

https://dspace.org/

Bam-Msimang, N.Y, The impact of government intervention on promoting small-scale commercial cannabis farmers in South Africa The impact of government intervention on promoting small-scale commercial cannabis farmers in South Africa

Bam-Msimang, Nomamiyandile

2023

University of the Witwatersrand, Johannesburg

https://hdl.handle.net/10539/44388

Bam-Msimang, Nomamiyandile. (2023). Bam-Msimang, N.Y, The impact of government intervention on promoting small-scale commercial cannabis farmers in South Africa The impact of government intervention on promoting small-scale commercial cannabis farmers in South Africa [Master's dissertation, University of the Witwatersrand, Johannesburg]. WireDSpace.

Downloaded from a DSpace repository. https://dspace.org/



UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

The impact of government intervention on promoting small-scale commercial cannabis farmers in South Africa

By

Nomamiyandile Bam-Msimang

2288746

SHORT DISSERTATION

Submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in fulfilment of the requirements for the degree of Master of Business Administration at Business School

Supervisor: Dr Tsele Moloi

Johannesburg

2023

Acknowledgement

This research and my MBA degree would not have been possible without the following individuals, and I am very grateful to them.

Dr Tsele Moloi, my supervisor, was an invaluable resource for me while I worked on my research. The guidance and support you have given me are invaluable. Also, we appreciate you bringing up the point that getting an MBA is no picnic. Your guidance and advice will be always valued by me.

Thanks to the cannabis farmers and policy makers who were kind enough to share their stories with me and take the time out of their hectic schedules to take part in this research. The responses you gave were quite insightful. Forever indebted to you. And lastly, I'd want to express my gratitude to my mother and brother for always being there for me and assuring me that hard work is rewards. You cheered me on no matter how tough things became.

My deepest appreciation also goes out to my loved ones, who have been tremendously supportive during this research. I want to thank you for making the computer apps easier to use and more accessible for my children, Khanya and Azande. Thank you for being so understanding and supportive, my hubby Ivor.

Thank you, to my WBS school mates, co-workers, and managers at Tiger Brands, who rallied behind me when times were tough.

Abstract

This study explored the impact of government interventions aimed at promoting small-scale commercial cannabis farmers in South Africa. A semi-structured interview tool made up of thirteen open-ended questions was used to collect qualitative data from a study group of ten participants. The study group consisted of purposively sampled two policymakers and eight small-scale cannabis farmers. Participants' responses were first recorded after obtaining their consent and afterwards transcribed. The qualitative data was inductively and thematically analysed to generate several main themes and sub-themes. These themes and sub-themes provided a deeper understanding and insights that highlighted the impact of government intervention on promoting small-scale commercial cannabis farmers in South Africa.

The study findings revealed that despite the current government policies such as the Cannabis Master Plan and Phakisa Initiative aimed at deregulating commercial cannabis small-scale farmers still face considerable exclusion from this economic activity. To begin with, most small-scale farmers still face entry barriers that linked to legal, licence compliance and market competitiveness challenges. In addition, commercial cannabis farming has thus far failed to act as a driver for job creation and poverty alleviation in rural areas.

This study found that the main cause of challenges faced by small-scale commercial farmers in this country has much to do the way government interventions are ineffectively implemented by various stakeholders. At most these interventions are marked by low levels of coordination, collaboration, and political will among officials tasked with implementing policies like the Cannabis Master Plan.

Finally, the study made recommendations that can lead to increased effectiveness of government interventions and thus promote small-scale commercial cannabis farming in this country. Examples of these recommendations being conducting more awareness campaigns to sensitise law enforcers and rural cannabis small-scale farmers about commercial cannabis legislative frameworks, efforts to include rural farmers into formal cannabis supply chain and increase market competitiveness and accessibility thereof.

Keywords

Cannabis Commercialisation; Cannabis Tourism; Decriminalisation; Landrace, Cannabis; Legalisation; South Africa's Dagga Belt;

Contents

Acknowledgement ..... **ii**
Abstract ..... **iii**
Keywords ..... Error! Bookmark not defined.
List of Tables ..... **xiii**
List of Figures ..... **xiv**
List of Appendices ..... **xv**
List of Acronyms ..... **xvi**
CHAPTER 1: INTRODUCTION **1**
1.1 Statement of Purpose 1
1.2 Background of Study 1
1.3 Research Problem 3
1.4 Research Objectives 4
1.4.1 Primary Research Objective 4
1.4.2 Secondary Research Objectives 4
1.5 Research Question 4
1.5.1 Primary research questions 4
1.5.2 Secondary research questions 4
1.6 Rationale 5
1.7 Delimitations of Study 5
1.8 Assumptions 5
1.9 Definition of Terms 6
1.10 Literature Review 8
1.10.1 Introduction 8
1.10.2 Background Discussion 9
1.10.2.1 An Overview of Cannabis plants 9
1.10.2.2 Uses and Application of Cannabis 10
1.10.2.3 Commercialisation of Cannabis (Cannabis Industry) 12

1.10.2.4 Smallholder Cannabis Farming in South Africa 14
1.10.2.5 Legality of Cannabis Plants and Products 16
1.10.2.5.1 Criminalisation of Cannabis 16
1.10.2.5.2 Decriminalisation of Cannabis 17
1.10.2.5.3 South Africa's Cannabis Policies and Legislative Frameworks 18
1.10.2.5.4 Regulatory Compliance 20
1.11 Literature Review summary on study objectives 21
1.12 Theoretical and conceptual frameworks 23
1.12.1 Theoretical Framework 23
1.12.2 Conceptual Framework 25
1.13 Conclusion of Literature Review 25
1.14 Research Methodology 25
1.15 Research methods 25
1.15.1 Research Philosophies 25
1.15.2 Ontological and Epistemological Views 26
1.15.3 Philosophical Worldviews 26
1.16 Research Approach 27
1.17 Research procedure and methods 28
1.18 Research Tools 29
1.18.1 Research tools for collecting data and information (s) 29
1.18.2 Research target population and responder selection 29
1.18.3 Selecting or sampling responders from the intended audience 30
1.19 Research data and information analysis 30
1.20 Description of the research respondents 31
1.21 Ethical consideration 31
1.21.1 Ethical consideration 31

1.21.2 Permission to conduct the study. 32
1.21.3 Informed consent 32
1.21.4 Voluntary participation 33
1.21.5 Confidentiality and anonymity 33
1.21.6 Data management 33
1.22 Chapter Outline 33
CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK 34
2.1 Introduction 34
2.2 Theoretical framework 34
2.2.1 Inclusive Policy Making 34
2.2.2 Induced Innovation Theory & the Recursive Model 37
2.2.3 Economies of Scale 39
2.2.4 Sustainable Livelihood Framework (SLF) or Sustainable Livelihood Approach (SLA) 41
2.3 South African Cannabis Master Plan 44
2.3.1 Introduction 44
2.3.2 Objectives of the Cannabis Master Plan 44
2.3.2.1 Pillar 1: Effective Regulatory Systems 45
2.3.2.2 Pillar 2: Sustainable Seed Supply Systems 45
2.3.2.3 Pillar 3: Research Development and Innovation (RDI) 45
2.3.2.4 Pillar 4: Producer Support Systems 46
2.3.2.5 Pillar 5: Market Development 46
2.3.2.6 Pillar 6: Enterprise and Supplier Development 46
2.3.2.7 Pillar 7: Manufacturing and Product Development 47
2.3.2.8 Pillar 8: Education and Training 47
2.3.2.9 Pillar 9: Communication and Awareness 47
2.3.4 Challenges associated with the Cannabis Master Plan 48

2.4 Licencing of Commercial Cannabis Participants in South Africa 49
2.4.1 Introduction 49
2.4.2 SAHPRA Licence for Commercial Cannabis Farmers or Manufacturers 49
2.4.2.1 Date of Audit 49
2.4.2.2 Good Agricultural Practices (GAP) 49
2.4.2.3 Good Manufacturing Practices (GMP) 49
2.4.3 A Critique of SAHPRA's Licence 50
2.5 Conclusion 50
CHAPTER 3: RESEARCH METHODOLOGY **51**
3.1 Introduction 51
3.2 Research Philosophical Worldviews 51
3.3 Probability Sampling Technique 52
3.4 Research Approach 52
3.4.1 Qualitative Research Approach 53
3.4.2 Quantitative Research Approach 53
3.4.3 Mixed Research Approach 53
3.5 Research design 54
3.6 Sampling 55
3.6.1 Research Population & Sample 55
3.6.2 Purpose of Sampling 56
3.6.3 Sampling Techniques 56
3.6.3.1 Non-Probability Sampling Technique 56
3.6.3.2 Sampling Procedure 57
3.7 Data collection 58
3.7.1 Instruments & Techniques 58
3.7.2 Preliminary Interviews 60
3.7.2.1 Purpose of Preliminary Interviews 60

3.7.2.2 Methodology Followed 60
3.7.2.3 Evaluation of Preliminary study 60
3.7.2.4 Consultant's Consideration of Preliminary Study 61
3.8 Data Analysis 61
3.9 Quality Assurance 61
3.10 Ethical Considerations 62
3.11 Limitations of the Study 63
3.11.1. Sampling Technique 63
3.11.2. Resource Constraints 63
3.11.3. Conclusion 63
CHAPTER 4: PRESENTATION AND ANALYSIS OF THE FINDINGS 65
4.1 Introduction 65
4.2 Demographic Analysis 66
4.2.1 Response Rate 66
4.2.2 Age 67
4.2.3 Gender 68
4.2.4 Role 68
4.2.5 Experience 69
4.3 Analysis of Findings 69
4.3.1 PART 1: Findings from Cannabis Small-scale Farmers 69
4.3.1.1 Section A 69
4.3.1.1.1 Legal Challenges 72
4.3.1.1.2 Implementation Challenges 73
4.3.1.1.3 Inadequate Support 73
4.3.1.1.4 Lack of Market Infrastructure or facilities 74
4.3.1.1.5 Low Levels of Awareness 74
4.3.1.1.6 Stigma 74

4.3.1.2 Experience with law enforcement 75

4.3.1.2.1 Positive experiences 75

4.3.1.2.2 On-going prosecution 75

4.3.1.2.3 Neutral experience 76

4.3.1.3 Affordability of licence for commercial growing of cannabis 77

4.3.1.3.1 Licence affordability 77

4.3.1.3.2 Unaffordable 78

4.3.1.3.3 Lack of awareness 78

4.3.1.4 Quality control and compliance 78

4.3.1.4.1 Non-existent quality control 79

4.3.1.4.2 Complicated and Stringent Compliance 80

4.3.1.4.3 Negative Market Impact 80

4.3.1.1.4 No Awareness Programmes 80

4.3.1.5 Acceptance level cannabis deregulation 81

4.3.1.5.1 Stigmatisation 83

4.3.1.5.2 Limited Public or Private Efforts 84

4.3.1.6 Cannabis growing in alleviating unemployment 84

4.3.1.6.1 Few Full Time Jobs 86

4.3.1.6.2 No impact on unemployment 87

4.3.1.7 Alleviating Poverty among rural communities 87

4.3.1.7.1 Legal & Implementation Constraints 89

4.3.1.7.2 Inadequate Jobs & Investments 90

4.3.1.8 Summary analysis of growers' response 90

4.3.2 PART 2: Responses from Policy Makers (Master Plan and Phakisa initiative) 90

4.3.2.1 Experience in policy making. 90

4.3.2.2 Cannabis Master Plan in Promoting 92

4.3.2.2.1 Exclusion from the Supply Chain 93

4.3.2.2.2 On-going crackdown 93

4.3.2.3 Accessibility to innovation 93

4.3.2.4 Promoting sustainability livelihood for small-scale farmers 94

4.3.2.4.1 Legal Constraints 95

4.3.2.4.2 Unfavourable Market Conditions 96

4.3.2.5 Creating economies of scale for small-scale farmers. 96

4.3.2.6 Implementation of cannabis master Plan 98

4.3.2.6.1 Good Practices 99

4.3.2.6.2 Challenges with Masterplan 100

4.3.2.7 Summary analysis of policymakers' response 100

CHAPTER 5: DISCUSSION OF THE FINDINGS 102

5.1 Introduction 102

5.2Themes and Sub-Themes 102

5.2.1 Role of government frameworks 102

5.2.2 Policies and interventions 103

5.2.3 Creating employment opportunities 104

5.2.4 contributing towards poverty alleviation 104

5.3 Conclusion 105

CHAPTER 6: CONCLUSION 106

6.1 Introduction 106

6.2 Summary of Findings 106

6.3 Study Limitations 107

6.3.1 Literature Gaps 107

6.3.2 Resource and Cultural Constraints 107

6.3.3 Sample Size and Composition 108

6.4 Recommendations 108

6.4.1 Recommendations for Commercial Cannabis Policy Makers 108

6.4.2 Recommendations for further studies 109

6.5 Conclusion 109

REFERENCES 110

APPENDICES..... 121

List of Tables

Table 1. 1: Cannabis Plant 10

Table 1. 2: Cannabis Industry Profit 12

Table 1. 3: Philosophical Worldviews 26

Table 2. 1: KPIs used to measure Inclusive Development 36

Table 2. 2: Types of Economies of Scale 40

Table 2. 3: Components of SLF 43

Table 3. 1: Advantages and Disadvantages of Interviews & Questionnaires 58

Table 4. 1 Profile of Study Participants 66

Table 4. 2: Interview Question 1 theme-Government intervention to eliminate barriers in cannabis farming 71

Table 4. 3: Interview Question 2 theme - Experiences with law enforcement 74

Table 4. 4: Interview Question 3 theme - Affordability of Licence Compliance 77

Table 4. 5: Interview Question 4 theme - Commercial Cannabis Regulatory Compliance 78

Table 4. 6: Interview Question 5 theme - Cannabis Legalisation Efforts 82

Table 4. 7:interview Question theme – Alleviation of unemployment 85

Table 4. 8:Interview Question 7 Theme - Role of Commercial Cannabis in Poverty Alleviation 88

Table 4. 9:Interview Question 8 Theme - Role as a Policy Maker 91

Table 4. 10: Interview Question 9 Theme – Inclusivity under Cannabis Master Plan. 92

Table 4. 11: Interview Question 9 theme - Innovations accessibility 94

Table 4. 12: Interview Question 10 theme - Sustainable Livelihoods under the Cannabis Master Plan 95

Table 4. 13: Interview Question 11 theme - Economies of Scale under the Cannabis Master Plan 97

Table 4. 14: Interview Question 12 theme - The Cannabis Master Plan Review..... 99

List of Figures

Figure 1. 1: Research Conceptual Framework 1
Figure 1. 2: Usage and Product of Hemp Plant 11
Figure 1. 3: Value Chain of Industrial Hemp 12
Figure 1. 4: Retail Sales of Cannabis Products in the USA in 2016 13
Figure 1. 5: Global Production in 2005 13
Figure 1. 6: Global Legal Status of Cannabis 18
Figure 1. 7: The national Cannabis Plan Framework 19
Figure 1. 8: Proposed Regulatory Framework for medical cannabis 21
Figure 1. 9: The Hayami-Ruttan Recursive Model of induction innovation 24

Figure 2. 1: Pillars of Sustainable Development 36
Figure 2. 2: The Hayami-Ruttan Recursive Model of Induced Innovation 38
Figure 2. 3: Costs Savings from Economies of Scale 39
Figure 2. 4: Components of a sustainable Livelihood Framework (SLF) 43

Figure 3. 1: The Saunders' Onion 51
Figure 3. 2: research Approach 53
Figure 3. 3: Quantitative Research Approach 53
Figure 3. 4: Research Approach 54
Figure 3. 5: Sampling Techniques 56

Figure 4. 1: Study Participants' Response Rate 67
Figure 4. 2: Age Distribution of Study Participants 67
Figure 4. 3: Gender of Participants 68
Figure 4. 4: Role of Study Participants in South Africa's Commercial Cannabis Industry 68

Figure 4. 5: Experience of Participants..... 69
Figure 4. 6:Themes identified in question 1..... 72
Figure 4. 7:Themes identified and analysed for Question 2 75
Figure 4. 8:Sub -Themes for Interview Question 3..... 77
Figure 4. 9: Sub -Themes on Interview Question 4 79
Figure 4. 10: Sub -Themes on Interview Question 5 83
Figure 4. 11: Sub -Themes on Interview Question 6 86
Figure 4. 12: Themes identified and analysed for Interview Question 7 89
Figure 4. 13: Participants' Experience on SA's Commercial Cannabis Policies 91
Figure 4. 14: Sub -Themes on Interview Question 8 92
Figure 4. 15: Sub -Themes on Question 10 95
Figure 4. 16:Sub -Themes on Interview Question 11 97

List of Appendices

Appendix 1: In depth interview Questions for small-scale farmers..... 121
Appendix 2: Questionnaire - Interview Instrument..... 122
Appendix 3: In depth interview Questions for Policy Makers..... 126

List of Acronyms

ANC	African National Congress
CBD	Cannabidiol
COSATU	Congress of South African Trade Unions
DALRRD	Department of Agriculture, Land Reform and Rural Development
DFID	Department of International Development
DoH	Department of Health
IDI	Inclusive Development Indicator
DIT	Department of Industry and trade
LRAC	Long Run Average Cost
KPIs	Key Performance Indicators
NDP	National Development Plan
RDP	Rural Development Programme
OECD	Organisation for Economic Cooperation and Development
SACP	South African Communist Party
SLA	Sustainable Livelihood Approach
SLF	Sustainable Livelihood Framework
SAPS	South African Police Services
SAHPRA	South African Health Products Regulatory Authority
SDGs	Sustainable Development Goals
THC	Tetrahydrocannabinol
UN	United Nations
UNODOC	United Nations Office on Drugs and Crime
WCED	World Commission on Environment and Development

CHAPTER 1: INTRODUCTION

1.1 Statement of Purpose

The purpose of this research study was to determine the effectiveness of government policies and intervention measures aimed at promoting small-scale cannabis commercial farmers in South Africa.

