas, certificates, etc. (b) TVET colleges and other technical colleges B36.7 Other sources (b) Trade/technical publications and scientific journals (d) Graduate students, university lecturers	
Innovation activities triggered by internal/ external influences, by LIPC	Innovation activities triggered by external influences: B6.7 Find out if customers are satisfied with the current product; or if the customers are interested in new products and are willing to pay for it OR B6.8 Change/upgrade technology (tools & equipment) OR B6.9 Search for new knowledge from sources such as the internet, searching for popular brands by competitors, consultants OR B6.10 Bring in know-how or other types of knowledge from other businesses or organisations OR B6.11 Engage in a formal apprenticeship system (with certification at the end)		
	Innovation activities triggered by internal influences: B6.1 Bring in tools, machinery and equipment for the purpose of changing what the business produces or how it produces it OR B6.2 Bring in internet facilities and other devices to improve how the business does business OR B6.3 Look for and use new sources of supply of raw materials and tools that are cheaper and/ or better than old sources		

Continues overleaf...

Table name	Question number and short description	Calculations	Additional comments/ cleaning editing/issues
	of supply OR B6.4 Use indigenous knowledge sources OR B6.5 Train staff to introduce changes in the goods and services you sell, or how you do business OR B6.6 Make changes to buildings/vehicles as well as other infrastructure for better running of the business OR B6.12 Engage in on-the-job learning usually from a supervisor at work (without certification at the end of the training) OR B6.13 Encounter "happy accidents" (unexpected discovery) during production		
D.2.2 Product innovation (new products, significantly improved products)			
Product innovation rate, by LIPC	B9.1 sell goods that you had not sold before OR B9.2 sell goods that have been made better and differ a lot from what they were before OR B9.3 provide services that you have not provided before OR B9.4 provide services that you have been made better and differ a lot from what you provided before	Calculated product innovation rate: successful product innovators / all enterprises *100	
Product innovation creator, by LIPC	B12 Who created the new good or service?		
Novelty level of product innovations, by LIPC	B11 As far as you know, during the two years 2021 to 2022, did your business introduce a good or service that was: 1= new to the world; 2= not new to the world, but a first in South Africa?; 3= not new to the world or South Africa, but a first in the business that you do?; 4= a first in your local area?		
Novelty level of product innovations, by area of origin	B13.1 Did most of these new goods/services come from outside the country?		
D.2.3 Process innovation			
Process innovation rate, by LIPC	B16.1 change the way it made or sold goods/ services OR B16.2 change the way it delivers your goods/services? OR B16.3 bring in new ways of organising your business by introducing record-keeping or accounting methods, or stocktaking OR B16.4 find new ways of letting people know about your business	Calculated process innovation rate: successful process innovators / all enterprises *100	This variable was excluded as it was reported by just one business: B16.5 work with new suppliers (including government suppliers or otherwise)

Continues overleaf...

Table name	Question number and short description	Calculations	Additional comments/ cleaning editing/issues
Percentage of process innovators that have marketing innovation, by LIPC	B16.4 find new ways of letting people know about your business		
Percentage of process innovators that have organisational innovation, by LIPC	B16.3 bring in new ways of organising your business by introducing record-keeping or accounting methods, or stocktaking		
Product innovation creator, by LIPC	B17 Who created these new methods? (Select the most appropriate)		
D.2.4 Incomplete innovation			
Incomplete innovation (abandoned, ongoing), by LIPC	B19.1a New goods/services OR B19.1b New methods (processes)		
D.2.5 Barriers to innovation			
Factors that impede innovation	B20. During the two years (2021 to 2022), how did the following affect your business's new goods, services or methods?		For those factors that are low in frequency, group them together under other (x,y,z, …)
Barrier: Changes in government	Frequent changes in the policies and leadership of government departments		
Barrier: Dysfunctional society	Protest action or crises inside the community OR High levels of crime		
Barrier: Technological constraints	Lack of access to modern technology OR Cost of acquiring modern technologies and tools OR High cost to import modern equipment OR Poor access to broadband/internet OR Rapid changes in technology	Calculated as the mean of the component variables rounded	
Barrier: High compliance costs	High cost of ensuring quality and complying to national standards	Calculated as the mean of the component variables rounded	
Barrier: No innovation funds	Unavailability of funding from family or friends OR Unwillingness on the part of commercial banks and other financial/credit institutions to fund businesses with low turnover	Calculated as the mean of the component variables rounded	
Barrier: Poor competitor linkages	Unwillingness of competitors to work together OR Competitors don't share information and knowledge OR Having too many businesses standalone; and don't come together in clusters	Calculated as the mean of the component variables rounded	

Continues overleaf...

Table name	Question number and short description	Calculations	Additional comments/ cleaning editing/issues
Barrier: Fierce competition	Fierce competition in the industry		
Barrier: Poor knowledge institution linkages	Poor interaction between businesses and knowledge institutions (e.g. NGOS, universities, incubators)	Calculated as the mean of the component variables rounded	
Barrier: Training challenges	High cost of training of workers to acquire new skills on how to use modern technology OR Poor training/irregular training on new tools and ways of doing business	Calculated as the mean of the component variables rounded	
Barrier: Bureaucracy	Red tape in registering innovations (patents, copyrights, etc.) OR Difficulty in getting loans (for innovation) from commercial banks due to business not being registered	Calculated as the mean of the component variables rounded	
Barrier: Employee challenges	High employee turnover (loss of employees to larger business or to formal sector) OR Lack of people who can manage workers	Calculated as the mean of the component variables rounded	
Barrier: Basic infrastructure	Lack of access to basic infrastructure and shared facilities such as good buildings, roads, electricity, potable water, energy, health, toilets	Calculated as the mean of the component variables rounded	
Barrier: Logistical challenges	Distance of business to sources of raw materials OR Distance between where the goods and services are produced and where it is sold	Calculated as the mean of the component variables rounded	
Barrier: "Business as usual"	The owner of the business doesn't see the need to innovate since sales are good and customers loyal OR The owner of the business does not like to change the business adequately	Calculated as the mean of the component variables rounded	

Continues overleaf...

Table name	Question number and short description	Calculations	Additional comments/ cleaning editing/issues
SECTION 3. Education and training of employers/employees			
D.3 Education and training of employers/employees			
D.3.1 Education levels			
Education levels of employers, by LIPC	B47 What is the highest level of education of the owner?		
Levels of educated employees, by LIPC	B49.3 How many of the people working in the business finished school in 2022?		
D.3.2 Training sources			
Formal sources of skills development, by LIPC (frequencies and percentages)	B35.7 Worked with employees to develop skills through formal channels		
Informal sources of skills development, by LIPC (frequencies and percentages)	Embodied, workplace mentorship, imitating formal products, apprenticeship) B35.1 Developed skills from working with new equipment; or from working with new raw materials, at workplace B35.2 Learned skills from formal employment, working closely with supervisors, or other colleagues B35.3 Learned by trying to understand and imitate/ copy goods and services, and business practices (processes) of large formal enterprises		
SECTION 4. Technological capability for innovation			
Bringing in machinery, equipment and specialised tools, by LIPC	B6.1 Bring in tools, machinery and equipment for the purpose of changing what the business produces or how it produces it		
Bringing in internet facilities and other devices, by LIPC	B6.2 Bring in internet facilities and other devices to improve how the business does business		
Cheaper or better suppliers of raw materials and tools, by LIPC	b6.3 Look for and use new sources of supply of raw materials and tools that are cheaper and/or better than old sources of supply		
Bringing in know-how, by LIPC	b6.10 Bring in know-how or other types of knowledge from other businesses or organisations		

Continues overleaf...