Figure 1. 1: Research Conceptual Framework



Source: Author derived (2023)

1.2 Background of Study

A study conducted by Nkosi, Devey & Waetjen (2020) discusses in detail how, for a long time, the South African government regulated and policed cannabis[1] based on both national and international legislative frameworks and conventions[2]. For instance, the Medical, Dental & Pharmacy Act No. 13 of 1928 section 61 (subsection 1 b & c), prohibited and criminalised the growth, personal use, possession, import, export, transportation, processing and distribution of cannabis plants and products. Offenders were punishable by either legal fines or jail sentences if found guilty of contravening this legislative act. In addition, the use of cannabis was (and is still to a certain degree) a taboo subject amongst many societies in this country.

For a long time, the group of cannabis plants and products were categorised under prohibited and controlled narcotic substances in South Africa, and many parts of the

[1] Cannabis is referred to by various names in different place. For instance, Dagga, Weed, Nsangu, Zol, Pot, Herb, Mary Jane, Reefer, Hash, Blunt, Bhang etc. (South Africa); Marijuana; Indian Hemp; Mbanje in other places.

[2] Such as the 1922 South Africa's Customs & Excise Amendment that defined cannabis as 'a dangerous drug' and South Africa's adoption of the 1925 League of Nations ruling that classified cocaine, morphine, and cannabis as 'restricted substances'.

globe. However, this is no longer the case. Governments worldwide are taking steps to either legalise or decriminalise, and thus rehabilitate status of cannabis plants. These plants, dubbed 'Green Gold' now form part of a multibillion US$ dollar industry. Its supply chain is characterised by economic activities such as cultivation, manufacturing processes, research and development, and retail of recreational, medicinal and industrial products (Gelashvili, 2019).

The South African government justice system embarked on a journey aimed at liberalising and transforming the status of cannabis plants and products. Reports indicate {Agriculture Market Intelligence Report (2020), Grooten (2023) & Lewis (2020)} that government's jurisprudential turnaround on cannabis was driven by a combination of two factors: First, the government was reacting to legal and economic developments in the cannabis industry worldwide in places such as United States of America, Europe, Asia etc. Lastly credit should be given to the South Africa's constitutional court ruling in a 2018 landmark case[3] (Lubaale & Mavundla, 2019). The court ruled that 'the right to privacy entitles an adult person to use or cultivate or possess cannabis in private for his or her personal consumption'.

The ruling overturned some existing legislative provisions of the Drug & Medicine Acts[4], and paved way for cannabis decriminalisation in this country. That is apart from upholding certain constitutional rights, the ruling acted as stimulus for the commercialisation of cannabis supply value chain for various key stakeholders in South Africa. Many welcomed the decision because it would better position the country in its efforts to benefit from the emerging global cannabis renaissance. On the other hand, this ruling is likely to place South Africa in an enforcement dilemma on account of it being a signatory of various anti-Drug & Drug Trafficking International Conventions[5].

[3] The 2002 case of Prince V President of Law Society, Cape of Good Hope' was referred to the constitutional court after a local court found that the defendant, Prince (a Rastafarian) had no rights to use dagga for religious, culinary and medicinal purposes.

[4] The Drugs & Drug Trafficking Act 140 of 1992 - section 4(b) & the Medicines and Related Substance Control Act 101 of 1965 - section 22(A) 10. However, cannabis is still categorised as schedule 7 substance alongside narcotics like mandrax and heroin.

[5] Such as the United Nations Single Convention Narcotic Drugs (1961); The United Nations Convention on Psychotropic Substances (1971); The United Nations Convention against Illicit Trafficking in Narcotic Drugs & Psychotropic Substances (1988) etc.

The ANC led government, capitalising on the constitutional court's decision, drafted several progressive cannabis regulatory policies such as the 2021 National Cannabis Master Plan (Ramashala et al. 2021). This National Cannabis Master Plan with its multi sectoral and broad-based framework has two advantages. First, it will enable the government to develop and promote South Africa's commercial cannabis industry. According to a discussion by Grooten (2023), The Master Plan is an effective tool for transforming and formalising the underground economy of cannabis and creating thousands of job opportunities and alleviation of poverty among rural and marginalised communities in South Africa's Dagga Belt[6] (Sihlobo, 2018) and other places.

1.3 Research Problem

Although cannabis has been deregulated in South Africa, the participation of small-scale farmers as primary producers to the commercial supply chain is limited. A preliminary literature review revealed gaps in knowledge and understanding on the effectiveness of government frameworks designed to facilitate small-scale commercial cannabis production in South Africa. Furthermore, the effectiveness of governmental initiatives aimed at promoting industrial-scale cannabis cultivation cannot be ascertained. Insufficient attention has been given to academic research and studies to the degree to which these frameworks incorporate rural farmers as significant actors in the cannabis supply value chain and the official "green gold" economy. On the contrary, it is believed that the frameworks under consideration only benefit large-scale commercial farmers that optimise their operations for cost advantages.

Problem Statement: Small-scale farmers in South Africa's rural areas are less competitive as main cannabis plant growers regardless of cannabis deregulation and commercialisation, according to current studies. This is the case despite the efforts of the government. The effectiveness of government intervention policies and frameworks in cannabis cannot be determined effectively.

1.4 Research Objectives

1.4.1 Primary Research Objective

The primary objective of this research was to assess the effectiveness of government policies and intervention measures in promoting small-scale commercial cannabis farming in South Africa.

1.4.2 Secondary Research Objectives

The secondary objective of the research was to measure and evaluate how government frameworks (policies and interventions) are eliminating various entry barriers and challenges faced by small-scale cannabis farmers; promoting inclusive, competitive and sustainable small-scale of cannabis farming; creating job opportunities, and alleviating poverty among small-scale cannabis farmers in rural South African communities.

1.5 Research Question

1.5.1 Primary research questions

How effective are government frameworks (policies and interventions) in promoting the level of small-scale cannabis farming in South Africa?

1.5.2 Secondary research questions

The following are the secondary research questions:

i. What role do various government frameworks (interventions and policies) play in eliminating entry barriers faced by small-scale farmers of cannabis in South Africa?
ii. How do various government frameworks (policies and interventions) promote inclusive, competitive and sustainable small-scale cannabis farming in South Africa?
iii. How do various government frameworks (policies and interventions) create employment opportunities amongst small-scale cannabis farmers?
iv. How do various government frameworks (policies and interventions) contribute towards poverty alleviation in South Africa?

1.6 Rationale

The findings from this research study provided knowledge and insights that can be used to evaluate the effectiveness of government policy frameworks to promote cannabis farming among small-scale farmers in rural parts of South Africa.

In addition, the research findings raised questions that can stimulate further research studies aimed at exploring strategies for increasing the level of rural area based small-scale cannabis farmers' participation in the supply value chain of the cannabis industry of South Africa.

1.7 Delimitations of Study

The geographical dispersion of the research population (small-scale cannabis growers) across the nine provinces of South Africa was a major cause of delimitations for the research. Most of these farmers are located in rural areas that are hard to access due to poor or lack of road network infrastructure.

This research population excluded small-scale cannabis farmers in the provinces of Northern Cape, Western Cape, North West, and Limpopo. Instead, the study group included cannabis farmers from Gauteng, Mpumalanga, and dagga belt in Free State, Eastern Cape, and Kwa-Zulu Natal. The other delimitation arose on account of failure to interview all sampled respondents.

Therefore, the relevancy and generalisation of findings from this proposed research have to be interpreted in light of the aforementioned delimitations.

1.8 Assumptions

Despite various government policies and interventions for promoting small-scale cannabis cultivation, there are various assumptions such as these outlined below:

i. Small-scale farmers face market entry barriers in South Africa
ii. Small-scale farmers cannot afford licence fees[7] required for cultivation of cannabis plants.
iii. Regulations and quality control compliance procedures are complicated, cumbersome, and not user friendly.

[7] Ranging from US $ 182, 000 up to 304,000

iv. Small-scale farmers struggle to compete against monopolistic and well-resourced big multinational commercial cannabis growers.
v. Stringent and complicated distribution channels
vi. There are low levels of acceptance (buy in) regarding cannabis legalisation by religious groups and members.
vii. The legalisation of cannabis has flooded markets with a cannabis produce and has considerably fluctuated prices.
viii. Many small-scale farmers lack (or have inadequate) awareness and information about cannabis legislative frameworks and regulations.
ix. Small-scale cannabis farmers still struggle to access arable land for profitably farming due to land ownership and tenure challenges.
x. Cannabis farmers continue to face harassment at the hands of law enforcers.
xi. Inaccessibility to cannabis seeds and farming resources like irrigation, greenhouse facilities etc.

1.9 Definition of Terms

The following are definitions of terms used in the study:

a. Cannabis – this is a collective for a group of strains and varieties of flowering plants that belong to the family of Cannabaceae (Gwala, 2023:4).
b. Cannabis Tourism – this a form of AgriTourism and leisure travel in which tourists from all over the world visit places that have legalised cannabis farms or retail outlets offering various cannabis products. Examples are breakfast hotels, coffee shops, farm tours, cannabis festivals and expos, cannabis trails, ganja yoga, cannabis experiences etc. (Slabbert,2017:1)
c. Cannabis Commercialisation – the process of cultivating and selling various Cannabis plants and products (Ramashala et al 2019:1).
d. Cannabis Legalisation – the act of removing all criminal penalties and punishments associated with cultivation, distribution, processing, sale and use of cannabis (Svakic et al. 2023:2-3)
e. Criminalisation of Drugs – A legislative process characterised by anti-drug laws that prohibits the cultivation, use, processing, marketing, distribution,

possession of narcotic substances. Contravention of these laws is a punishable criminal offence (Nkosi et al. 2020:14).

f. Dagga Belt - Geographical regions covering rural areas of Kwa-Zulu Natal and Eastern Cape Provinces that share boundaries with Lesotho and Eswatini that have been associated with cultivation of cannabis for centuries (Sihlobo, 2018:2).
g. Decriminalisation of drugs – situation whereby the cultivation, usage, processing, distribution, possession ceases to be a punishable criminal offence. Instead, offenders are subjected to civil penalties such as referral to rehabilitation centres (Austin:3).
h. Drug Liberalisation – this refers to enlightened policies that regulate production, distribution, marketing, and usage of narcotic substances (Benfer et al. 2018: 3-5)
i. Economic Marginalisation – Economic marginalisation is a situation whereby certain groups of people in a society are excluded from accessing economic opportunities and wealth amassing means. This can be due to a number of factors like structural and institutional biased policies; racial discrimination; gender imbalances; nepotism etc. (Akhbar & Bodhanya, 2021: 3)
j. Green Gold – this is a euphemism that refers to commercial cannabis (Gelashvili, 2019:1).
k. Global Cannabis Renaissance – this refers to the accelerated growth, and transformation of commercial cannabis into a multibillion-dollar industry (Gibbs et al, 2019:10).
l. Indigenous People – this is a collective term for distinct and ethnic groups that have intergeneration connections to their ancestral land, and natural environments (Dwivedi, 2022:1).
m. Landrace cannabis – landrace cannabis is a name for various cannabis strains that have adapted to a particular climate and environment with little or no genetic alterations (Chouvy, 2023:23).
n. Medicinal Cannabis: is a legal and standardised pharmaceutical product made from cannabis plants (tablets, capsules, sprays, oils, tinctures). It comprises varying concentrations of either THC or CBD or both chemicals

(WESGRO 2021:2) Recreational Cannabis – is cannabis that is consumed for enjoyment rather than medicinal purposes (Shyam et al. 2022:2).

o. Industrial Cannabis – this refers to cannabis plant varieties that cultivated and processed into a wide range of medicinal or industrial products (Lowitt, 2022:8).
p. Smallholder or Small-Scale Farming – this is defined as a form of agricultural practice that is characterised by low asset capitalisation, investments, mechanisation and production Kirsten & van Zyl, 1998:3)
q. Sub Saharan Africa – geographical areas that located south of the Sahara Desert on the African continent (Machete & Dintwe, 2023:2)
r. Underground Economy – Okon, (2022:2) defines underground economy as "All economic transactions that are deemed illegal because the goods and services are unlawful in nature, or because the transactions fail to comply with government reporting requirements".
s. War on Drugs - this is anti-drug movement that is characterised by the prohibitive and restrictive legislations against the production, processing, trafficking, distribution, and consumption of narcotic substances (Grooten, 2023:3 & Pedram 2023:1).

1.10 Literature Review

1.10.1 Introduction

This section reviewed the available literature from primary sources on : origins & strains of cannabis plants ; commercialisation of cannabis; production of medicinal, recreational and industry cannabis; various uses and applications of cannabis in the 21st century; scale of cannabis trade; role of small-scale and indigenous farming in the cannabis supply value chain; the legality of cannabis plants & products; the state of commercial cannabis on national, regional and global levels; the effectiveness of various legislative policies and interventions that the South African government has put in place to regulate the commercial cannabis industry and drive the inclusivity of previously illegal small-scale and indigenous cannabis farmers from rural areas into the formal sector of this emerging industry, and linkages commercial cannabis industry to broader development strategies such as the National Develop Agenda 2030 and 2030 UN Agenda on Sustainable Development Goals (SDGs).

In addition, the review identified literature gaps related to the research objectives used to measure and evaluate the effectiveness of government policies and interventions that are intended to:

i. Eliminate various entry barriers and challenges faced by small-scale cannabis farmers in rural South Africa.
ii. Facilitate strategies that can enable small-scale cannabis farmers to compete against big commercial growers; promote inclusive and sustainable small-scale cannabis farming in South Africa.
iii. Create job opportunities among small-scale cannabis farmers in South Africa
iv. Alleviate poverty among small-scale cannabis farmers in South Africa

1.10.2 Background Discussion

1.10.2.1 An Overview of Cannabis plants

A number of plant strains and varieties belonging to the Cannabis family have a long, fascinating and controversial history. These plants – mostly used for recreational, religious and medicinal purposes – were domesticated around 12000 years ago by people from East Asia[8] (Grooten, 2023, Lowitt, 2020 & Guangpeng et al, 2021).

With the passage of time, cannabis cultivation and usage spread to almost every part of the earth. First, evidence provided by Almqvist (2015), shows that there was a widespread cultivation, consumption and trading of cannabis by indigenous people in many parts of Africa[9] such as Ethiopia, Southern Rhodesia, South West Africa etc. from as early as the 14th century. In addition, Lowitt (2020) points out that hemp was a leading cash crop from 1000 BCE to 19th century. This form of cannabis, which was used as raw material for the manufacture of ropes, ship sails etc., played key role in shipping industry, military and colonisation activities.

For a long time, cannabis cultivation, and usage of its products was legal. Criminalisation and demonisation of this plant is a recent development that began in the early days of the 20th century. Decades later, cannabis was added to the list of

[8] Mesopotamia in 8000 BCE & China in 4000 BCE
[9] Allegedly brought by Arab and Indian traders

banned narcotics. Farmers, distributors, processors, sellers and users of cannabis plants and products found themselves on the wrong side of the law (Beres, 2016).

Despite this onslaught from multiple anti-cannabis legislations, the crop and its by-products survived and thrived in the underground (or black market) economy. For instance, on the African continent (like in many parts of the globe), illegal cannabis cultivation and usage has been going on for many generations. This is true for the Dagga Belt (that spans certain parts of South Africa, Lesotho and Eswatini etc.) where cultivation and smuggling of cannabis have been the main source incomes among marginalised and poor indigenous farmers for over 200 years (Mkhize, 2022).

The cannabis plants belong to the Cannabaceae family are scientifically known as Cannabis Sativa Linnaeus. These are made up of many strains and varieties – see Table 1. 1

Table 1. 1: Cannabis Plant

Scientific Name	**Country of Origin**
Cannabis Sativa	India
Cannabis Indica	Afghanistan, Pakistan, Turkmenistan
Cannabis Ruderalis	Europe, Russia
Landrace Cannabis[10]	Indigenous to various parts of the world

Source: Author derived (2023)

1.10.2.2 Uses and Application of Cannabis

Clemencot (2019) pointed out the significant role of cannabis plants and products in society on account the purposes outlined below:

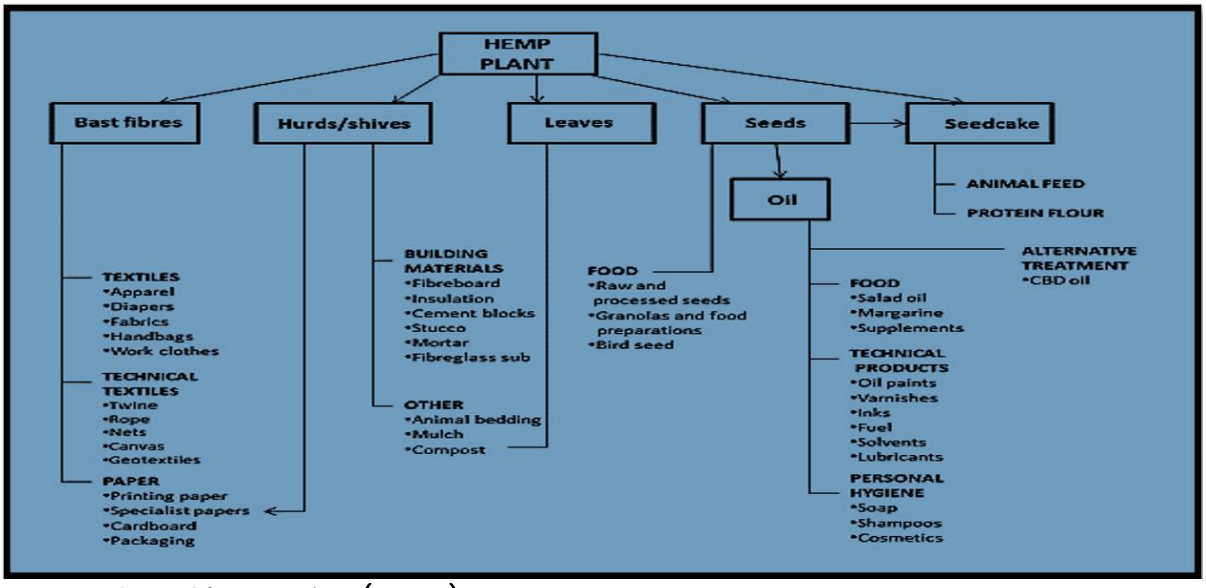
i. Medicinal Cannabis – to cure certain diseases or treat symptoms.
ii. Industrial Cannabis[11] – ropes, cotton, cords, resin, paper etc. processed from plant stems and fibres.
iii. Recreational Cannabis –can be smoked.

[10] This refers to strains that are adapted to grow in specific regions, and have limited diversity but high resistance to pests and drought conditions
[11] Hemp serves as raw material for these products because of its low THC, CBD levels

iv. Religious or Spiritual Purposes
v. Cannabis Tourism
vi. Food and Beverages (juices, bottled water, soft drinks etc.)
vii. Cosmetics
viii. Biofuels
ix. Oils
x. Batteries

The various applications of cannabis plants and products as noted by Grooten (2023) are determined such, as plant sex and concentration of certain chemicals like Cannabidiols (CBD), tetrahydrocannabilic acid (THCA) and terpenoids[12] found in particular strain. For instance, industrial cannabis strains that have lower concentrations THC (less than 0.3%) are mostly processed into industrial materials (see Figures 2&3). By contrast, strains with high levels of THCs serve are mainly used to manufacture medicinal and recreational cannabis products.

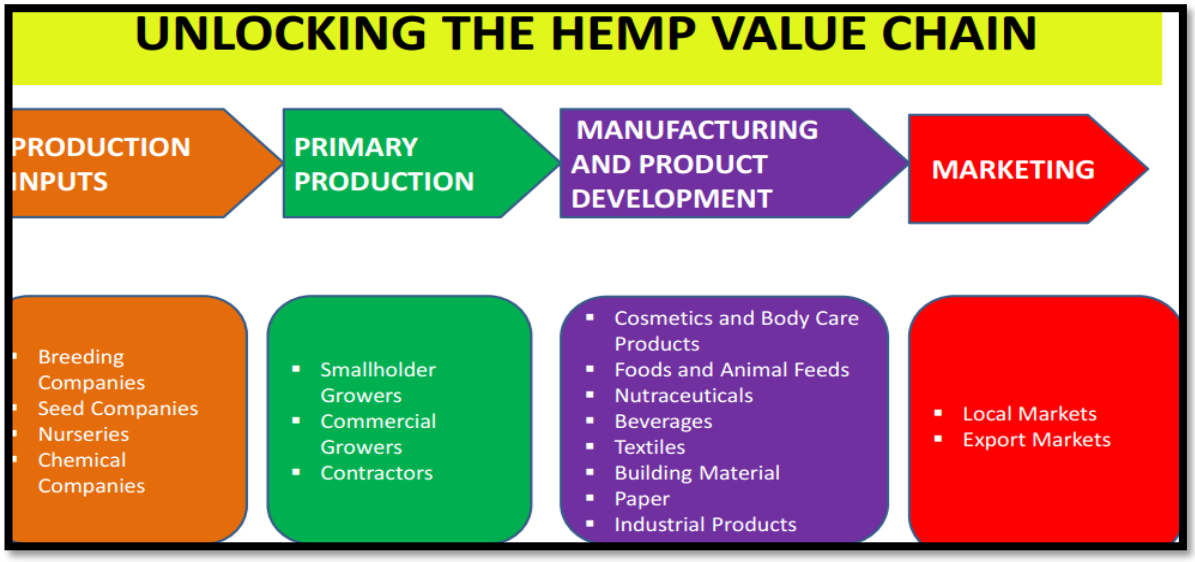
Figure 1. 2: Usage and Product of Hemp Plant



Source: Adapted from Lowitt S (2020:9)

[12] Male strains are commonly used for industrial purposes whilst female are suitable for medicinal and recreational ones. The chemicals are responsible for differences in taste, smell and psychoactive effects associated with each cannabis plant strain.

Figure 1. 3: Value Chain of Industrial Hemp



Source: Ramashala T, (2021 p:6)

1.10.2.3 Commercialisation of Cannabis (Cannabis Industry)

The recent boom in the cannabis commercial industry can be attributed to global decriminalisation and legalisation efforts[13] aimed at leveraging the wide applications of cannabis plants in society. Nowadays Cannabis (or Green Gold) is a global multibillion supply industry – see Tables 1.2 & Figures 1.4 & 1.5.

The highest demand for processed cannabis comes from the United States of America (USA). For instance, the USA markets share for cannabis processed products stood at 60% in 2016 (Lowitt, 2020).

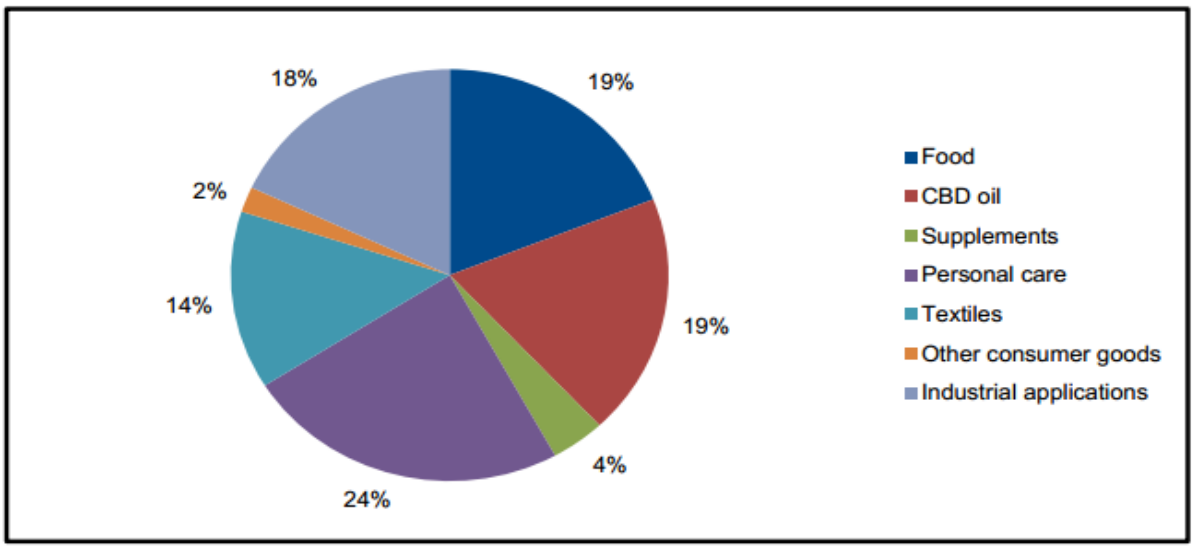
Table 1. 2: Cannabis Industry Profit

Location	Year	Projections
Global	US $12 billion (2018)	US $ 166 billion (2026)
Africa	US $ 7.1 billion (2023)	
South Africa	US $ 1.6 billion (2021)	

Source: Clemencot (2019) & Ramashala et. al (2021)

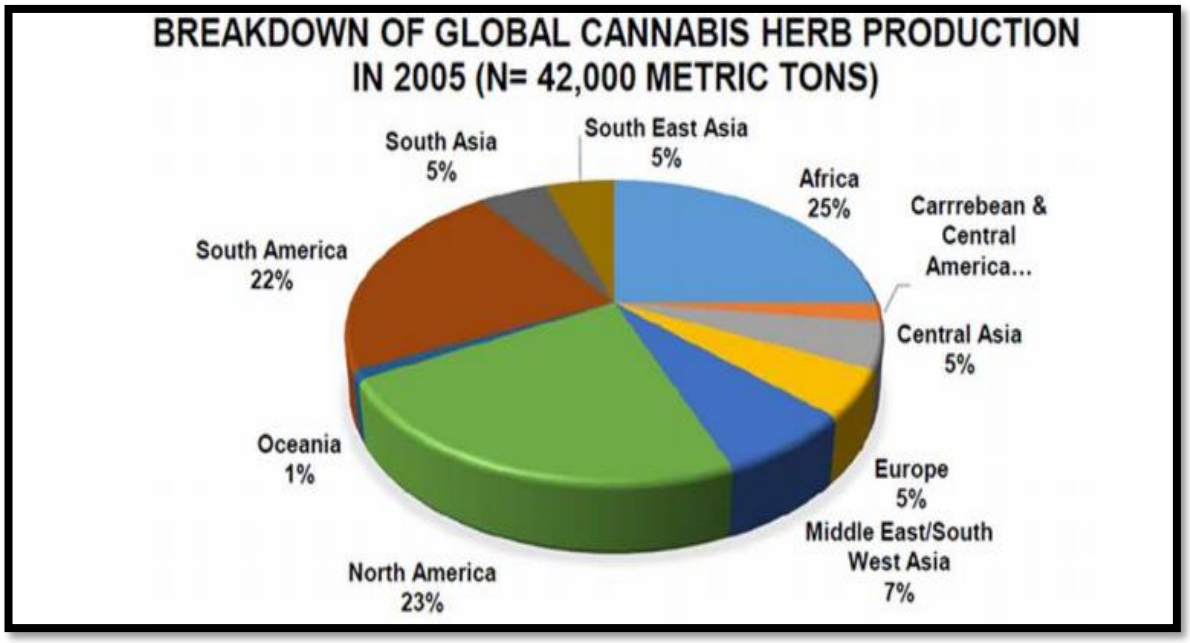
[13] The degree of cannabis legalisation for various usages (recreational, medicinal, industrial, food, biofuels etc.) differs from country to country globally.

Figure 1. 4: Retail Sales of Cannabis Products in the USA in 2016



Source: Adapted from Lowitt S. p.16

Figure 1. 5: Global Production in 2005



Source: Adapted from Gwala RS (2021: p.106)

A typical cannabis supply chain comprises these economic activities: cultivation; processing and manufacturing; logistics (transportation, storage, distribution etc.); banking; insurance; retail; research and development Greenfield & Zwielich, 2021).

Both commercial and subsistence cultivation of cannabis is more lucrative than that of other crops. Cannabis growers are now earning higher incomes by comparison to

those involved in the growing of traditional cash crops such tobacco, maize etc. Gelashvili (2019) states that Chinese cannabis farmers earned average incomes of US$ 1,500 after selling a hectare of the 'Green Gold'. According to reports by Fortune Business Insights (2021), the cultivation of cannabis is likely to eclipse other traditional cash crops such as tobacco in Africa, and elsewhere. The 'Green Gold Rush' is proving to be a very profitable occupation for farmers across the globe. For instance, European farmers produced 95 tonnes of cannabis in 2018.

A 2019 report by Clemencot provides insights on why more and more governments in Africa and elsewhere are embracing the Cannabis (Green Gold) industry as a strategy for economic development and poverty alleviation amongst rural populations. The report points out that this low labour cost industry is seen as a viable job creation and investment driver in many places like sub-Saharan African countries that have favourable climatic conditions for cannabis growing[14]. In this region, it is estimated that the cannabis industry will create around thousands of jobs and attract billions of US$ in foreign investments alone.

1.10.2.4 Smallholder Cannabis Farming in South Africa

Smallholder farming plays a significant role in any country's agriculture development, and Gross Domestic Production (GDP). This type of agricultural sector is practised by poverty stricken rural dwellers, indigenous people[15], and hobbyists worldwide. Smallholder farming, as noted by Tharakan (2016) & Qwabe (2020) is a predominant rural form of agriculture in both developing and developed parts of the world.

Small holder farmers uniquely integrate indigenous knowledge systems (IKS)[16] and modern scientific knowledge systems (MSKS). Agrekon (1998 p.6) defines a smallholder farmer as "any farmer whose scale of operation is too small to attract the provision of services he or she needs to be able to significantly increase his or her productivity".

[14] Lesotho, Zimbabwe, Zambia, Malawi, South Africa etc. A 2003 Interpol report ranked South Africa 4th in terms of global cannabis production

[15] This group estimated at about 1% of South Africa's population comprises San (Khwe & Xun) and Khoe (Nama, Koranna, Griqua. Cape KhoeKhoe) people, live mostly in parts of Gauteng, North West, Free State, Western Cape Eastern Cape & Kwa-Zulu Natal provinces.

[16] This is a collection of intergeneration knowledge, skills, beliefs, attitudes and rudimentary technologies that have enabled distinctive local communities to achieve sustainable, holistic and eco-friendly livelihoods in certain environments.

There are more than half a billion smallholder farmers globally (Burnett, 2002 & Lewis, 2022). In South Africa, small-scale farming is dominated by rural, marginalised, vulnerable and black people from former homelands[17] (the Dagga Belt) of Eastern Cape, KwaZulu-Natal, Mpumalanga and Limpopo provinces that grow a wide range of food and cash crops (including cannabis) on small sized farms with low levels or no technologies (Lakčević, 2016 & Lewis,2020).