Table name	Question number and short description	Calculations	Additional comments/ cleaning editing/issues
Make changes to buildings/ vehicles and other infrastructure, by LIPC	b6.6 Make changes to buildings/vehicles as well as other infrastructure for better running of the business		
Change or upgrade technology, by LIPC	B6.8 Change/upgrade technology (tools & equipment)		
SECTION 5. Sources of information, knowledge flows and collaboration			
Reasons for collaborating, by LIPC (frequencies and percentages)	B37. Why did you work with the collaborators in the previous question? (Select as many as necessary)		
D.5.1 Knowledge sources and innovation intermediaries			
Strength of interaction with knowledge sources, by LIPC (frequencies and percentages)	B36. During the two years (2021 to 2022), how often did you interact with the following as sources of information in your innovation activities?		
D.5.2 Funding sources			
Main sources of business funding, by LIPC (frequencies)	B62.1 Did your business receive financial support? (Yes/No) B62.2 If yes, who did you receive financial support from?		
Strength of interaction with funding sources (banks), by LIPC (frequencies)	B36. During the two years (2021 to 2022), how often did you interact with the following as sources of information in your innovation activities? Financial sources (a) Commercial banks, microfinance banks (b) Stokvels, loan sharks (c) Friends and family for loans (d) Venture capital organisations, angel investors		
D.5.3 Production value chain			
Main customers and their localness, by LIPC	B21. Who are your main customers? B22. Are most of your customers from outside the neighbourhood?		
Main suppliers, by LIPC	B24. Who are your main suppliers?		
Location of main suppliers, localness, by LIPC	B25. Where do you buy most of your supplies?		

Continues overleaf...

Table name	Question number and short description	Calculations	Additional comments/ cleaning editing/issues
Marketing strategies, by LIPC (frequencies and percentages)	B23. How do you attract customers? Do you: (Select all that apply)		
Exporting, by LIPC	B27. EXPORTS: Do you ship part of your goods / services?		
Main competitor characteristics (nationality), by LIPC	B28. Are big businesses or small businesses your main competition?		
Main competitors and their localness by LIPC	B29 How many competitors do you have? B29. How many competitors do you have? (fill in numbers) (a) In this street (b) Province		Replaced two outliers with the mean for the specific LIPC
Competitiveness by LIPC	B31. Compared to your main competitors, your prices are (select only one option): higher, lower OR the same.		Ensured that only those who responded 'higher' for B31 are included in B32 and those who responded 'lower are included in B33. Those who responded NO, are reported as blank/ missing.
Reasons for higher prices than competitors, by LIPC	B32. If you selected 1 in the previous question, why are your prices higher? (Select all that apply)		
Reasons for lower prices than competitors, by LIPC	B33. If your prices are lower, why are your prices lower? (Select all that apply)		
SECTION 6. Innovation outcomes			
Labour productivity of innovators and non-innovators, by LIPC (2021, 2022)	Number of employees, turnover	Calculated labour productivity: annual turnover / total employees * 100	
Number of units of goods/ services sold	B59.1 Approximately how many units of your main goods/services did you sell during 2022?; B59.2 Approximately how many units of your main goods/ services did you sell during 2021?		Deleted zeros if a turnover was reported.
Changes in profitability of innovators and non-innovators, by LIPC	B60. In the last two years, has your profit... increased / decreased / stabilised		

Continues overleaf...

Table name	Question number and short description	Calculations	Additional comments/ cleaning editing/issues
SECTION 7. IP protection			
Awareness of IP legislation and sources of support for IP protection, by LIPC	B65. Did you know that there are laws about the new goods, services or methods you create or invent?		
IP protection mechanisms of businesses, by LIPC	B63. Intellectual Property: Do you protect your new ideas on doing business in any way? (Use the options below to decide)		
IP protection mechanisms of businesses that do protect IP, by LIPC	How do you go about protecting your ideas? B63.1 Semi-formal protection B63.2 Informal protection		Includes businesses that responded 'Yes' to B63. Intellectual Property: Do you protect your new ideas on doing business in any way?

Innovation in the Informal Sector Survey instrument

PART 1: BUSINESS LISTING

B1.1 Interviewer Name		**B1.1.1 Interviewer Surname**	
B1.2 Time and date			
B1.3 Name of enterprise			
B1.4.1 Geo-positional no latitude	° ′ ″ ° ′ ″		
B1.4.2 Geo-positional no longitude	° ′ ″ ° ′ ″		
B1.5 SIC			
B1.6 Business location	**from where does this business operate? Select one option.**		

01 = Within the owner's dwelling/s – with its own space (e.g. a separate room)
02 = Within the owner's dwelling/s – without its own space (e.g. a family room)
03 = In a structure attached to owner's dwelling/s or on the same plot (e.g. a workshop in the back yard)
04 = Within another person's dwelling (e.g. a neighbour's dwelling)
05 = In a non-residential building (e.g. an office block or factory)
06 = From a taxi rank
07 = On a footpath, street or open space
08 = At a market
09 = No fixed location/mobile
10 = At customer's homes or offices
11 = From outside a shopping centre
12 = Other – If OTHER, then provide detail ....

B2. Do you wish to proceed with the Survey?	1 = No 2 = Yes, Now 3 = Yes, Later

B3.1 What is your MAIN economic activity?

01 = Food services
02 = Building services
03 = Haircare and cosmetics
04 = Wearing apparel and homeware
05 = Metalwork
06 = Accommodation
07 = Vehicle repairs and maintenance
08 = Transport services
09 = Creative arts and entertainment services
10 = Traditional healers
11 = Daycare and pre-school education centres
12 = Electronics repairs and maintenance
13 = Business support services
14 = Other products

B3.2 Tell me about your main goods/services?	
B3.3 What year was the business started?	
B3.5 Are you the owner of this business?	Y N
B3.6 Owner's contact number	
B3.7 Alternate number	
B3.8 Owner's email address	
B3.9 Can I take a photo of your business?	Y N
B3.10 Can we use the photo in our research outputs?	Y N

PART 2: INNOVATION SURVEY

BUSINESS INFORMATION

B4. Reason for starting the business *Select all that apply*

What was the main reason you started in this business?

01 = inherited/family tradition
02 = unemployed/have no alternative income source
03 = retrenched from formal business
04 = inadequate income from the other source
05 = I like the activity
06 = the opportunity came up
07 = I have the skills for this business
08 = I have the equipment for this business
09 = allows me to feed my family or send my children to school
10 = only needed a small amount of money to start
11 = unhappiness with previous work
12 = allows me to spend more time with my family
13 = other

B5. Difficulties for selling *Select all that apply*

Which difficulties are you facing in selling your goods/services?

01 = too few customers
02 = too much competition
03 = sales are low in some seasons
04 = protest action, crises inside the community
05 = can't get my goods/services directly to customers easily
06 = lack of funds for marketing
07= other

We now turn to discuss innovation. That is, we want to see if you have made significant changes in your business over the two years 1 January 2021 to 31 December 2022.

INNOVATION

B6. Innovation activities

	During the last two years (2021 to 2022), did your business do anything differently from the way it always does? Did you…	Yes	No
B6.1	Bring in tools, machinery and equipment for the purpose of changing what the business produces or how it produces it	☐	☐
B6.2	Bring in internet facilities and other devices to improve how the business does business	☐	☐
B6.3	Look for and use new sources of supply of raw materials and tools that are cheaper and/or better than old sources of supply	☐	☐
B6.4	Use indigenous knowledge sources (e.g. ancestral family secrets, chronicles, traditions, flashes of insights, amongst others) available to the employees or owner	☐	☐
B6.5	Train staff to introduce changes in the goods and services you sell, or how you do business	☐	☐
B6.6	Make changes to buildings/vehicles as well as other infrastructure for better running of the business	☐	☐
B6.7	Find out if customers are satisfied with the current product; or if the customers are interested in new products or are willing to pay for it	☐	☐
B6.8	Change/upgrade technology (tools & equipment)	☐	☐
B6.9	Search for new knowledge from sources such as the internet, searching for popular brands by competitors, consultants	☐	☐
B6.10	Bring in know-how or other types of knowledge from other businesses or organisations	☐	☐
B6.11	Engage in a formal apprenticeship system (with certification at the end)	☐	☐
B6.12	Engage in on-the-job learning usually from a supervisor at work (without certification at the end of the training)	☐	☐
B6.13	Encounter "happy accidents" (unexpected discovery) during production	☐	☐

IF YOU MARKED NO FOR ALL OF THE OPTIONS IN B6, THEN GO TO B22 (PRODUCTION VALUE CHAIN)

Remember to restrict to only the employees that were actually involved in the changed goods/services or processes.

B7.1 Description of the new goods/services

Describe in 2 sentences any new good/service that you started in the last two years.

....

....

....

....

B7.2 Employees involved in innovation	B7.2a Male	B7.2b Female
How many employees were involved in helping you do things differently?		

B.8 Did you answer No to all of the above? Y N

Use the infographic to explain the differences between new goods and services. Goods are things you can make like clothes, chairs, hair weaves. Services are things like doing people's hair, selling braai meats, clothing, chairs etc.

The next two sections will ask about your goods & services innovation, and process innovation separately. We start with goods & services innovation.

GOODS/SERVICES INNOVATION

B9. Goods/Services Innovation			
	From those new activities that you put into action during 2021 and 2022, does your business now…	**Yes**	**No**
B9.1	**sell goods** that you had not sold before		
B9.2	sell **goods** that have been **made better and differ a lot** from what they were before		
B9.3	**provide services** that you have not provided before		
B9.4	provide **services** that have been **made better and differ a lot** from what you provided before		
B9.5	Did you answer No in all of the above?		

IF YOU MARKED NO FOR ALL OF THE OPTIONS IN B9, THEN GO TO B16 (PROCESS INNOVATION)

B10. Novelty			
	Were any of these new goods/services during the two years (2021 - 2022):	**Yes**	**No**
B10.1	new to the industry your business and other businesses like yours sell to		
B10.2	new to your business but not other business like yours		

B11. As far as you know, during the two years 2021 to 2022, did your business introduce a good or service that was: *Select only one option (the most appropriate)*

01 = new to the world?
02 = not new to the world, but a first in South Africa?
03 = not new to the world or South Africa, but a first in the business that you do?
04 = a first in your local area?

B12. Who created the new good or service? *Select the most appropriate*

01 = Mainly your business
02 = Your business together with other businesses or organizations
03 = Your business by adapting or modifying methods originally developed by other businesses or organizations
04 = Mainly other businesses or organizations
05 = It is common knowledge
06 = Other

B13. Origin of the innovation

B13.1	Did most of these new goods/services come from outside the country?	☐ Yes ☐ No
B13.1(a)	If Yes, which country mainly?	
B13.2	Did most of these new goods/services come from outside the province?	☐ Yes ☐ No
B13.2(a)	If Yes, which province mainly?	

☐ Eastern Cape	☐ Kwazulu Natal	☐ North West
☐ Free State	☐ Limpopo	☐ Northern Cape
☐ Gauteng	☐ Mpumalanga	☐ Western Cape

B14. Share of innovative goods/services – 2021 to 2022

How many units of the new goods/services did you sell during 2022? ☐☐☐☐

B15. Knowledge used

What kind of knowledge did you use to develop these new goods/services? *(Select all that apply)*

01= traditional/family/ancestral knowledge
02 = apprenticeship/on-the-job training
03 = just happened by chance
04 = interacting with other businesses or organisations
05 = learning from what other businesses are doing
06 = experience from previous work
07 = from technical knowledge/processes
08 = learning while conducting everyday business operations (e.g. customer feedback, and experimentation)
09 = searching for knowledge from information supplied through internet, popular brands
10 = from work experience as an employee in formal business

Now we want to know more about things that you have done differently, other than sell new goods/services.

B16. Process innovation

	During the two years 2021 to 2022, did your business:	Yes	No
B16.1	change the way it made or sold goods/services	☐	☐
B16.2	change the way it delivers your goods/services?	☐	☐
B16.3	bring in new ways of organising your business by introducing record-keeping or accounting methods, or stocktaking	☐	☐
B16.4	find new ways of letting people know about your business	☐	☐
B16.5	work with new suppliers (including government suppliers or otherwise)	☐	☐
B16.6	Did you mark No for all of the above	☐	☐

IF YOU MARKED NO FOR ALL OF THE OPTIONS IN B9, THEN GO TO B20 (ABANDONED OR ONGOING INNOVATION)

B17. Degree of openness

Who created these new methods? *(Select the most appropriate)*

01 = Mainly your business
02 = Your business together with other businesses or organizations
03 = Your business by adapting or modifying methods originally developed by other businesses or organizations
04 = Mainly other businesses or organizations
05 = It is common knowledge
06 = Other

B18. Origin of the innovation

B18.1	Did most of these new methods come from outside the country?	☐ Yes ☐ No
B18.1(a)	If Yes, which country mainly?	
B18.2	Did most of these new methods come from outside the province?	☐ Yes ☐ No
B18.2(a)	If Yes, which province mainly?	

☐ Eastern Cape ☐ Kwazulu Natal ☐ North West
☐ Free State ☐ Limpopo ☐ Northern Cape
☐ Gauteng ☐ Mpumalanga ☐ Western Cape

B18.3 What kind of knowledge did you use to develop these new methods?

01 = Traditional/family/ancestral knowledge
02 = Apprenticeship/on-the-job training
03 = Just happened by chance
04 = Interacting with other businesses or organisations
05 = Learning from what other businesses are doing
06 = Experience from previous work in the same industry (formal)
07 = Experience from previous work in the same industry (informal)
08 = From technical knowledge/ processes
09 = Learning while conducting everyday business operations (e.g. customer feedback, and experimentation)
10 = Searching for knowledge from information supplied through internet, popular brands
11 = Experience from previous work in formal business

We also want to ask you about the goods & services innovation or process innovation that you did not complete in the two year period 2021-2022, or that you gave up on.