Findings from studies conducted by Lewis (2022); Ndlovu & Masuku (2021); Muzekenyi et al (2019) & Neethling (2023) show that small-scale growers from rural areas in South Africa face many challenges and constraints in their efforts to be part of commercial cannabis growers. First, small-scale farmers experience challenges of accessing formal domestic and international markets due to factors like poor transport infrastructure, stiff competition from large commercial growers, unavailability of critical information and storage facilities, red tape associated with regulatory compliance and quality control procedures. Second, small-scale growers of cannabis are often harassed by law enforcers due to limited compliance issues. For instance, members of the South Africa Police Services (SAPS) regularly arrest rural cannabis farmers, destroy cannabis plants or confiscate cannabis produce. Third, the efforts of rural small-scale cannabis growers are hampered by resource constraints. These farmers find it hard to access financial assistance or loans from formal lenders, farm inputs (such as seeds, irrigation facilities), and government support programmes just to mention a few. Fourth, South Africa's complicated land ownership and tenure systems means that small-scale farmers have inadequate arable land that can be used for growing commercial cannabis. This in turn puts them in positions where it is hard to take advantage of economies of scale that can boost production. Fifth, there is a significant lack of scientific, technical, entrepreneurial and management farming skills and knowledge amongst rural small-scale farmers. Last but not least there are marked inconsistencies, poor alignment and implementation of government policies and legislative frameworks.

These challenges result in high degrees of exclusivity and participation in the cannabis value chain by small-scale farmers from rural areas of South Africa. Lastly various

[17] Large numbers of these farmers are concentrated in the mountainous Pondoland where they grow landrace cannabis strains.

environmental challenges driven by climate change such as drought, floods, soil erosion etc. negatively impact the productivity of small-scale cannabis farmers in rural areas of South Africa.

1.10.2.5 Legality of Cannabis Plants and Products

1.10.2.5.1 Criminalisation of Cannabis

The reputation of cannabis plants began to change for the worse in the early days of the 20th century. Gwala (2023) & Hudak (2016) & UNODOC (2019) posit how cannabis plants and products gained a notorious and negative reputation that led to criminalisation and prohibition. The tarnished image and criminalisation of cannabis were underpinned by various prohibitive anti-drug policies and enforcement; international conventions and legislative acts[18]. United States of America's lawmakers set a precedent that compelled many governments to introduce measures as part of the 'war on drugs' aimed at eradicating what was seen a dangerous plant. Anti-drug measures have often been characterised by punitive legislative frameworks and acts against those involved in the cannabis supply chain, and many unintended consequences[19].

South Africa took the first step towards criminalisation of cannabis in 1919 upon signing of the Versailles Peace Treaty (Singh, 2019). The treaty expected signatories to police and restrict the trade of narcotic substances. The South Africa government, therefore, amended its Customs and Excise Act in 1922 in order to comply with the treaty. The amendment led to partial restrictive measures against cannabis cultivation, and its products.

The enacting of the Medical, Dental and Pharmacy Act of 1928 brought about a complete ban and criminalisation of cannabis growing, possession, processing, distribution, sale and research. The act authorised law enforcers to conduct widespread search and seizure operations, arrests and imprisonment of offenders (Debons, 2022; Gwala, 2023; Historia 2020 & Singh 2019). Other legislations aimed

[18] Examples are the 1925 Geneva Convention on Opium & Drugs, and the 1906 Opium Exclusion Act; Marihuana Tax Act of 1937; War on Drugs based on Nixon's Executive Order No. 11599 etc.
[19] Such as gross violations of human rights; crimes against humanity; destruction of vulnerable populations' livelihoods; police violence and brutality etc.

at intensifying government's efforts to prohibit 'dangerous drugs like cannabis' followed. Examples of these are:

i. The Weeds Act of 1937
ii. The Medicine and Related Substances Act of 1965
iii. The Pharmacy Act of 1974
iv. The Criminal Procedure Act of 1974
v. The Drugs and Trafficking Act of 1992

Lubaale & Mavundla (2019); Historia (2020) & Singh (2019) question the justification of criminalising cannabis worldwide. First, there is evidence that links enforcement of anti-cannabis laws to widespread infringement of constitutional rights such as rights to privacy and religious practice of people. Second, states have used drug legislations to control cross border migration; entrench racial discrimination and segregation; marginalise certain ethnic groups etc. In the case of South Africa, the apartheid regime saw cannabis as a driver of racial integration among 'urbanised blacks, coloureds and poor 'whites'. In the United States of America (USA), authorities used anti legislations to victimise African Americans, and curb the influx of Mexicans and other Spanish speaking people. Lastly, various studies have failed to come up with conclusive evidence proving that cannabis is a dangerous narcotic substance. Instead, the criminalisation of cannabis is based on unfounded evidence, misinformation, myths, religious moralising, racism and fear mongering.

1.10.2.5.2 Decriminalisation of Cannabis

Drug liberalisation enables policy makers to distinguish between hard and soft narcotic substances. Hard drugs are illegal whilst the legal status of soft ones varies from country to country. Uruguay is an exception because it never criminalised narcotic substances. As result, by being categorised as a soft drug, cannabis for recreational and medicinal purposes is now widely decriminalised whilst being a controlled substance in many parts of the world[20]. Austin (2002) & Chouvy (2019) write about how the global decriminalisation of cannabis gained momentum with actions taken by Netherlands in 1976. This European country partially relaxed some of its anti-drug

[20] Farmers need licences to grow the plant, and conditional aspects such as possession and use are treated like civil rather than criminal offences.

laws to allow sales of recreational cannabis in coffee shops and decriminalise personal possession of less than 5 grams.

The boom in commercial cannabis industry is incentivising legal efforts in many countries around the world to decriminalise medicinal and recreational cannabis (Gwala, 2023). Figure 1.6 is a map of the world showing various stages of cannabis decriminalisation by March 2021.

Figure 1. 6: Global Legal Status of Cannabis



Source: Gwala RS (2023: p104)

The case of 'Prince V President of Law of Society, Cape of Good Hope' which was referred to South Africa's Constitutional Court, and its outcome paved way for the decriminalisation of recreational and medicinal cannabis[21].

1.10.2.5.3 South Africa's Cannabis Policies and Legislative Frameworks

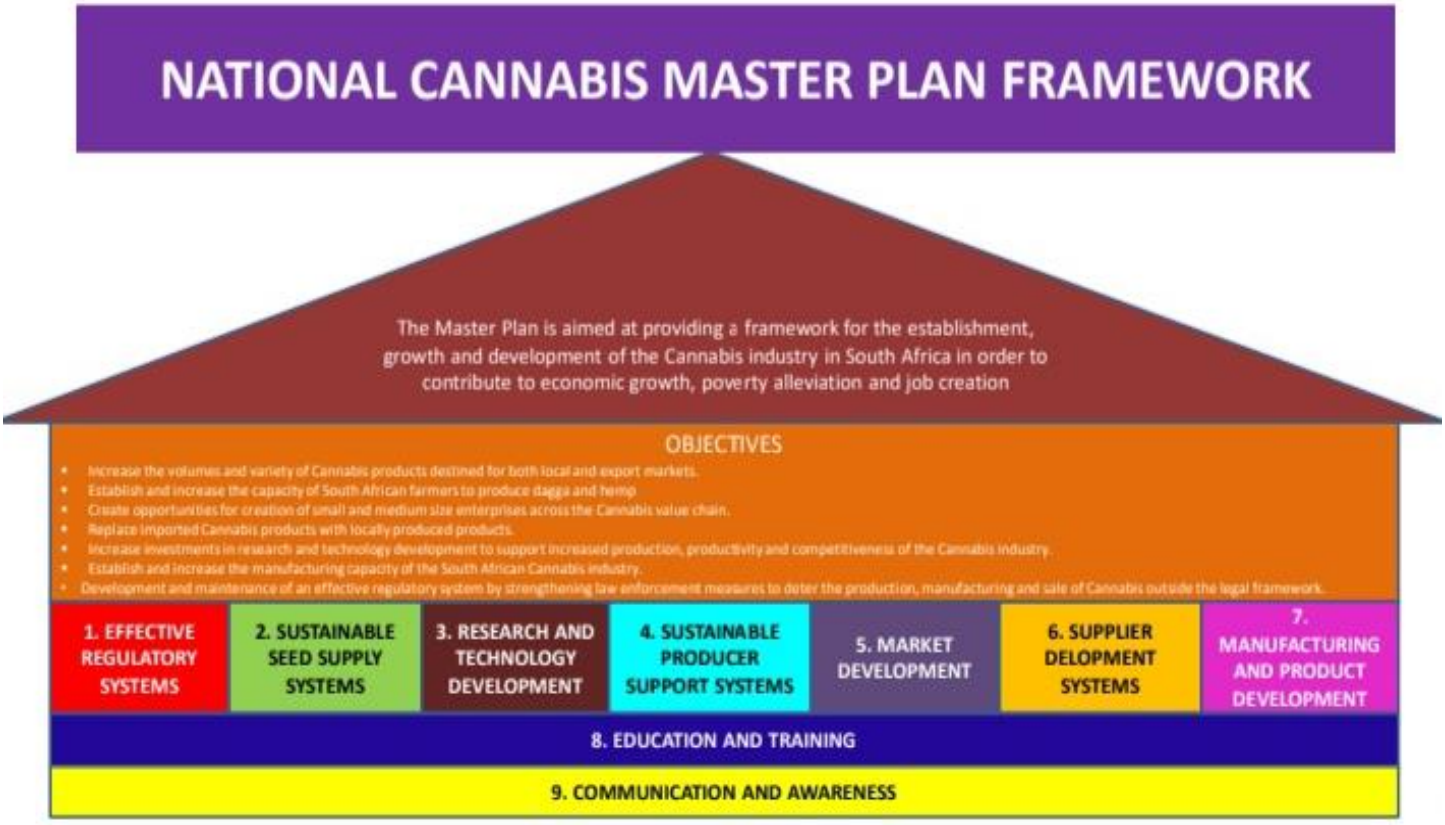
In 2021, the ANC led government developed a multi sectoral National Cannabis Master Plan that comprises stakeholders from Department of Agriculture, Land Reform & Rural Development (DALRRD); Department of Health (DoH); Department of Trade and Industry (DTI); Department of Justice and Small Business Development; The South African Police Service (SAPS); The National Marketing Council; The Tripartite Alliance; The Congress of South African Trade Unions (COSATU) & The South African Communist Party (SACP) (Ramashala et al. 2021). The national cannabis master plan is a broad-based framework that intends to develop and promote

[21] Apart from Lesotho and Zimbabwe, South Africa is one of the African countries that have taken steps to decriminalise the recreational and medical uses of cannabis since 2017.

South Africa's commercial cannabis industry (see Figure 1.7 & 1.8). The objectives of the cannabis master plan are to:

i. Establish an inclusive, sustainable and world class competitive cannabis industry.
ii. Increase the cultivation and processing of cannabis plants[22] for both domestic and export markets.
iii. Promote the inclusion of small-scale and indigenous farmers in supply chain as significant primary producers of commercial cannabis.
iv. Increase the level of cannabis research development, investments and domestic processing capacity.
v. Streamline the various cannabis plants and products within the nation's legislative framework.

Figure 1. 7: The National Cannabis Plan Framework



Source: Ramashala T (2021: p8)

According to discussions by Gerwel (2018) & Grooten (2023), achieving the above outline objectives will play a key role in the rehabilitation of cannabis as an illegal cash

[22] Dagga and hemp

crop, tackling of unemployment[23] and poverty levels among vulnerable and marginalised citizens in rural communities of the Dagga Belt and elsewhere[24]. In addition, the plan is an ideal vehicle to assist South Africa to meet other development milestones like:

i. Chapter 6 goals of the National Development Plan (NDP) 2030 that relies on the integrated macroeconomic strategy of 'Induced Institutional Innovation in Agriculture: The Recursive Model' to give rural communities more social, economic and political opportunities for poverty alleviation.
ii. Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda: No. 1 (No. poverty); No. 2 (Zero Hunger); No. 3 (Good Health and Wellbeing); No. 5 Gender Equality; No. 8 Decent Work & Economic Growth and No.10 Reduced Inequalities.

1.10.2.5.4 Regulatory Compliance

Participation in the commercial cannabis industry requires both primary and secondary producers to comply with existing legislations that regulate narcotics in this country (WESGRO, 2021). For instance, a compulsory 5-year operating licence is required for those involved in medicinal cannabis supply chain. This regulation ensures the local cannabis industry produces standardised and quality raw materials and products.

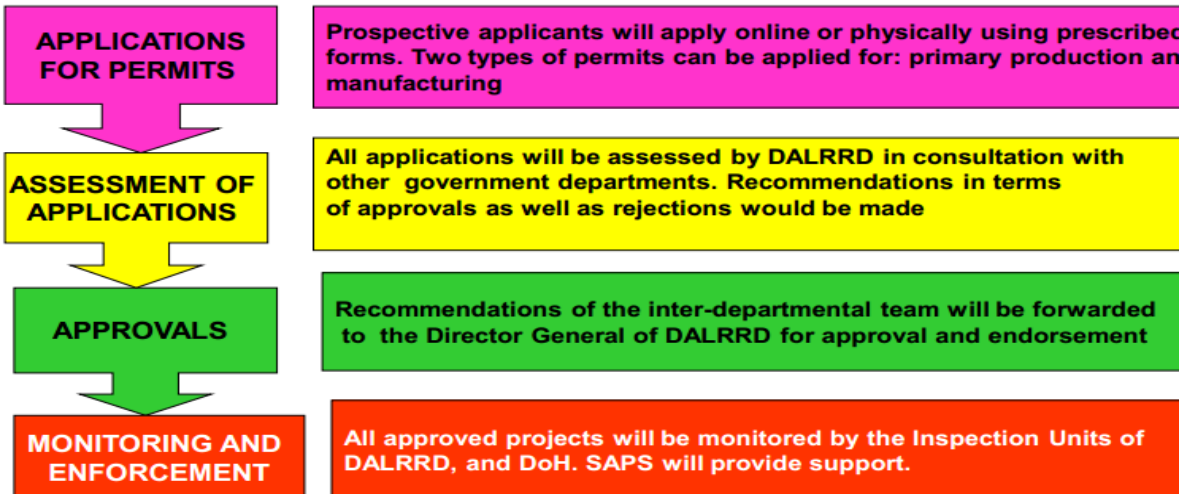
As 2017, the South African Health Products Regulatory Authority (SAHPRA) was tasked with issuing licences (at a certain fee) to any person that wants to grow or process or export or import medicinal cannabis as mandated by the Medicines and Related Substance Act of 1965 (sections 22 C & D). The licence[25] applicants must provide the following information: Application Type (new or renewal); Applicant's Details; Business Details; Business Registration Details; Site Information & Activities; Analytical Sites & Activities; Storage and Handling of Produce & Products; Activities Relating to Import or Export; List of Activities (cultivation, processing, packaging, testing or distribution); Information of Personnel (qualifications, experience, contact

[23] The plan is expected to create between 10000 and 25000 across the cannabis supply chain.
[24] Poverty stricken people living in the rural areas of Kwa-Zulu Natal and Eastern Cape Provinces that share boundaries with Lesotho and Eswatini, and in Limpopo and Mpumalanga provinces as well.
[25] Applicants must fill a lengthy form of more than 14 pages – manually or electronically.

details etc.); Nominated Pharmacist, Quality Controller & Security; Proposed Date of Audit and Declaration.

DALRRD officials, in coordination with stakeholders from DoH and SAPS, must assess the eligibility of applicants and suitability of proposed sites before the approval by the director of DALRRD (Ramashala, 2021).