ABANDONED/ONGOING INNOVATION

B19. Abandoned or ongoing innovation activities

	During the years 2021 and 2022, did your business try something new, but have still not put it to use, or gave up on it?	**Yes**	**No**
B19.1(a)	New goods/services	☐	☐
B19.1(b)	New methods (processes)	☐	☐

B19.2 What kind of knowledge did you use to create these new goods/services? *(select all that apply)*

01 = traditional/family/ancestral knowledge
02 = apprenticeship/on-the-job training
03 = just happened by chance
04 = interacting with other businesses or organisations
05 = learning from what other businesses are doing
06 = experience from previous work in the same industry (formal)
07 = experience from previous work in the same industry (informal)
08 = from technical knowledge/ processes
09 = learning while conducting everyday business operations (e.g. customer feedback and experimentation)
10 = Searching for knowledge from information supplied through internet, popular brands
11 = Experience from previous work in formal business

We would like to know what are the things that stop you from innovating in your business.
Note that these things may not be the same as what stops you from running your everyday business.

B20. During the two years (2021 to 2022), how did the following affect your business's new goods, services or methods?

No effect: Nothing has stopped innovation from taking place
Low: Your innovation was stopped for less than a year
Medium: Stopped for 1-2 years
High: Stopped for more than 2 years

Degrees of Severity

				No effect	Low	Medium	High
B20.1	Political Factors	(a)	Frequent changes in the policies and leadership of government departments	☐	☐	☐	☐
		(b)	Protest action, crises inside the community	☐	☐	☐	☐
B20.2	Economic Factors	(a)	Cost of acquiring modern technologies and tools	☐	☐	☐	☐
		(b)	High cost of ensuring quality and complying to national standards	☐	☐	☐	☐
		(c)	High cost of training of workers to acquire new skills on how to use modern technology	☐	☐	☐	☐
		(d)	Unavailability of funding from family or friends	☐	☐	☐	☐
		(e)	Unwillingness on the part of commercial banks and other financial/credit institutions to fund businesses with low turnover	☐	☐	☐	☐
B20.3	Social Factors	(a)	Unwillingness of competitors to work together	☐	☐	☐	☐
		(b)	Competitors don't share information and knowledge	☐	☐	☐	☐
		(c)	Having too many businesses standalone; and don't come together in clusters	☐	☐	☐	☐
		(d)	Poor interaction between businesses and knowledge institutions (e.g. NGOS, universities, incubators)	☐	☐	☐	☐

No effect: Nothing has stopped innovation from taking place
Low: Your innovation was stopped for less than a year
Medium: Stopped for 1-2 years
High: Stopped for more than 2 years

Degrees of Severity

				No effect	Low	Medium	High
B20.4	Technological Factors	(a)	High cost to import modern equipment	☐	☐	☐	☐
		(b)	Lack of access to modern technology	☐	☐	☐	☐
		(c)	Poor access to broadband/internet	☐	☐	☐	☐
		(d)	Poor training/irregular training on new tools and ways of doing business	☐	☐	☐	☐
		(e)	Rapid changes in technology	☐	☐	☐	☐
B20.5	Legal Factors	(a)	Red tape in registering innovations (patents, copyrights, etc.)	☐	☐	☐	☐
		(b)	Difficulty in getting loans (for innovation) from commercial banks due to business not being registered	☐	☐	☐	☐
B20.6	Environmental Factors	(a)	High employee turnover (loss of employees to larger business or to formal sector)	☐	☐	☐	☐
		(b)	Lack of access to basic infrastructure and shared facilities such as good buildings, roads, electricity, potable water, energy, health, toilets	☐	☐	☐	☐
		(c)	Fierce competition in the industry	☐	☐	☐	☐
		(d)	Distance of business to sources of raw materials	☐	☐	☐	☐
		(e)	Distance between where the goods and services are produced and where it is sold	☐	☐	☐	☐
		(f)	High levels of crime	☐	☐	☐	☐

No effect: Nothing has stopped innovation from taking place
Low: Your innovation was stopped for less than a year
Medium: Stopped for 1-2 years
High: Stopped for more than 2 years

				Degrees of Severity			
				No effect	Low	Medium	High
B20.7	Other Factors	(a)	Lack of people who can manage workers adequately	☐	☐	☐	☐
		(b)	The owner of the business does not like to change the business	☐	☐	☐	☐
		(c)	The owner of the business doesn't see the need to innovate since sales are good and customers loyal	☐	☐	☐	☐

PRODUCTION VALUE CHAIN

B21. Value Chain *(Select all that apply)*

Who are your main **customers?**

01 = Government units
02 = Formal businesses (e.g. Shoprite)
03 = Informal businesses (e.g. traders)
04 = NGOs, etc.
05 = Households
06 = Direct exports to other African countries
07 = Direct exports (excluding African countries)
08 = Selling online
09 = Other

B22. Are most of your customers from outside the neighbourhood? ☐ Yes ☐ No

B23. How do you attract customers? Do you: *(Select all that apply)*

01 = Newer and bigger signs
02 = Tell family, friends, etc. about your business
03 = Word of mouth (people other than yourself telling customers about your business)
04 = Move your business closer to where the customers are
05 = Use the internet or cell phone apps
06 = Other

B24. Suppliers *(Select all that apply)*

Who are your main **suppliers?**

01 = Government units
02 = Formal businesses (e.g. Shoprite)
03 = Informal businesses (e.g. traders)
04 = NGOs, etc.
05 = Households
06 = Direct imports (from African countries)
07 = Direct imports (excluding African countries)
08 = Buying online
09 = Other

B25. Where do you buy most of your supplies?

01 = Locally within the neighbourhood
02 = Within the province
03 = A main city in the province
04 = Within the country
05 = Outside the country

B26. Do you use the internet to find most of your supplies? ☐ Yes ☐ No

B27. EXPORTS: Do you ship part of your goods/services? ☐ Yes ☐ No

COMPETITORS

B28. Are big businesses or small businesses your main competition? ☐ Big formal businesses ☐ Small formal businesses ☐ Informal businesses

B29. How many competitors do you have? *(fill in numbers)*		(a) In this street	(b) Province
B29.1	Formal local businesses		
B29.2	Informal local businesses		

B30. Are your strongest competitors owned by South Africans? ☐ Yes ☐ No

B31. Compared to your main competitors, your prices are: *(Select only one option)*

01 = Higher
02 = Lower
03 = The same

B32. If you selected 1 in the previous question, why are your prices higher? *(Select all that apply)*

01 = Equipment less productive
02 = Not enough customers
03 = Labour costs higher
04 = Higher quality
05 = Goods and services from suppliers more expensive
06 = Other

B33. If your prices are lower, why are your prices lower? *(Select all that apply)*

01 = Labour costs lower
02 = Customers less wealthy
03 = Quality inferior
04 = Goods and services from suppliers cheaper
05 = Other

B34. Origin of goods/services that you sell

Are most of your goods/services made in South Africa? ☐ Yes ☐ No

B34.1 If No, from which country mainly?

SKILLS DEVELOPMENT ACTIVITIES

B35. During the two years (2021 to 2022), did the business engage in any of the following skills development activities?

		Yes	No
B35.1	Developed skills from working with new equipment; or from working with new raw materials, at workplace	☐	☐
B35.2	Learned skills from formal employment, working closely with supervisors, or other colleagues	☐	☐
B35.3	Learned by trying to understand and imitate/copy goods and services, and business practices (processes) of large formal enterprises	☐	☐
B35.4	Encouraged employees/apprentices to solve problems on their own	☐	☐
B35.5	Encouraged employees/apprentices to implement their own ideas in running the business	☐	☐
B35.6	Worked towards meeting quality standards (both local and international)	☐	☐
B35.7	Worked with employees to develop skills through formal channels (e.g., formal college course)	☐	☐
B35.8	Learned skills through an apprenticeship	☐	☐

Innovation involves interacting with information sources, either through interacting (collaborating) with them in business, or through accessing knowledge from them.

INFORMATION SOURCES AND COLLABORATORS

B36. During the two years (2021 to 2022), how often did you interact with the following as sources of information in your innovation activities?

Not at all: Did not interact with the source between 2021-2022
Sometimes: Interacted with the source once or twice every six months
Frequently: Interacted with the source once a month on average
Very frequently: Interacted with more than once a month on average

				Not at all	Sometimes	Frequently	Very frequently
B36.1	Internal sources	(a)	Sources within your business	☐	☐	☐	☐
		(b)	Sources within other businesses connected to your business (i.e. a cluster)	☐	☐	☐	☐
B36.2	Market resources	(a)	Suppliers of tools, equipment, raw materials, components or software	☐	☐	☐	☐
		(b)	Customers	☐	☐	☐	☐
		(c)	Competitors or other businesses in your sector	☐	☐	☐	☐
B36.3	Institutions	(a)	NGOs	☐	☐	☐	☐
		(b)	Research organisations (e.g. HSRC)	☐	☐	☐	☐
		(c)	Government sources (departments, regulatory bodies and agencies such as Department of Small Business Development, Department of Trade and Industry etc.)	☐	☐	☐	☐
		(d)	University departments, research laboratories, etc.	☐	☐	☐	☐
B36.4	Financial sources	(a)	Commercial banks, microfinance banks	☐	☐	☐	☐
		(b)	Stokvels, loan sharks	☐	☐	☐	☐
		(c)	Friends and family for loans	☐	☐	☐	☐

Not at all: Did not interact with the source between 2021-2022
Sometimes: Interacted with the source once or twice every six months
Frequently: Interacted with the source once a month on average
Very frequently: Interacted with more than once a month on average

				Not at all	Sometimes	Frequently	Very frequently
		(d)	Venture capital organisations, angel investors	☐	☐	☐	☐
B36.5	Training sources	(a)	University through outreach programs, workshops, diplomas, certificates, etc.	☐	☐	☐	☐
		(b)	TVET colleges and other technical colleges	☐	☐	☐	☐
		(c)	Larger firms through mentorship	☐	☐	☐	☐
		(d)	Organisations that provide other forms of mentorship	☐	☐	☐	☐
B36.6	Support	(a)	Incubators	☐	☐	☐	☐
		(b)	Service providers (IT support)	☐	☐	☐	☐
		(c)	Extension workers (e.g. from government, university)	☐	☐	☐	☐
B36.7	Other sources	(a)	Trade fairs, exhibitions	☐	☐	☐	☐
		(b)	Trade/technical publications and scientific journals	☐	☐	☐	☐
		(c)	Adverts, billboards, commercials	☐	☐	☐	☐
		(d)	Graduate students, university lecturers	☐	☐	☐	☐
		(e)	Business websites, searchable databases, catalogues, brochures, magazines, newspapers	☐	☐	☐	☐
		(f)	Indigenous knowledge practitioners	☐	☐	☐	☐
		(g)	Informal groups such as religious groups, civil society, community associations, etc.	☐	☐	☐	☐
		(h)	Professional and trade associations (formal or informal)	☐	☐	☐	☐

B37. Why did you work with the collaborators in the previous question? *(Select as many as necessary)*

(a) = Sharing the cost of developing new goods/services/methods
(b) = Accessing information
(c) = Accessing critical expertise/skills
(d) = Experimenting
(e) = To sell more of the good or service
(f) = Accessing new markets
(g) = Find new ways to get goods and services to customers

BUSINESS INFORMATION

B38.1 Does your business belong to a group of other businesses doing the same work as your business? ☐ Yes ☐ No

B38.2 Is your business registered? ☐ Yes ☐ No

B39. Owner's age: What is the owner's age group?

☐ 15-17 ☐ 18-35 ☐ 36-40 ☐ 41-59 ☐ 60+

B40. Owner's gender ☐ Male ☐ Female ☐ Prefer not to say

B41. Owner's ethnic group ☐ Black African ☐ Coloured ☐ Indian/Asian ☐ White ☐ Other

B41.1 If other, specify

B42. Owner's country of birth: In which country was the owner born? ☐ South Africa ☐ Other

B42.1 If other, specify

B43. Owner's citizenship: Is the owner a South African citizen? ☐ Yes ☐ No

B43.1 If No, which country is the country of citizenship?

B44. Number of businesses owned ☐☐☐☐

B45. How many businesses does the owner have in this area? ☐☐☐☐

B46. Workplace Language *(Select up to a maximum of three)*

Which language do you speak most often in your workplace?

☐ English ☐ Afrikaans ☐ isiZulu ☐ isiXhosa ☐ Isindebele ☐ Sepedi
☐ Sesotho ☐ Setswana ☐ Tshivenda ☐ Xitsonga ☐ Siswati ☐ Others

B47. Owner's level of education

What is the highest level of education of the owner?

☐ Primary not completed ☐ Primary, or equivalent ☐ Intermediate (grade 9)/junior/group certification, or equivalent
☐ School leaving certificate (matric), or equivalent ☐ Diploma/certificate ☐ Primary degree ☐ Postgraduate diploma/degree

B48. Owner's work experience

B48.1 Have you worked in a formal business? ☐ Yes ☐ No

B48.2 If yes, specify the type of business

B48.3 Are you currently working in a formal business? ☐ Yes ☐ No

B48.4 If yes, specify the type of business

EMPLOYEES 2022

B49. In 2022

B49.1	How many people were working in the business? ☐☐	**B49.2**	How many of the people working in the business were paid? ☐☐	**B49.3**	How many of the people working in the business finished school? ☐☐
B49.4	How many of the people working in the business were family members? ☐☐	**B49.5**	How many of the people working in the business were female? ☐☐	**B49.6**	How many of the people working in the business were male? ☐☐
B49.7	How many of the people worked in a formal business? ☐☐	**B49.8**	Were more than half of the people working in the business South African? ☐ Yes ☐ No		

EMPLOYEES 2021

B50. In 2021

B50.1	How many people were working in the business? ☐☐	**B50.2**	How many of the people working in the business were paid? ☐☐	**B50.3**	How many of the people working in the business finished school? ☐☐
B50.4	How many of the people working in the business were family members? ☐☐	**B50.5**	How many of the people working in the business were female? ☐☐	**B50.6**	How many of the people working in the business were male? ☐☐
B50.7	How many of the people worked in a formal business? ☐☐	**B50.8**	Were more than half of the people working in the business South African? ☐ Yes ☐ No		

BUSINESS ACTIVITY

B51. Was the business open every month of the year during 2021 - 2022?