Figure 1. 8: Proposed Regulatory Framework for medical cannabis



Source: Ramashala T (2021: p14)

1.11 Literature Review summary on study objectives

i. **First Research Objective on literature Review -** The commercial cannabis industry in this country traces its beginnings to the case of 'Prince V President of Law of Society, Cape of Good Hope' which was referred to South Africa's Constitutional Court (Lubaale & Mavundla, 2019). The court's ruling led to the development of policies and legislative frameworks and amendments that culminated in the decriminalisation of industrial, recreational and medicinal cannabis in South Africa (Grooten, 2023 & Ramashala et al 2021). These developments were meant to benefit poverty stricken rural communities in the Dagga Belt, and indigenous people that have growing cannabis illegally through the objective of "eliminating various entry barriers and challenges faced by small-scale cannabis farmers in South Africa".

ii. **Objective 1 – Stringent regulatory compliance & licencing procedures as an entry barrier for small-scale cannabis farmers -** Preliminary literature has

failed to show the extent to which this objective has been achieved. As indicated in the literature review section on challenges and constraints, many small-scale cannabis farmers in rural South Africa are aggrieved by the existence of entry barriers for accessing lucrative cannabis products' markets. Rural and indigenous cannabis growing communities remain confined to the black-market economy on account of stringent regulatory compliance and licence procedures (Mkhize, 2022).

iii. **Objective 1 – Resource Constraints as an entry barrier -** Many poverty-stricken growers in rural areas that traditionally cultivate cannabis are facing challenges of resources to either afford fees required for cannabis licences or seeds required for the growth and quality control testing etc. of approved medicinal cannabis plants (Musiwa, 2022).

iv. **Second Objective Literature Review -** The intentions of the 2021 National Cannabis Master Plan, amendments of certain provisions of the Drug Act, and pledges by various high ranking political leaders were meant to speed up the rate of inclusivity, competitiveness and sustainability of small-scale cannabis plants farming in South Africa (Ramashala et al 2021).

v. **Objective 2 – Rural and indigenous growers of cannabis are still excluded from the mainstream cannabis industry -** Regarding the objective of "promoting inclusive, competitive and sustainable small-scale cannabis plants farming in South Africa", literature by Mkhize (2022) & Musiwa (2022) reveal that rural and indigenous cannabis growers still face high exclusivity from the formal and legal cannabis supply value chain. By contrast, the growing of medicinal is dominated by large firms, and pledges made by politicians, and the 2021 National Cannabis Master Plan remain empty promises in the eyes of rural primary producers of cannabis plants in this country.

vi. **Objective 2 - Rural and indigenous growers of cannabis face stiff competition from large growers -** According to Lewis (2022); Ndlovu & Masuku (2021); Muzekenyi et al (2019) & Neethling (2023), rural cannabis growers find it hard to compete against well-resourced big commercial growers.

For instance, these big growers' saturate markets with legal cannabis forcing small-scale primary producers to sell their plants at unprofitable prices to smugglers.

1.12 Theoretical and conceptual frameworks

1.12.1 Theoretical Framework

Several deductive theories discussed in this section are critical in understanding and gaining insights on the effectiveness of government's policies and interventions that South Africa has been using to stimulate and promote small-scale commercial cannabis farming.

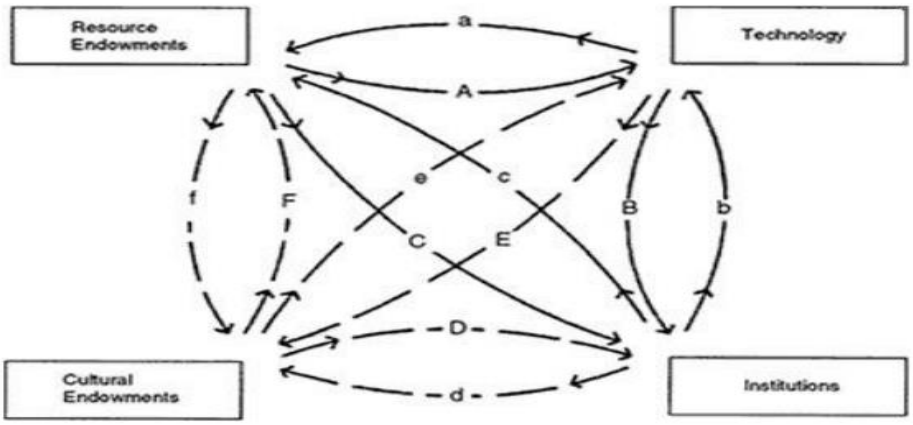
1.12.1.1 Inclusive Policy Making

This is an approach whereby governments prioritise policy frameworks that maximise development opportunities for a wider scope of social groups in a country (OECD, 2023). Examples are South Africa's development policies like the National Development Plan (NDP) 2030, Rural Development Programme (RDP), and the 2021 National Cannabis Master Plan and 2030 UN Agenda on Sustainable Development Goals (SGDs).

1.12.1.2 Induced Innovation: The Recursive Model

This microeconomics theory refers to various government interventions aimed at facilitating the development of affordable, appropriate and modern technologies that can be utilised by rural communities to increase agricultural production (Hayami & Ruttan (1971 & 1984). The model is underpinned by indigenous knowledge systems; modern scientific knowledge systems; availability of public funds and facilities and public institutions with strong good governance and public resources.

Figure 1. 9: The Hayami-Ruttan Recursive Model of induction innovation



Source: Hayami & Ruttan, (1984)

1.12.1.3 Economies of Scale

Kenton (2022) defines economies of scale as business organisation's ability to achieve efficient production and increase competitiveness. Economies of scale, which are influenced by internal and external factors, allow a business to maximise profits whilst reducing operational costs.

Policies like the National Development Plan (NDP) 2030, Rural Development Programme (RDP), and the 2021 National Cannabis Master Plan are meant to leverage the position of small-scale farmers to take advantage of economies of scale.

1.12.1.4 Sustainable Livelihood Framework (SLF)[26]

The sustainable livelihood framework is a multidisciplinary, flexible, inclusive and consultative economic strategic approach that allows governments to drive rural development, and poverty alleviation programmes (Grooten, 2023 & Scoones, 2015). This framework is an ideal approach because it provides rural communities with sustainable development assets and resources; knowledge; skills and capabilities to mitigate environmental, economic, social and political setbacks.

The framework is aligned to broader South Africa's development plans such as the National Development Plan (NDP) 2030, Rural Development Programme (RDP), and the 2021 National Cannabis Master Plan.

[26] Sociologist Ian Scoones came up with this framework in 1998.

1.12.2 Conceptual Framework

1.12.2.1 Constructive Grounded Theory[27]

This is an inductive approach that allows a researcher to construct new concepts and theories based after the analysis of data (Kothari, 2004). An analysis of findings generates hypotheses and patterns that lead to the creation of new theories and concepts.

Constructive Grounded Theory is ideal for exploring unknown topics, and issues with little or no existing literature such as the effectiveness of government policies and interventions for promoting small-scale cannabis farming in South Africa.

1.13 Conclusion of Literature Review

Secondary literature from various sources exhaustively unpacked a wide range of issues relating to cannabis plants, history, supply value chain (primary production, processing, distribution, uses etc.), and legislative frameworks and acts. Most of these are a result of research studies and investigations conducted by an array of academics and other credible parties across the globe.

However, the review revealed a scarcity of findings on the effectiveness of policies and interventions to increase the roles of smallholder cannabis growers here in South Africa, and elsewhere. This literature gap, therefore, opens opportunities for potential studies in this area of the commercial cannabis industry.

1.14 Research Methodology

The section of this research examined and discussed the research methodology applied to address research questions and analyse and interpret findings. Consequently, the research methodology described both the research framework and the research design. To answer the research questions posed in the first chapter, the research methodology and approaches will be critical.

1.15 Research methods

1.15.1 Research Philosophies

[27] Grounded Theory was introduced by Glasser and Strauss in 1967.

Philosophy and paradigm assumptions are crucial to research technique. Johnson & Christensen (2012) define research paradigm as a viewpoint on knowledge generation based on common assumptions, beliefs, values, ideas, and behaviours. Research is regarded knowledge advancement in an area. New knowledge is created to solve an organization's or field's challenge (Creswell, 2014). Research paradigm aids study efficiency. Research paradigm encompasses research methodologies and ideologies. This study combo helps a researcher comprehend and learn about the phenomena or issue. These are epistemological and ontological ideas. These research paradigms or ideologies are mentioned below.

1.15.2 Ontological and Epistemological Views

Phair and Warren (2021) says that each philosophy or paradigm is based on ontological and epistemological ideas. To foster a better understanding of outcomes, ontological approaches in research place emphasis on determining what genuinely exists (the nature of reality) (Moon & Blackman, 2017). These enquiries help reveal the truth like: What kinds of assumptions about reality can be made? Who has the right to decide what is real? And how does one deal with the fact that reality has two different sides?

Epistemological viewpoints, on the other hand, focus on the study's philosophy and knowledge. Epistemology helps researchers choose study scope, data collecting and analytic methodologies, subject-object relationships, and study validity (Rehman & Alharthi, 2016).

1.15.3 Philosophical Worldviews

There are various philosophical worldviews that influence decisions on research approaches, designs and methodologies (Creswell, 2007). However, academics differ on the exact number of philosophies. The worldviews are below in Table 3.2.

Table 1. 3: Philosophical Worldviews

Name of Philosophy	Description
Positivism (assumption that	• Traditional quantitative study that examines established notions, absolute facts, and human behaviour and actions. Reductionist and deductive - turns thoughts and concepts into variables that can be

there is one reality or truth)	tested during hypothesis testing to get sensible and logical research study results.
Constructivist (Social Constructivism)	• Ideal for qualitative research methodologies that explore and comprehend the numerous meanings of human interactions with their surroundings. More subjective since it considers participants' social attitudes and settings throughout research. uses inductive methods to generate new hypotheses, correlations, and patterns.
Realism	• A notion that certain phenomena exist independently of people's opinions or perceptions—one must connect to the universe based on facts exclusively.
Pragmatism (focuses on consequences of actions)	• Often employs a mixed research strategy to study multiple research topics in many political, social, and economic settings and scenarios. Action-oriented research to solve problems, difficulties, etc.
Interpretivism (Interpretivist Approach)	• Doctrine that acknowledges the subjectivity of qualitative research findings from social actors like businesspeople. The researcher in turn makes subjective interpretations

Source: Creswell JW (2007) & Guest et.al. (2011).

The study will be based on interpretivism philosophy. The study will investigate multiple realities about cannabis farming in South Africa analyse and report the findings.

1.16 Research Approach

A qualitative research approach was used for this research. Ballenger's (2010) states that despite the use of interviews (a qualitative research method), some studies questions are best answered by using a quantitative research approach. However, in this research the qualitative method was proved superior in evaluating the efficacy of government intervention policies and measures on small-scale cannabis farmers in South Africa.

Using the hermeneutic phenomenological method, an in-depth conversation could be used to do a different kind of qualitative study. Idahosa and Vincent (2019) also support this method. Through in-depth interviews, the researcher was able to find themes and patterns that had been found in earlier studies, as well as the most common problems small-scale cannabis farmers' experience.

The data for the research was collected using qualitative research methods, such as surveys and interviews. The significance of this methodology stems from the fact that it permits the examination of common themes. These themes aided in identifying existing challenges that hinder the efficacy of government intervention policies for small-scale cannabis producers.

The research design resembled in-depth interviews where the subjects took the lead in telling the story, thus enabling the researcher to find the analysis's unspoken themes. It has been discovered that the phenomenological approach is effective in helping to comprehend the difficulties and obstacles faced by the respondents. As a result, the research's design mandates that it use in-depth, unstructured interviews.

Idahosa and Vincent (2019) and Johnson (2014) use the phenomenological research method to answer the study's questions. The goal of the study was to determine the effectiveness of government frameworks (interventions and policies) in promoting small-scale cannabis farming in rural areas of South Africa. The authors picked this design so that they could learn about the participants' problems and successes from their own lives. Both Idahosa and Vincent (2001) and Johnson (2014) rationalised the choice of this study design because it provides insights from the respondents' point of view; facilitates thematic and narrative analysis of findings; enables respondents to answer research questions correctly by discussing more than one paradigm during an interview session and there is no need to use observation techniques.

1.17 Research procedure and methods

The following subsection of the research methodology described the study's procedures and methods in detail. The subsections 1.18.1 examined the manner in which the required data was collected as well as the corresponding collection instruments. Section 1.18.2 discussed the target population of the study and the methodology for sampling from this population. This provided guidance on how to obtain the appropriate sample and consequently reduce attrition bias in the results. Methods for processing data and information are examined in Section 1.18.3.

1.18 Research Tools

1.18.1 Research tools for collecting data and information (s)

The research design indicated that information was gathered through a series of in-depth interviews with study participants. As a consequence, the study employed an interview schedule to guide the narrative and conversation. This is consistent with phenomenological methodology (Johnson, 2014). Employing an exploratory structure will necessitate semi-structured interviews. In contrast to fully structured or unstructured interviews, the semi-structured interview compliments qualitative data with further exploratory techniques central to the study. This is possible because interviewees are provided with open-ended questions that allow them to share narrative experiences (Johnson, 2014).

The methodology of data collection employed semi-structured interviews to explore participants' personal experiences and encounters as small-scale cannabis growers in rural areas of South Africa. In this way the exploratory approach is critical since it assist the researcher in answering research questions by means of various themes that will underpin data analysis (Johnson, 2014).

In-depth interviews facilitated the identification of significant themes based on responses from participants during interview sessions that inquired about personal experiences of being small-scale cannabis growers and led to unrestricted responses.

1.18.2 Research target population and responder selection

Bryman (2016) defines a population as a group of elements or cases, whether individuals, objects, or events, that conform to specific criteria and to which it is intended to generalize research findings.

The targeted population of the research was small-scale cannabis farmers in the cannabis industry, which includes small-scale licensed commercial farmers. The expanded scope permitted the participation of more farmers. The rationale was that some small-scale cannabis farmers would have refused to participate in research study due to the sensitive nature of the information especially for those that are cultivating cannabis without a permit. Therefore, the inclusion of commercial farmers allows for a larger population.

1.18.3 Selecting or sampling responders from the intended audience

The sampling strategy for this research was based on the need to gather qualitative data from in-depth interviews of respondents. Sampling can be subdivided into probability sampling techniques comprising of Simple Random Sampling, Systematic Sampling, Clustered Sampling, and Stratified Sampling (Health Knowledge, 2020). Non-Probability techniques on the other hand include Convenience Sampling, Quota Sampling, Purposeful Sampling, and Snowball Sampling.

Although a sampling methodology may result in systemic issues and pose a serious threat to the accuracy and generalizability of the results, it is generally inexpensive and simple to implement (Ascholar, 2020). The researcher gains access to a wider range of observations in the process of gathering data and information for research.

There is a variety of data gathering techniques that can be utilised in qualitative research studies such as in-depth interviews, face -to-face, telephonic, and internet-based interviews. The researcher looked into other ways of accessing small-scale farmers in order to overcome logistic challenges. For instance, the researcher used available digital platforms such as video calling, Microsoft Teams and Zoom to conduct interviews and record responses during the data collection phase. Audio and video recordings of the interviews were made available right after the interviews thus making it easy to type and transcribe in real time.

1.19 Research data and information analysis

There are various methods that researchers use to analyse qualitative findings (Warren, 2020). The choice of data analysis technique is always influenced by research aims, objectives and questions. However, since no single technique is perfect, it is advised to adopt the Triangulation Method. In triangulation the researcher utilises two or more techniques to analyse findings.

Qualitative Analysis was used to analyse the research data and find answers to the research questions from Chapter 1. The findings were subjected to thematic and narrative analysis methods in order to determine the effectiveness of government frameworks that have been deployed to promote small-scale cannabis farming in rural areas of South Africa.

According to Braun and Clarke (2006), thematic analysis is the arrangement of findings (respondents' experiences, views, and opinions) into meaningful, interesting and important themes and patterns in order to address research questions. A thematic analysis might be a time-consuming technique but its flexibility makes it more appropriate for the analysis of detailed and complex qualitative findings.

Outlined below are the various steps followed during thematic analysis: Transcription of recorded data; Familiarisation with data; Generation of initial codes; Development of a coding frame; Identification of common themes or patterns; Review of themes or patterns; Definition of labelling of themes or patterns and Reporting Narrative analysis on other hand enables the researcher to summarise personal stories (narratives) of respondents that provide insights, views and perspectives on research questions. This technique is associated with certain weaknesses such as research biasness, time consuming and lower chances of repeatability in subsequent studies.