- ☐ Yes, business was open every month of the year
- ☐ No, there were months during the year that the business was closed

B51.1. If you answered No, what was the main reason that your business was closed during these months? *(Select all that apply)*

- ☐ Seasonal factors
- ☐ No customers
- ☐ Lack of raw materials
- ☐ Business created during the past 12 months
- ☐ Disruptions due to loadshedding
- ☐ Family reasons (e.g. sick child)
- ☐ Sickness of yourself or staff
- ☐ Lack of funds to buy supplies
- ☐ Due to violence or criminal incident(s)
- ☐ Non-payment of government charges/taxes
- ☐ Other personal reasons than sickness (pregnancy, etc)
- ☐ No one to help during owner's absence
- ☐ Epidemic (e.g. COVID-19)

B52. Infrastructure and service providers *(Select all that apply)*

- ☐ Piped (tap) water in structure
- ☐ Communal standpipe < 200m
- ☐ Electricity in structure (preparid/post-paid meters)
- ☐ Generator / solar
- ☐ Piped (tap) water in yard
- ☐ Other access to water
- ☐ Electricity connected to source and paid for
- ☐ Other electricity access
- ☐ Communal standpipe > 200m
- ☐ No access to piped water
- ☐ Access to electricity (do not pay for)
- ☐ No access to electricity

B53. What kind of toilet facility does the business have? *(Select all that apply)*

- ☐ Flush toilet on site
- ☐ Flush toilet offsite
- ☐ None
- ☐ Other

B54. Where is the nearest telephone that the business can use? *Give only one answer, the main one*

- ☐ Fixed telephone on site
- ☐ Cellular telephone
- ☐ The nearest telephone is a public telephone
- ☐ Other

B55. Do you use the following to market your business? *Mark all that apply.*

B55.1	Facebook	Y N	**B55.2**	WhatsApp	Y N	**B55.3**	Twitter	Y N
B55.4	Business website ("Google")	Y N	**B55.5**	Instagram	Y N	**B55.6**	TikTok	Y N
B55.7	Other (Specify)							

B56. Last month's business gross turnover

B56.1 Approximately how much money did your business make from selling your good or service last month?

R0 - R100	R101 - R350	R351 - R750	R751 - R1 500
R1 501 - R3 000	R3 001 - R6 000	R6 001 - R9 000	R9 001+

B56.2 Is that what you typically earn in a month? Yes No

B56.3 If previous response is No, is that more than usual or less? More Less

2022 Gross earnings
B57. Approximately how much money did your business make from selling your good or service during 2022 (South African Rands)

R0 - R1200	R1201 - R4200	R4201 - R9000	R9001 - R18000
R18001 - R36000	R36001 - R72000	R72001 - R108000	R108001+

2021 Gross earnings
B58. Approximately how much money did your business make from selling your good or service during 2021 (South African Rands)

R0 - R1200	R1201 - R4200	R4201 - R9000	R9001 - R18000
R18001 - R36000	R36001 - R72000	R72001 - R108000	R108001+

B59. Number (approx.) of goods/services in 2021 and 2022

B59.1 Approximately how many units of your main goods/services did you sell during 2022?

B59.2 Approximately how many units of your main goods/services did you sell during 2021?

Profit
B60. In the last two years, has your profit... Increased Decreased Stabilized

B61. Business evolution *(Select all that apply)*

During the two years 2021 to 2022, did your business

- Start employing people (part-time or unpaid)?
- Become registered for tax with SARS - South African Revenue Service?
- Start employing full-time employee(s)?
- Start keeping regular accurate accounts and financial statements?
- Get a person to manage the business other than the owner?
- Receive a bank loan or microfinance?
- Become registered with the local municipality (business permit or licence)?
- Become registered with CIPC - Companies and Intellectual Property Commission
- Moved to fixed premises?
- Sell, close or outsourced parts of your business
- Open a business bank account?
- Establish new branches in other areas?
- Registered employees for benefits like UIF, pension fund or health insurance?

B62. Financial Support

B62.1 Did your business receive financial support? Yes No

B62.2 If yes, who did you receive financial support from? Government Private Sector NGO Family/friends Any other source

(Specify other source)

B62.3	Did your business receive other support through government programmes? ☐ Training support or internships ☐ Access to equipment or facilities ☐ Access to ICT infrastructure ☐ Support for marketing ☐ SEDA incubation programme ☐ Other incubation or mentoring ☐ Other
B62.4	Specify other support

B63. Intellectual Property

Do you protect your new ideas on doing business in any way? (Use the options below to decide) ☐ Yes ☐ No

How do you go about protecting your ideas?

				Yes	No
B63.1	Semi-formal protection	(a)	Keeping the "know how" secret from competitors by refusing to disclose technical information	☐	☐
		(b)	Documentation in diaries and other records	☐	☐
		(c)	Making the design of the good or service too difficult to copy	☐	☐
				Yes	**No**
B63.2	Informal protection	(a)	Division of duties (any one employee does not know the whole business)	☐	☐
		(b)	Selective sharing of technical information with employees/apprentices/competitors/customers	☐	☐
		(c)	Retaining employees/apprentices with great skills and knowledge by all means	☐	☐

B64. Are you receiving support in protecting your business ideas/inventions?

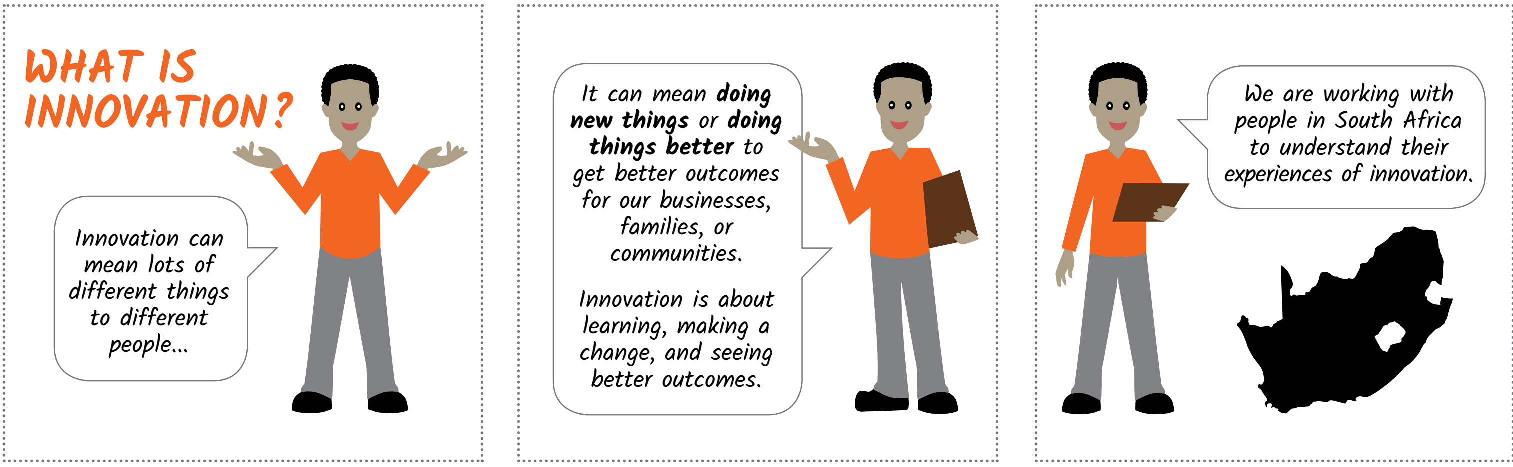
☐ Trade Association ☐ Local Government ☐ National Government ☐ Other ☐ No support

B64.1 Specify other support

B65. Did you know that there are laws about the new goods, services or methods you create or invent? ☐ Yes ☐ No

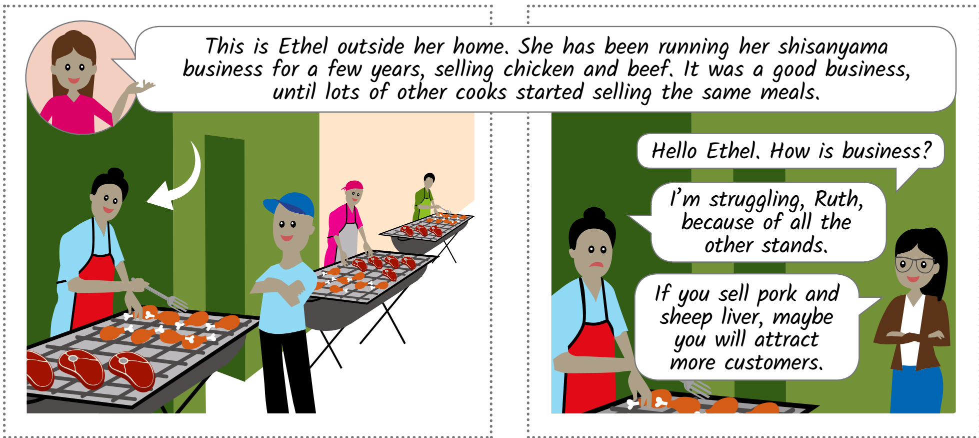
B66. Do we have your consent to contact you if you are selected for a follow-up interview or focus group or workshop? ☐ Yes ☐ No

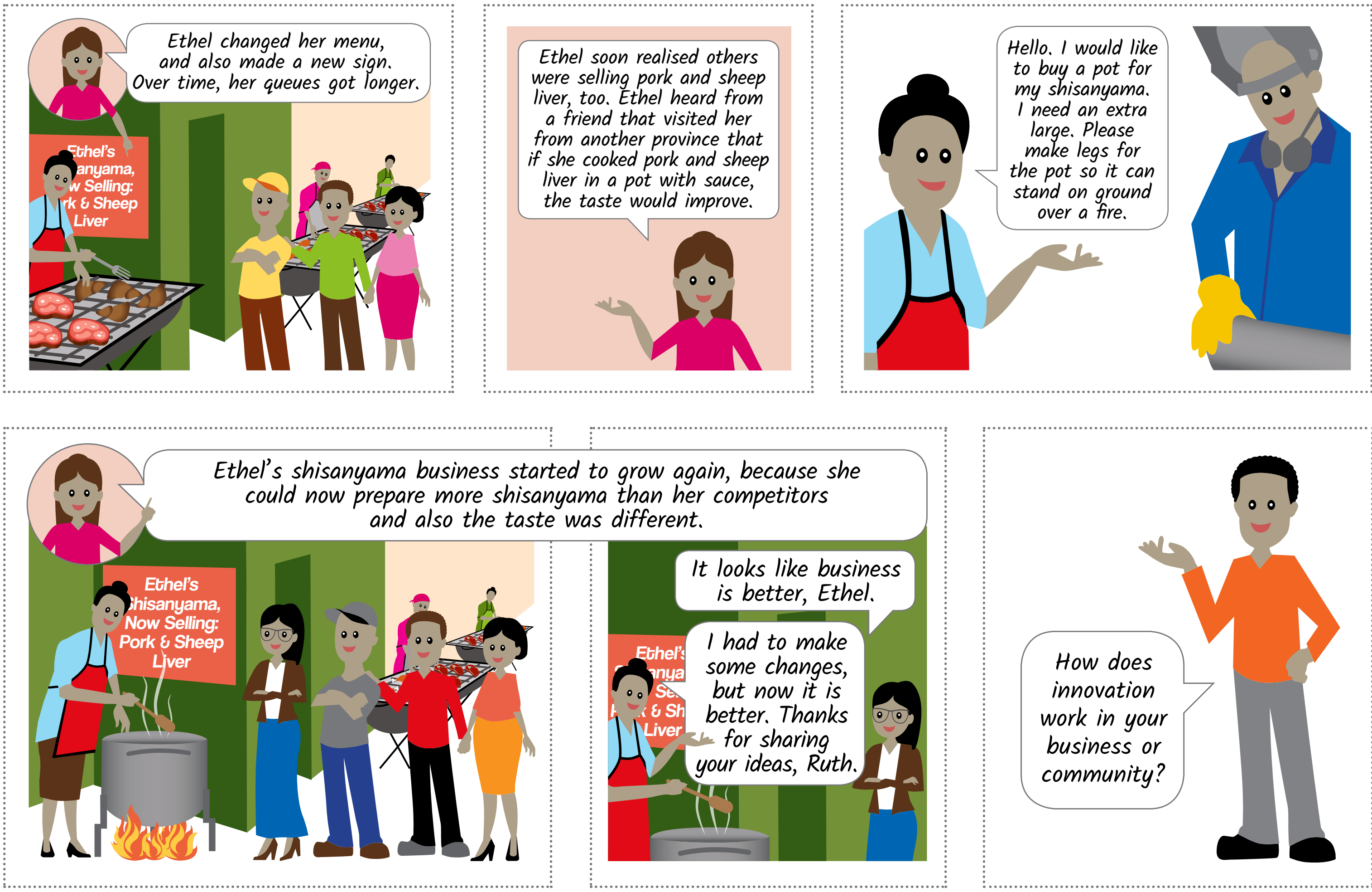
Thank you for your participation
in the Informal Sector Innovation Questionnaire!