1.20 Description of the research respondents

Small-medium sized cannabis farmers based in rural areas of South Africa formed part of the study. These farmers were better positioned to address the research questions of the study through face-to-face interviews or questionnaires when gathering the required data. The farmers' education level determined the choice data collection instruments while the amount of experience as cannabis growers influenced inclusion in the study group.

1.21 Ethical consideration

1.21.1 Ethical consideration

According to Bhandari (2021), the concept of research ethical principles is a set of principles that guide your study designs and methodologies. When acquiring information from members of the public, scientists and researchers are expected to behave themselves in line with a specified code of conduct. Research done in academic settings and in enterprises must always comply to the requirements of ethical research.

The research study took into consideration a number of possible ethical problems, such as the dignity, feelings, rights, safety, and well-being of research participants, as

well as the sensitivities of the circumstance. During the course of the study, the following processes were followed in order to preserve and maintain ethical standards:

i. All interviews were conducted at participants' places of residence to prevent psychological discomfort.
ii. The research goals were thoroughly explained in local languages to make sure that participants fully understand the research's value.
iii. The researcher obtained either written or verbal consent from all farmers that comprised the study group in order to eliminate or minimise stress, and anxiety.
iv. All research subjects were afforded adequate protection against physical risk, discomfort, anxiety, harassment, breaches of privacy, and degrading behaviour during interviews.
v. There was strict adherence to confidentiality and anonymity in line with the Data Privacy and Protection Act of 1998 and the Protection of Personal Information Act (POPIA) 4 of 2014 (this involved concealing participants' identity and not using interview information without consent).
vi. The researcher avoided any forms of research misconduct such as plagiarism, fraud, falsification, lying, exaggeration, conflict of interest, and coercion.

1.21.2 Permission to conduct the study.

A university research permission application was filed prior to conducting the study. This application whilst authorising a researcher to contact university staff on research related matters did not substitute the subjects' consent to participate in the study project. Study participants reserved the right of consent to participate in the study that collected data directly from them through instruments such as questionnaires, interviews, or otherwise.

1.21.3 Informed consent

Informed consent involves alerting prospective research volunteers about the study's essentials and their role in it. Obtaining informed consent from human participants is crucial to ethical research. Providing a written permission document with the required information (i.e., informed consent) and presenting it to potential participants is a

common way to gain consent. Informed consent guarantees that research study's adherence to ethical and legal requirements pertaining to the use of human subjects.

1.21.4 Voluntary participation

Participation requires informed consent. Researchers are expected to sensitise and reassure research participants about the importance of compliance to the informed consent concept. This ensures that participants thoroughly understand the risks associated with participation in a study, and thus make informed, thoughtful, and voluntary decisions on whether to participate or not.

1.21.5 Confidentiality and anonymity

Confidentiality and anonymity protect human subjects' personal data throughout data collection, analysis, and reporting. The act of eliminating or changing participants' individually identifiable data is called "confidentiality." However, anonymity is data collecting without personal information. In qualitative research, confidentiality is placed above participant anonymity since social scientists are more interested in people's behaviour and experiences than their profiles.

1.21.6 Data management

The researcher complied with all Data Protection Regulations and Personal Data Protection Acts requirements like POPIA during the processing of personal data in order to protect all personal information provided throughout study. Before processing their personal data, research participants were informed. The study permission application included a document describing how personal data would be used and processed as required by law.

1.22 Chapter Outline

Below is an outline of chapters that will comprise the final research:

- Chapter 1: Background of the study – It presents the milieu of study, purpose of the study, problem statement, motivation of the study and objectives of the study.

- Chapter 2: Literature Review - It involves a detailed discussion on available published secondary sources relating to cannabis policies and literature gaps identified.
- Chapter 3: Research methodology – This chapter develops in detail the research methodology used in the study. The chapter will explain methodology used to collect data in detail, the selected design of the research and validity and ethical aspects of the research will be considered. The selected population sample, sampling frame used will also be discussed in detail.
- Chapter 4: Presentation, analysis and interpretation of quantitative and qualitative data collected data is sorted, organized, analyzed.
- Chapter 5: Discussion of findings – This chapter discusses the findings of the study and provides a platform for drawing conclusions.
- Chapter 6: Conclusion - This chapter presents the conclusion of the research findings and gives recommendations of the study.

Chapter 2 presents the literature review in which the researcher explores the literature of the study in detail analyse the factors that can lead to the formation of successful home-grown franchise models in South Africa that can compete globally.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

Chapter 1 provides the background of the researcher study and defined the research problem; it outlined the summary of methodology and data gathering tools for conducting the study. This chapter provides a literary overview of the various theories and concepts underpinning the policies and interventions that the South Africa government has put in place to promote cannabis farming among small-scale farmers in rural areas.

2.2 Theoretical framework

2.2.1 Inclusive Policy Making

Inclusive policy making is an approach that is a popular develop approach adopted by governments to come up strategies aimed bridging existing rural-urban divides and

gap between the rich and poor; stimulating economic and sustainable development and mitigating various forms of social injustices, inequalities and marginalisation of within nations.

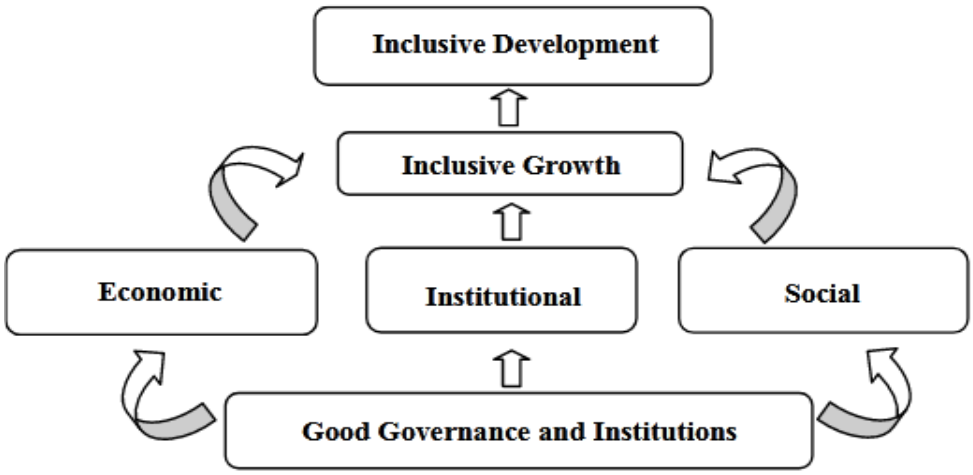
According to OECD (2023) inclusive policy making refers to concept where whereby governments adopt and implement inclusive, participatory, multidisciplinary and equitable development frameworks. The inclusivity of the frameworks is driven by assigning equal priority to multiple aspects of development such as economic growth, human behaviour, social and political institutions.

Inclusive policy making is undertaken within the neo liberal paradigm (Borodina & Prokopa, 2019). This paradigm allows nations to pursue sustainable development agendas that are aligned to the United Nations Sustainable Development Goals (SDGs), observance of basic human rights, promotion of various national traditions and customs, social and political inclusion of all groups.

Sustainable development is characterised by inclusive growth and development strategies aimed at alleviating poverty levels (Burange et al. 2014). Inclusive growth and development are correlated concepts in the realisation of sustainable development goals of providing basic services and infrastructure for citizens to improve welfare status, living standards and quality of life. The former involves the creation of economic opportunities for all people that can lead to increases in incomes and socio-welfare benefits. The latter combines inclusive growth with implementation of democratic principles.

According to Bulange et al. (2014) and Borodina & Prokopa (2019) sustainable development consists of economic, institutional and social pillars that are enhanced by effective governance and institutions (see Figure 2.1 below).

Figure 2. 1: Pillars of Sustainable Development



Source: Burange et al. (2014:78)

The pillars are linked to the 2030 UN SDGs on account of these factors: provision of land tenure systems; equitable access and distribution of resources; bottom-up driven community approaches and participation; protection of basic human rights; effective management of localised resources; rule of law and transparency.

In 2018, delegates at attending the 48th World Economic Forum (WEF) came up with an inclusive development index (IDI). Borodina & Prokopa (2019) posit that the IDI determines each country's level of sustainable development by rating nations on a 1 – 7 scale[28]. The IDI utilises key performance indicators (KPIs) that are more based to measure the level of development (see Table 2.1).

Table 2. 1: KPIs used to measure Inclusive Development

Inclusive Development Indicator (IDI)	Key Performance Indicators (KPIs)
Growth and Development	Per capita GDP, Employment, Labour Productivity, Healthy Life Expectancy
Inclusion	Median Household Income, Income Gini, Poverty Rate and Wealth Gini
Intergenerational Equity and Sustainability	Adjusted Net Savings, Dependency Ratio, Ratio of Public Debt to GDP and Carbon Intensity

Source: Author Derived

[28] Norway had most inclusive development based on the highest score of 6.08 in 2018.

In a South African context some of the examples of inclusive policies like the National Development Plan (NDP) 2030, Rural Development Programme (RDP), and the 2021 National Cannabis Master Plan were formulated by the government in order to include small-scale farmers into the lucrative commercial cannabis farming in rural areas. These frameworks, that are aligned to international goals such as the 2030 UN Agenda on Sustainable Development Goals (SGDs), will be pivotal in affording poor and marginalised farmers with various economic opportunities to alleviate poverty.

2.2.2 Induced Innovation Theory & the Recursive Model

This section discusses how various government policies and interventions (National Development Plan (NDP) 2030, Rural Development Programme (RDP, and the 2021 National Cannabis Master Plan) can facilitate the development of affordable, appropriate and modern innovations within the agricultural sector. These innovations are critical in promoting small-scale farmers' participation in the value chain of South Africa's commercialised cannabis industry.

Innovation refers to ideas or processes that business use to make strategic adaptions or create novel products or services (Boyles, 2022). Different forms of innovations benefit business organisations by facilitating the mitigation of problems; increasing productivity, revenues and competitiveness; providing cost saving and differentiation strategies mechanisms. Hayes (2021) argues that innovative ideas and technologies are main drivers of creativity; value proposition; efficient production and operations; broad product and service range; product or service utility and customer satisfaction within markets.

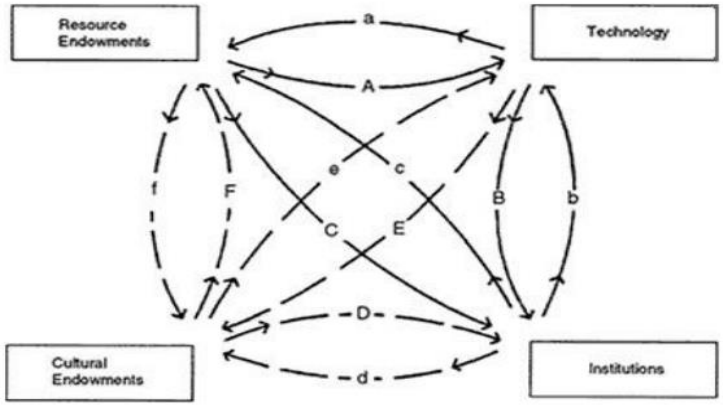
Induced innovation theory provides entrepreneurs and business leaders with valuable insights on understanding how innovations occur. This microeconomics theory was developed by John Hicks in 1932. Hicks writing in "The Theory of Wages" stated that "a change in the prices of the factors of production is itself a spur to invention of a particular kind-directed to economizing the use of a factor which has become relatively expensive". Entrepreneurs and businesses are often forced to come up with ideas or inventions that help organisations to mitigate changes associated with rising prices or scarcity of certain production factors.

In 1985, Vernon Ruttan and Yujiro Hayami adopted and applied Hick's theory to understand how induced innovation can influence agricultural development among

nations (Hayami & Ruttan, 1971 & 1984). The two authors adopted the recursive model (see Figure 2.2) to explain how technology and institutions drives various innovations and inventions that are critical in agricultural development and increasing production.

The recursive model consists of exogenous and endogenous factors that directly or indirectly influence innovations in agriculture (Coppola et al., 2018). Exogenous factors like resource[29] and cultural[30] endowments are located on the left-hand side of the recursive model. These external factors of production are outside the control of farmers, and responsible for fluctuations in prices, and supply of farm inputs. Endogenous factors, located on the right-hand side, by contrast are dependent variables that affect each other and are influenced by exogenous ones.

Figure 2. 2: The Hayami-Ruttan Recursive Model of Induced Innovation



Source: Hayami & Ruttan, (1984)

Hayami and Ruttan (1971 & 1984) argue that changes in exogenous factors (like price hikes, inelastic supply, and population and income booms) force farmers to adopt innovative ideas and technologies in order to mitigate negative effects. Governments are supposed to play leading roles in driving innovations by establishing and funding public institutions that can conduct research and development activities. In addition, these public institutions should be tasked with diffusing information and equipping farmers with adequate information, knowledge and skills to increase the adoption levels of innovative ideas and inventions in the agriculture sector. In this way, the

[29] Examples are management, development of available resources; capital; assets etc.
[30] Tangible and intangible cultural aspects in various regions that can be monetised

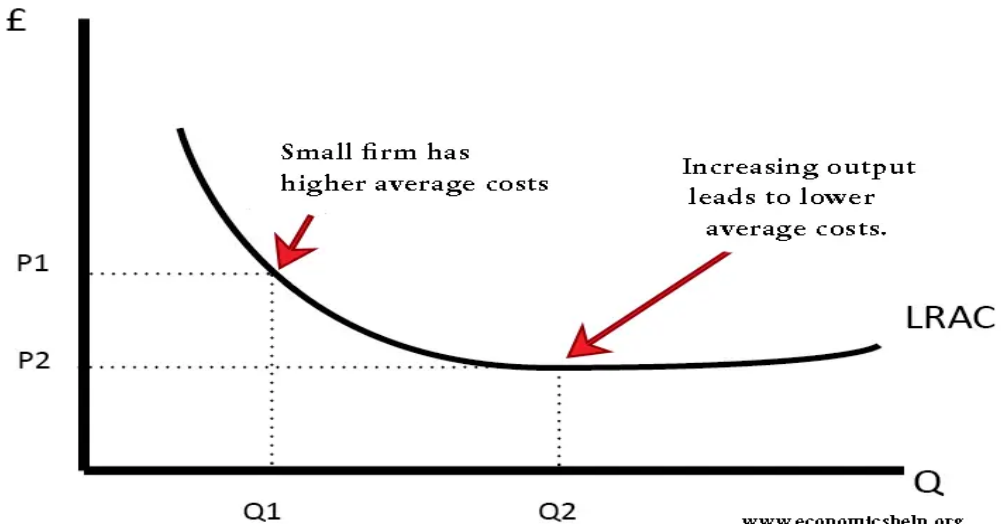
induced innovations will help farmers to become more competitive because mechanisation is linked to lower costs of inputs, increased production, and more returns from investments.

2.2.3 Economies of Scale

This section discusses how government policies and interventions adopted in this country can help small-scale cannabis growers in rural South Africa to achieve economies of scale. Policies like the National Development Plan (NDP) 2030, Rural Development Programme (RDP), and the 2021 National Cannabis Master Plan are meant to leverage the position of small-scale farmers so that they can benefit from economies of scale in the commercial cannabis industry.

Economies of scale refer to situation where increased output in production corresponds with decreased unit prices (Kenton, 2022 & Pettinger, 2019). Economies of scale are a result of labour specialisation, adoption of technological advances, efficient utilisation and distribution of resources and production processes. This in turn lead to increased competitiveness because it allows a business to maximise profits, implement cost savings that reduce operational costs, charge lower market prices than competitors, and pay workers more. The graph below illustrates the cost savings derived from economies of scale.

Figure 2. 3: Costs Savings from Economies of Scale



Source: Pettinger (2019)

The graph assumes an L shape showing how output increases from Q1 to Q2 resulting a reduction of long-run average costs (LRAC) from P1 to P2. In this way economies of scale promote efficiency in production as firms increase in size.