SOME EXAMPLES OF INNOVATION

1. New or changed goods or services ✓
2. New or changed processes for producing goods or services ✓
3. New ways for marketing goods or services ✓
4. Changes to how we set up our businesses or work places ✓





Source: Adapted from CeSTII (2021)

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6. APPENDICES

Appendix 1: Alternative industry classification to Stats SA's SIC 7, based on the LIPS framework

Category	Title	SIC classes
A	**FOOD SERVICES**	
A.1	**Animal and fresh produce production**	
	Animal production: Raising of sheep and goats	1440
	Animal production: Raising of swine/pigs	1450
	Fruit and vegetable growing	1130
	Mixed farming	1500
A.2	**Bakery products**	
	Manufacture and retail of cakes and other bakery products	10710
A.3	**Wholesale and retail of food, beverages and tobacco**	
	Wholesale and retail of live animals, meats, eggs	47710
	Retail of fruit and vegetables	47710
	Liquor retail	47710
	Spazas, mobile tuckshops and house shops	47710
	Traditional cigarette seller	47790
A.4	**Food and beverage service activities**	
	Events catering and catering equipment rental	56210
	Fast food cafes/take-aways	56101
	Other restaurant and mobile food service activities	56109
	Taverns	56300
A.5	**Other food service and related activities**	
	Cooling services	77100
	Rental of gas stoves (household), hubbly bubblies	77290
B	**BUILDING SERVICES**	
B.1	**Construction of buildings**	
	Construction of buildings	41000
	Bricklaying	43909
	Roofing	43909
	Construction of prefab buildings (mainly of wood) and mobile homes	16220
B.2	**Electrical, plumbing and other construction installation activities**	
	Electrician	43210
	Plumbing and air-conditioning installation	43220

Continues overleaf...

Category	Title	SIC classes
B.3	**Building completion and finishing**	
	Plastering and painting	43301
	Carpentry	43302
	Tiling	43309
	Ceiling fitting, tiling,	43309
	Glazing and door fitting	43309
	Fencing construction	43309
B.4	**Other building services and related activities**	
	Boiler maker, welding	43909
	Manufacture of clay building materials	23920
	Retail sales of building materials	47790
	Transport of prefab buildings (mainly of wood), mobile homes, building material	49230
C	HAIRCARE AND COSMETICS	
C.1	**Hairdressing and beauty treatment**	
	Hairdressing	96021
	Beauty treatment	96022
C.2	**Retail of hairstyling articles**	
	Wig selling	47790
C.3	**Retail of cosmetics and perfume**	
	Perfume sales	47790
	Cosmetics sales	47790
D	WEARING APPAREL AND HOMEWARE	
D.1	**Manufacture and retail sale of clothing and accessories**	
	Dressmaking/tailors	14100
	Clothing selling	47720
	Fashion design	74100
	Traditional attire and beads selling	47720
	Bags, caps selling	47720
	Retail in jewellery and related accessories	47790
D.2	**Manufacture, repair and retail sale of footwear**	
	Shoemakers	15200
	Shoe repairs	95230
	Shoe sellers	47720
D.3	**Manufacture, repair and retail of homeware**	
	Upholstery repairing	95240
	Retail sale of linen and fabric	47720
	Retail of rugs, towels, bathroom accessories, etc.	47790
	Manufacture of traditional rugs/carpets	13930
	Manufacture of made-up furnishing articles: curtains, blinds, bedspreads, etc.	13921
	Manufacture of pottery and other porcelain and ceramic products	23930

Continues overleaf...

Category	Title	SIC classes
E	VEHICLE REPAIRS AND MAINTENANCE	
E.1	**Maintenance and repair of motor vehicles**	
	Mechanical repairs and maintenance	45200
	Panel beating services	45200
	Auto electrical services	45200
	Repairs of tyres	45200
	Repair of vehicle canopies	45200
	Car washing services	45200
E.2	**Sale of motor vehicle parts and accessories**	
	Retail of tyres	45300
	Retail of car seat covers	45300
F	ACCOMMODATION	
	Landlord (long-term rental)	68100
	Other accommodation	55900
G	METALWORK	
G.1	**Manufacture and repair of fabricated metal products**	
	Fencing, welding and other steel work	33110
	Installation of motorised gates	43210
	Manufacture of metal containers	25991
	Manufacture of windows and other structural metal products	25119
G.2	**Repair of household appliances**	
	Domestic refrigerator repairing services	95220
G.3	**Recycled materials (metal)**	
	Recycling (metal)	46691
H	TRANSPORT SERVICES	
H.1	**Passenger transportation**	
	School bus transportation	49223
	Meter taxi	49222
	Other road transport (passenger)	49229
H.2	**Leasing and renting of motor vehicles and road transport equipment**	
	Leasing of motor vehicles	77100
	Leasing and renting of road transport equipment	77301
I	CREATIVE ARTS AND ENTERTAINMENT SERVICES	
I.1	**Creative Arts**	
	Visual artists and other creative arts activities	90000
	Specialised design activities	74100
	Photography services	74200
I.2	**Entertainment services**	
	Entertainment (DJ, music)	90000
	Sound engineering	59200
I.3	**Retail and rental of entertainment equipment and related activities**	
	Retail sale of music and video recordings	47790
	Renting of sound equipment	77309

Continues overleaf...

Category	Title	SIC classes
J	**TRADITIONAL HEALERS**	
	Traditional healing	86900
	Herbal/traditional medicine retailing	47790
K	**DAYCARE AND PRE-SCHOOL EDUCATION CENTRES**	
	Daycare and pre-school education centres	88900
L	**ELECTRONICS REPAIRS, MAINTENANCE AND RETAIL**	
	Repair of computers	95110
	Repair, installation and maintenance of television, radio receivers, sound systems	95210
	Repair and maintenance of cellular phones	95120
	Retail of electronics	47790
M	**BUSINESS SUPPORT SERVICES**	
M.1	**Marketing support**	
	Media businesses	73100
M.2	**Financial support**	
	Loan sharks	64920
M.3	**Other business support services and related activities**	
	Internet café	61900
	Photocopying, document preparation, other office support	82190
N	**FURNITURE MANUFACTURING, REPAIRS AND RETAIL**	
	Furniture manufacturing	31000
	Furniture repairs	95240
	Furniture retail	47790
O	**OTHER PRODUCTS**	
O.1	**Home-based industries**	
	Avon/Inuka products selling	47890
	Herbalife/Green World products selling	47890
	Tupperware selling	47890
O.2	**Retail of other products**	
	Wood selling	47790
	Selling airtime	47790
	Retail of electrical household appliances	47790
	Retail of household fuel oil, bottled gas, coal and fuel wood	47790
	Retail of cleaning products	47790
	Retail of health supplements	47790
	Other retail sales (e.g., brooms, mops, children's games and maps)	47790
O.3	**Home maintenance services**	
	Gardening services	81300
O.4	**Funeral and related services**	
	Funeral and related activities	96030
O.5	Other personal services	
	Laundry, washing and (dry-) cleaning of textile- and fur products	96010
	Repair of other personal and household goods (e.g., key cutting)	95290
	Other personal service activities (e.g., security, cleaning)	96090

Continues overleaf...

Category	Title	SIC classes
O.6	**Other education and related services**	
	Other education (e.g., learner license support, driving school)	85490
	Other sports activities (e.g., coaching soccer)	93190
O.7	**Waste management and recycling**	
	Waste picking and recycling	38300
O.8	**Other services**	
	Renting of brush cutting machine, welding equipment	77309
O.9	**Other manufacturing**	
	Soap manufacturing	20230

Source: Authors, based on the 2017–18 IIS survey data and updated based on the 2021–22 IIS survey data

NOTES

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Members of the Philippi fieldwork team. Photo credit: The Safety Lab (2023)

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