The concept of economies of scale dates back to the days of Adam Smith. According to Kenton (2022), Smith came up with this concept based on the argument that division of labour increased production. Later on Alfred Marshall, a British economist, refined the concept by classifying it into two categories namely external and internal economies of scale. The former category consists of both positive and negative external factors that exist in a business environment. These externalities have the ability of influencing production costs for a firm. Examples are tax incentives, government subsidies, transport and communication infrastructure, availability of skilled and knowledgeable workforce, access to product or service innovative ideas, relationships with suppliers and business partnerships. Internal economies of scale are within the control of business firms and are thus critical in the promoting efficient production processes. Table 2.2 below outlines examples of internal economies of scale.

Table 2. 2: Types of Economies of Scale

Type of Economies of Scale	Description
Technical Economies of Scale	A business' ability to adopt technology for the purpose of mechanising production processes.
Bulk Purchase Economies of Scale	Buying production inputs and resources in bulk in order to make savings from discounts.
Management Economies of Scale	Effective and efficient management of workforce by managers and supervisors and implementation of cost saving measures
Risk Bearing Economies of Scale	Degree to which business shares risks with its partners and stakeholders increases ability to overcome economic downturns
Financial Economies of Scale	This refers to ease of accessing financial assistance at attractive terms from lenders
Container Principle Economies of Scale	Cost saving strategy of bulk transportation of raw materials and goods

Marketing Economies of Scale	Effective and efficient marketing strategies
Specialised Labour Economies of Scale	This is practice of hiring skilled, experienced and competent employees

Source: Author Derived (2023)

Roest et al 2018 posits that government policies and interventions aimed at creating economies of scale must be seen through the lens of modernisation paradigms. For instance, development policies like the National Development Plan (NDP) 2030, Rural Development Programme (RDP), and the 2021 National Cannabis Master Plan originating from the central government are intended to accelerate land reform[31]; the adoption of various technologies, improvement of transport infrastructure, access to financial assistance, provision of farming and entrepreneurial skills and knowledge. Ideally such policies and interventions are supposed to level the playing field in the farming sector especially for previously marginalised small-scale farmers of South Africa. However, the reality is that much remains to done in order for these farmers to benefit from economies of scale.

A Conversation article written by Mazenda and Masiya in October 2022, highlighted several challenges faced by South African small-scale farmers, and the reasons why this group struggles to attain economies of scale in the agricultural sector. According to the authors the main cause has to do with the fact that most of the arable land is still owned by white commercial farmers who use to dominate agricultural production. That is white farmers own 72% of farmland as opposed to 4% by black farmers, and large commercial farmers account for 75% of agricultural production in South Africa.

2.2.4 Sustainable Livelihood Framework (SLF) or Sustainable Livelihood Approach (SLA)

Arguments presented by (Grooten, 2023 & Scoones, 2015) emphasise the need for 21st century policy makers to prioritise designing development frameworks that consider and balance the perspectives and needs of present and future generations. Despite the daunting challenges, such frameworks create win-win situations by preserving the environment and its finite resources for those both that are alive and

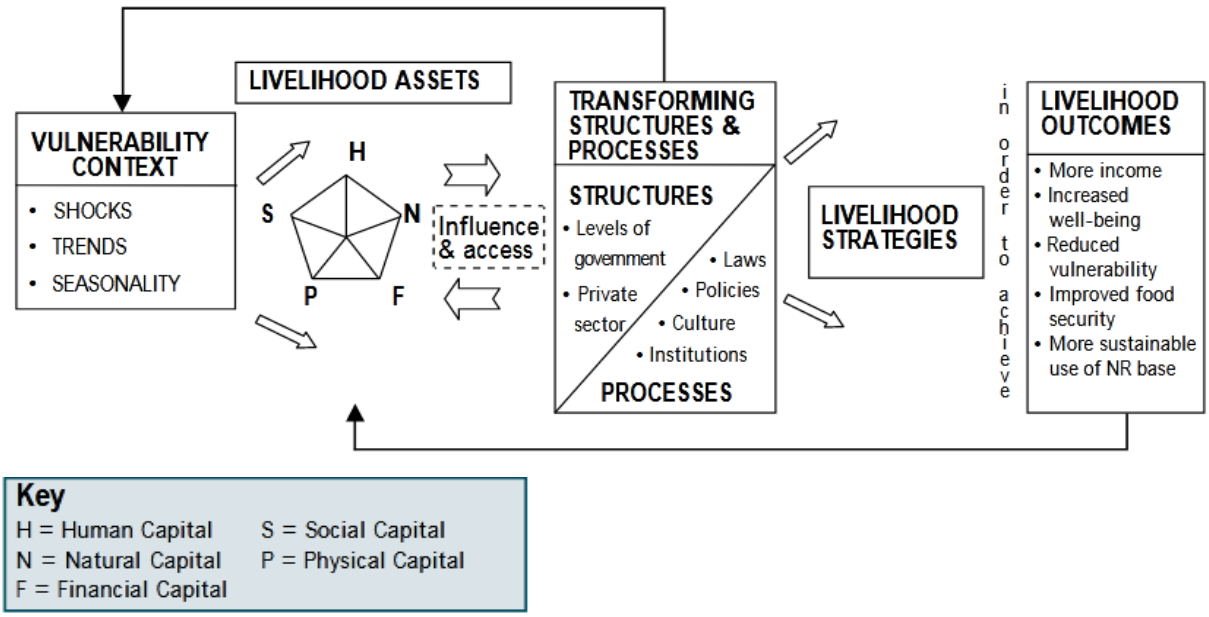
[31] In agriculture, large farms are better positioned to reap more benefits from economies of scale unlike smaller ones.

not yet born. Policy makers are, therefore, advised to pursue development strategies within the paradigms of Sustainable Livelihood Frameworks (SLFs) which are integrated, multidisciplinary, flexible, inclusive and consultative. The framework is ideal since it provides people with livelihood opportunities, sustainable tangible and intangible assets and resources; knowledge; skills and capabilities to mitigate environmental, economic, social and political setbacks. Nowadays there is a consensus that SLFs have lead to more people centred development strategies that add value in endeavours aimed at alleviating poverty and improving living standards in many parts of the poorer South divide.

The sustainable livelihood framework (SLF) was originally conceptualised by an advisory panel of the World Commission on Environment and Development (WCED) in 1987. As posited by da Silva Junior (2020), two researchers – Robert Chambers and Gordon Conway adopted the concept to hypothesise the contextual drivers of development. Chambers & Conway (1991:10) defined sustainable livelihoods framework as "A livelihood comprises, the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable when it's able to cope with and recover from stress and shock, maintain and or enhance its capabilities and assets, and provide sustainable opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term".

The SLF, linked to the 1992 Rio Earth Summit and its Agenda 21, is based on an assumption that development activities are influenced by factors such access to assets and resource; various vulnerabilities, and prevailing policies, processes and institutions (DFID,2008 and Morse & McNamara, 2013). The components of SLF are presented in Figure 2.4 and Table 2.3 below.

Figure 2. 4: Components of a sustainable Livelihood Framework (SLF)



Source: Adapted from DFID, (1999:1)

Table 2. 3: Components of SLF

SLF Component	Description
Vulnerability Context	Externalities that are beyond people's control often determine availability and accessibility of assets required for livelihoods. Examples of these are Seasonality of job opportunities, prices, production and health; Shocks such as health of people or livestock, political instability and conflict, manmade and natural disasters and economic downturns and Trends in politics, governance, economy, resources and technologies. Therefore, people should be equipped with adequate knowledge and skills that can facilitate effective coping mechanisms.
Livelihood Assets	People need five critical assets (Human, Natural, Financial, Social and Physical Capital) that can be transformed into positive livelihoods during sustainable development
Policies, Institutions & Processes	Drivers of development strategies and decisions; capital availability, exchange and access; inclusivity and well-being at all levels of development.
Livelihood Strategies	Wide range of activities and options that allow people to attain intended livelihood outcomes. The strategies are directly or indirectly influenced by livelihood assets and vulnerability contexts.

Livelihood Outcomes	Intended livelihood outcomes for people like increased incomes, standards of living, food security, environmental sustainability and decrease in vulnerabilities

Source: Author Derived (2023)

The various policies and interventions adopted by the South African government to promote commercial cannabis among small-scale farmers is an attempt to facilitate sustainability through sustainable livelihoods of SLFs. The purpose of policies such as the National Development Plan (NDP) 2030, Rural Development Programme (RDP), and the 2021 National Cannabis Master Plan is affording rural dwellers (cannabis small-scale growers included) with various opportunities that can better position them to pursue sustainable livelihoods. To achieve this purpose, the policies focus on land ownership, basic service and market infrastructure and facilities, training and legislations among other things that can uplift the situation of people living in rural areas.

2.3 South African Cannabis Master Plan

2.3.1 Introduction

The South African government introduced a National Cannabis Master Plan in July 2019. The rationale behind this national plan was to put in place various strategies aimed at developing policy and regulatory frameworks in order to promote the commercialisation of cannabis (hemp and dagga plants and products) in the country. This plan would in turn positively contribute towards other development efforts such economic growth, job creation and poverty alleviation (Draft National Cannabis Plan, 2019). The Department of Agriculture, Land Reform and Rural Department (DALRRD) is mandated to collaborate with various stakeholders comprising government departments, private business institutions, organised labour and communities in order to oversee the effective implementation of the National Cannabis Plan.

2.3.2 Objectives of the Cannabis Master Plan

The various goals of the National Cannabis Master Plan are there to promote an inclusive and sustainable commercial cannabis industry in the country through the achievements of 9 objectives. These 9 objectives, referred to as pillars, are as follows:

2.3.2.1 Pillar 1: Effective Regulatory Systems

The Department of Health (DOH), together with other departments like the Department of Justice and Correctional Services (DoJCD) and The Department of Small Business Development (DSBD), has put in place a regulatory framework to regulate the South African commercial cannabis industry. The regulatory framework is made up of various national drugs and protected substance legislative acts and complies with the provisions of the 1961 UN Convention on Narcotics. Examples of these legislative acts are Medicine and Medicine Substances Act of 1965, and the Drugs and Drugs Trafficking Act of 1982.

Pillar 1 is there to facilitate amendments to existing Drugs and Drugs Trafficking Acts; adopt relevant policy and legislative frameworks that can legalise and promote an inclusive commercial cannabis industry in South Africa.

2.3.2.2 Pillar 2: Sustainable Seed Supply Systems

The goal of pillar 2 is to provide oversight on key activities like compliant cannabis seed breeding and testing; cannabis cultivar control; import and export of commercial cannabis inputs and outs; certification of commercial cannabis related value chain activities and the production, processing and packaging of commercial cannabis products.

The South African Agricultural Research Council, assisted by the Department of Small Businesses (DBS), spearheads efforts under this pillar.

2.3.2.3 Pillar 3: Research Development and Innovation (RDI)

The main objective of pillar 2 is to provide funds and drive efforts of promoting innovative and affordable technologies and research activities within the South African cannabis sector.

To achieve this objective, the Department of Science and Innovation (DSI), as leader of the pillar, works in close coordination with various stakeholders from Indigenous Knowledge Based Bio-Innovation Committee of Science Councils, local universities, government departments, Traditional Health Practitioners (THPs), and small-medium enterprises in rural areas and townships across the country.

2.3.2.4 Pillar 4: Producer Support Systems

It is the responsibility of the DALRRD, in coordination with the DSBD, to mobilise and support and incorporate as many small-scale (legal and illegal) growers of cannabis into the formal commercial cannabis chain value chain in this country.

The DALRRD has put in place strategies that encourage small-scale formal and informal cannabis growers and suppliers to actively participate in the lucrative cannabis supply chain activities. Examples of these strategies are: provision of financial and technical assistance to previously marginalised and indigenous small-scale farmers, and creation of conducive conditions and incentives to encourage commercial cannabis production in poverty ridden rural areas of South Africa.

2.3.2.5 Pillar 5: Market Development

The main responsible parties, the Department of Trade, Industry and Competition (DTIC) and DSBD, intend to open up and increase access thereof to existing and new domestic and international markets in order to benefit all commercial cannabis value chain participants.

To achieve this objective, DTIC and DBSD are tasked with to facilitating, coordinating and supporting the establishment and access of cannabis domestic and export markets; dissemination of market information; put in place collection, storage and processing facilities for cannabis products and provision of relevant resources to disadvantaged producers and suppliers within the commercial cannabis sector.

2.3.2.6 Pillar 6: Enterprise and Supplier Development

The DBSD, together with the DTIC, are mandated to promote an inclusive and sustainable commercial cannabis industry in the country.

This calls for an equitable inclusion of all large, small-scale and indigenous growers into the commercial cannabis industry through these key activities such as the establishment of incubation and incentives programmes to attract new entrants; active coordination that can link commercial cannabis producers to product manufacturers and retailers within the industry's supply chain.

2.3.2.7 Pillar 7: Manufacturing and Product Development

At the forefront of pillar 7 are the DBSD, together with Department of Trade, Industry and Competition (DTIC). These two departments are responsible for efforts to increase the level commercial cannabis products processing within the country.

Increased processing is possible through the following interventions: investment and infrastructure development; provision of attractive incentives to manufacturers and the intensification of research studies on cannabis products and innovative technologies.

2.3.2.8 Pillar 8: Education and Training

Education and training are key components for the development of an inclusive and sustainable commercial cannabis industry in South Africa. Pillar 8, under the direction of the Department of Higher Education and Training (DHET), the Department of Basic Education (DBE) and the Department of Labour and Employment (DLE), is critical to implementation of the Cannabis Master Plan because it provides commercial cannabis value chain participants with relevant knowledge, skill sets and attitudes that can promote the growth of the industry; helps to identify potential markets; advocates for the establishment of cannabis education and training Sector Education and Training Authorities (SETAs), and helps eliminate or downplay negative misconceptions associated with hemp and dagga plants in this country.

2.3.2.9 Pillar 9: Communication and Awareness

The Government Communication and Information System (GCIS), in coordination with other stakeholders, uses pillar 9 to communicate information and raise awareness about the South African commercial cannabis sector.

This pillar is characterised by these interventions: evidence-based consumer education and awareness programmes on various economic and responsible uses of cannabis products; training and education of all commercial cannabis growers, producers, suppliers and retailers of products regarding value chain opportunities and potential markets; training commercial cannabis stakeholders on legal compliance requirements

2.3.4 Challenges associated with the Cannabis Master Plan

According to Bowman & Grube (2023); Maposa (2021) & Mathibe (2023), the Cannabis Master Plan is already experiencing a number of challenges related to its implementation after years being adopted.

Firstly, the government is faced with difficulties that can lead to the unqualified removal of cannabis from the Drugs and Drug Trafficking Act and pave way for full legalisation of this important commercial cannabis industry input. So far the DOH has only managed to classify cannabis as schedule 4 substance as opposed to schedule 0 by May 2020. This means that the usage of cannabis remains restricted for medicinal purposes only. In addition, the legal challenges also extend to the choice and quality of cannabis seeds that farmers are allowed to use, and the flooding of markets with illegal cannabis inputs and products mostly by informal sector players.

Secondly, the South African commercial cannabis sector level of market competitiveness in comparison that of other countries is worrying. For instance, experts attribute the lower competitiveness to factors such as scarcity or inadequate investment capital, stringent requirements and costs of domestic commercial cannabis licences and procedures; poor quality of domestic cannabis plants that in terms of weight to volume ratio and minimal processing of cannabis products capacities amongst domestic manufacturers.

Thirdly, the country's Cannabis Research and Innovation (RDI) efforts are problematic thus far. Examples of challenges faced by the cannabis RDI sector are: inadequate funding to the development of innovative technologies and inputs within the supply chain, and the continued marginalisation of higher learning institutions[32] in terms of capital and human resource allocations and infrastructure development.

Lastly, it is taking longer than expected to eradicate the negative beliefs and misconceptions that a majority of people have about cannabis plants and products in this country. These beliefs and misconceptions are to some extent directly linked to the slower rate of government efforts to fully legalised cannabis as commercial option for a developing nation like South Africa. People opposed to full decrimanalisation

[32] This is allegedly a common challenge for institutions that located in rural areas where most small-scale cannabis growers are found.

and legalisation of the plant and its products feel that cannabis will only exacerbate societal problems of drug abuse and addiction in the country.

2.4 Licencing of Commercial Cannabis Participants in South Africa

2.4.1 Introduction

As posited in the Cannabis Master Plan (2019), commercial cannabis growers, manufacturers, distributors and retailers of cannabis products are expected to do so upon being licenced under the provisions of the Medicines and Related Substance Act, 1965 (Sections 22C, 22D, 23 and 24). The licencing procedure is the jurisdiction of the South African Health Products Regulatory Authority (SAHPRA). SAHPRA, an independent regulatory entity that reports directly to minister of the National Health Department, is responsible for promoting access to safe health products for humans and animals in South Africa (SAHPRA annual report, 2020/21).

2.4.2 SAHPRA Licence for Commercial Cannabis Farmers or Manufacturers

SAHPRA issues a 5-year licence at a fee to applicants that have to meet the following conditions:

2.4.2.1 Date of Audit

Law enforcement or regulatory Compliance must carry out an audit of cannabis growers' or product manufacturers' farm or premises respectively in order to level of compliance to the GAP and GMP of DAFF and SAHPRA. Therefore, licence applicants are compelled to suggest a suitable date as to when they can be audited. The assigned auditor then confirms the actual date of audit with applicants 5 working days in advance.

2.4.2.2 Good Agricultural Practices (GAP)

Good agricultural practices as defined by SAHPRA refer to a collection of farming practices that will effectively maintain and promote environmental, economic and social sustainability, quality and safety of agricultural products produced by a farm.

2.4.2.3 Good Manufacturing Practices (GMP)

SAHPRA regularly issues updates on what constitutes good manufacturing practices (GMP) to commercial cannabis farmers and manufacturers of cannabis products.

Updated copies of GMPs are available at SAHPRA's CEO office or website - https://www.sahpra.org.za/

2.4.2.4 Responsible Pharmacist (RP)

All manufacturers or dispensers of medicinal cannabis products are compelled to comply with all provisions of the South African Pharmacy Act and other related legislative acts.

2.4.3 A Critique of SAHPRA's Licence

The full licence application form is four parts and eleven pages long questionnaire that must be completed. Those applying for or renewing a licence must provide details of personal information, farm or manufacturing activities, and security. Bowman & Grube (2023); Maposa (2021) have pointed out how the stringent nature of commercial cannabis licence requirements is cause for concern in the implementation of the Cannabis Master Plan in South Africa. For instance, it is easier for large and well-resourced commercial entities to comply with SAHPRA requirements, and thus dominate the commercial cannabis sector. By contrast, these compliance requirements have created many unintended consequences, and high entry barriers for disadvantaged and resource constrained small-scale cannabis farmers especially in rural areas.

2.5 Conclusion

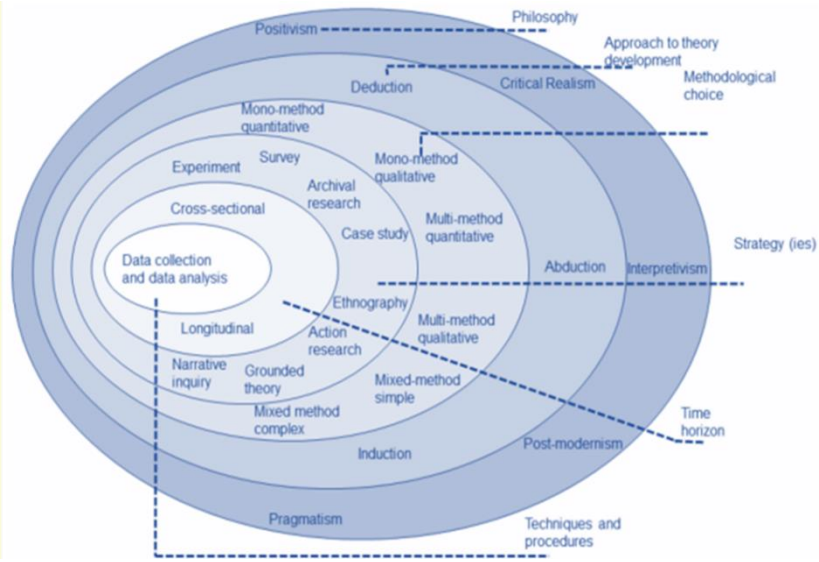
Chapter 2 discussed at length theories underpinning the research study; South Africa's National Cannabis Master Plan and SAHPRA role in the regulation of the commercial cannabis sector. The next chapter 4, unpacked research methodology and design used during the research study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

Chapter 2 reviewed the literature on impact of government intervention on cannabis in South Africa. Chapter 3 addressed in detail the theoretical and conceptual frameworks; research philosophy; approach; design; methodology; data collection and analysis methods; ethical consideration; quality assurance measures and identified limitations. In addition, the chapter provided a rationale for the various choices and decisions regarding each research process that form part of the study. The Saunders' Research Onion shown in Figure below outlines the research processes followed during this study.

Figure 3. 1: The Saunders' Onion



Source: Saunders, et al. (2019)

3.2 Research Philosophical Worldviews

According to Creswell (2007) & Saunders, et al. (2009), research methodologies influenced by various philosophical worldviews. These philosophies guided the choices of research processes and procedures that enabled a researcher to achieve research goals and answer research questions during the study.

A philosophical worldview is collection of beliefs that inform actions (Guba & Young (1994). At present, there are various philosophical worldviews that researchers utilise. Examples of these are: Positivism (an assumption that reality is a single objective entity or phenomena); Constructivist (Social Constructivism); Transformative (used in studies that investigate political, power and justice related phenomena that can lead to change in society); Realism; Pragmatism (correlations cause and effects of actions) and Interpretivism (Interpretivist Approach).

This qualitative research study was conducted within an interpretivist philosophical worldview. Interpretivism is a philosophy that acknowledges the subjective nature of qualitative findings gathered from people that have first-hand experience with the social phenomena under investigation, and leads to subjective interpretations conclusions afterwards (Creswell, 2007). As part of the study, responses of various social actors like commercial cannabis policy makers and small-scale cannabis farmers will provide subjective perceptions and insights on the effectiveness of government policies and interventions aimed at promoting small-scale cannabis farming in rural areas of South Africa.

3.3 Probability Sampling Technique

Probability sampling technique is a random process of selection of sample units (Kumar, 2011). There are three types of probability sampling namely simple random sampling (SRS); systematic sampling and stratified sampling. Despite being complex, costly and time consuming, the method allows each sample unit an equal and independent opportunity of being chosen to be part of a study sample and enhances reliability of findings and statistical inferences a study population.

3.4 Research Approach

A research approach refers to a blueprint or plan comprising processes, procedures and tasks that guides a research study (Solanki, 2022). An approach comprises sampling techniques; data collection instruments and techniques; data collection; analysis and interpretation of findings. Creswell (2007) & Dudovsky, (2016) posit that there are three research approaches namely: qualitative, quantitative and mixed.

3.4.1 Qualitative Research Approach

A qualitative research approach enabled the researchers to investigate and thus understand social phenomena, challenges, issues. The researcher utilised inductive reasoning to answer research questions, and achieve research aims and objectives, analyse and interpret findings (see Figure 3.2)

Figure 3. 2: Research Approach

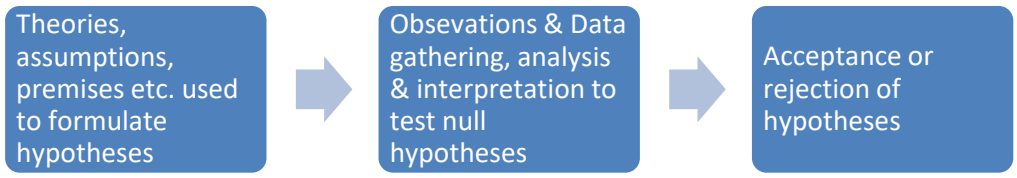


Source: Author Derived (2023)

3.4.2 Quantitative Research Approach

A quantitative research approach depends on deductive reasoning to develop hypotheses; test hypotheses based on the analysis and interpretation of objective findings and observations (see Figure 3.3).

Figure 3. 3: Quantitative Research Approach

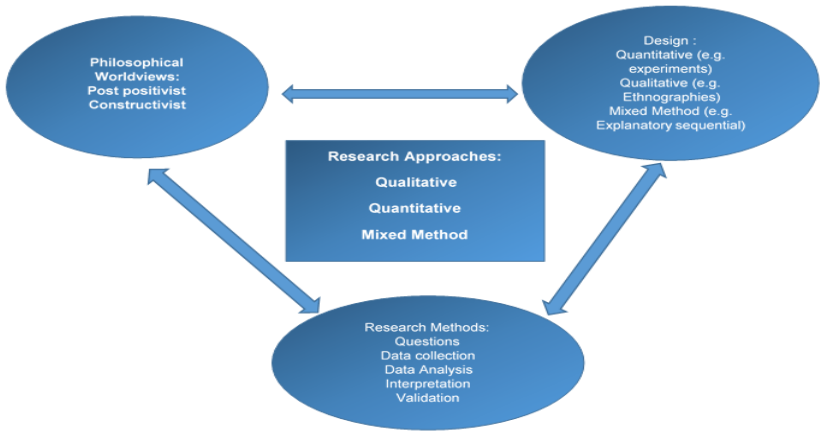


Source: Author Derived (2023)

3.4.3 Mixed Research Approach

A researcher combines qualitative and quantitative approaches to address research questions and achieve research goals during an investigation. Decisions on the choice research are influenced by the nature of research questions, philosophical worldviews, research designs and methods. This decision pathway is illustrated in Figure 3.4.

Figure 3. 4: Research Approach



Source: Creswell (2007)

A qualitative research approach was used to address research questions during this study. The approach facilitated in depth understanding and insights on a social phenomenon like the effectiveness of government policies and interventions for the promotion of small-scale commercial cannabis farming in rural areas of South Africa.

3.5 Research Design

Kumar (2011) & Pathak et al. (2013) define Research Design as a blueprint or plan for conducting a research study. The plan consists of logical and rational research steps, procedures, tasks, logistics and processes as part of the identification of research population; sampling strategy, and data gathering and analysis strategies. The choice of a satisfactory research design that can effectively address particular research goals and questions is determined by weighing advantages and disadvantages associated with each step or process (Evans, 2016).

A satisfactory Research Design focuses on these issues:

- Internal Validity – whether findings or results are due to causal relationship between independent and dependent variables and the presence of confounding variables.
- External validity – the degree to which findings or results can be applied or generalised to different research contexts, target groups or phenomena.
- Ethical Considerations – compliance with ethical principles that govern research studies.

- Statistical power - the ability to test hypotheses or detect relationships between variables during analysis.
- Cost effectiveness – the ability to conduct a study within its budgetary allocations and time constraints.
- Simplicity - a study's clarity, creativity, and theory development that enhances the chances of attracting potential funding.
- Publication potential – quality of study determines the probability of publication in journals etc.

To achieve the research goals and answer questions during the study, a qualitative design lead to the selection of a purposive sample consisting of 2 policy makers and 10 small-scale cannabis growers from rural areas in South Africa; gathering of data from the study group by means of semi structured interviews and questionnaires and utilisation of thematic and content method was used to analyse and interpret findings.

3.6 Sampling

Sampling is a process in which a researcher selects few individuals, subsets and objects from a larger population are selected that can be studied or investigated (Bhandari, 2022; Kumar, 2011 & McCombes & George, 2022).

3.6.1 Research Population & Sample

Bhandari, (2022) & Creswell (2007) distinguish a research population and sample. A research population consists of a defined group of people or non-human entities such as households, organisations, events etc. with certain characteristics that form the focus of an investigation. On the other hand, a research sample constitutes a smaller sub-group or subset of the universe that provides information, or can be measured or observed in order to address research questions.

According to Kumar (2011), the identification of a research population influenced by either inclusion or exclusion criteria. An inclusion criterion allowed the researcher to use certain characteristics or features of individuals or entities to select only those that can participate in a study group. By contrast, an exclusive criterion leads to the exclusions of individuals or entities from the study group based on characteristics or traits that were seen as inappropriate or could interfere with accuracy of findings.

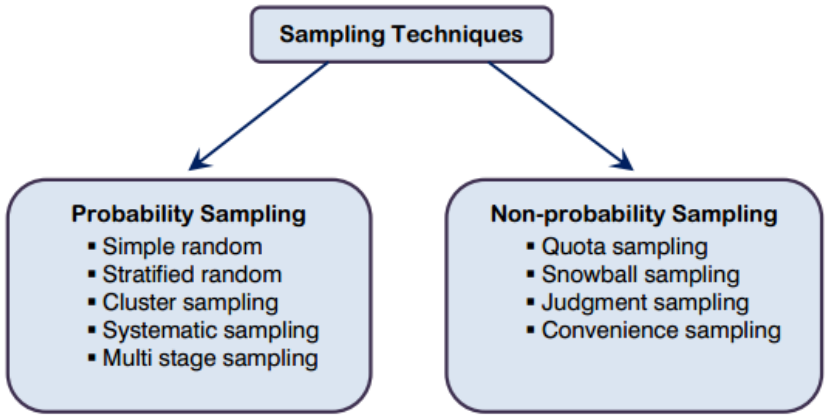
3.6.2 Purpose of Sampling

Sampling serves a number of purposes in research. Bhandari (2022) discusses the reasons why researchers use samples to gather information, and conduct observations and measurements. First, sampling is a practical and economic necessity since it is impossible to use an entire population for information gathering, observations and measurements in order to address research questions or test hypotheses. Second, some populations are geographically inaccessible or hard to contact. Lastly most databases used by researchers are only capable of storing a limited amount of information that is provided by samples.

3.6.3 Sampling Techniques

In research, one can choose between a probability and non-probability sampling technique to select samples (see Figure 3.5).

Figure 3. 5: Sampling Techniques



Source: Taherdoost (2020)

3.6.3.1 Non-Probability Sampling Technique

In non-probability sampling, the selection of a sample is determined by convenience or purpose (Creswell, 2014 & Bhandari, 2022). A researcher selects convenient or information rich samples for purpose of making observations or obtaining deeper under understandings and insights about research phenomena. Examples of non-probability sampling methods are Quota Sampling; Accidental Sampling; Judgmental or purposive Sampling; Expert Sampling and Snowball Sampling.

A purposive sampling method was used to select a sample of information rich policy makers and small-scale cannabis farmers for this study. The sample size was determined by a point of saturation since the researcher will stop collecting data when responses from participants (policy makers and small-scale farmers) are no longer provide new information on 'the impact of government intervention that promote small-scale cannabis farmers.

3.6.3.2 Sampling Procedure

For the purpose of this study, the Researcher followed a non-probability sampling method to purposively select 5 policy makers from the Department of Agriculture and Rural Development (DARD), and 10 small-scale cannabis growers from the rural areas of various provinces. Purposive sampling procedure is cheaper, faster and convenient. This method allowed the Researcher to use personal expertise and judgment in selecting study participants that have relevant information pertaining to research questions (Malhotra, 2019).

The study population comprises of all policy makers on commercial cannabis from the DARLD, and small-scale commercial cannabis growers from the rural areas of South Africa. However, due to limitations imposed by logistics and time and the application of the inclusive criterion the research sample was made up of only few DARLD policy makers and small-scale farmers that are involved in commercial cannabis policy making or farming respectively and can thus answer research questions pertaining to the 'Impact of Government Policies and Intervention on Promoting Small-scale Cannabis Farmers in South Africa'.

The selected sample was deemed to be 'information rich' on account of their role in formulation and implementation of South Africa's Cannabis Master Plan, and cultivation of commercial cannabis in rural areas. Information provided by these individuals will therefore be of assistance in effectively addressing research questions on the 'Impact of Government Intervention on Promoting Small-scale Cannabis Farmers in South Africa'.

3.7 Data collection

3.7.1 Instruments & Techniques

Data collection instruments and techniques are interlinked but different (Creswell, 2014). Data collection instruments refer to the tools that one uses to gather information or make observations during a research study. On the other hand, data collection is the gathering of qualitative and quantitative information (data) from multiple sources in order to address research problems, questions, evaluate goals, and predicts trends and probabilities. The choice of relevant data collection instruments was influenced by research goal(s); types of data to be gathered and methods of data collection, storage, and processing.

There are various data collection instruments that Researchers can use to collect primary and secondary information. Examples of these are: structured or semi structured interviews; questionnaires; observations; surveys; experiments, case studies and focus groups (primary data) and– published sources, online databases, government and institutional records, publicly available data and previous research findings (secondary data).

Interviews and questionnaires was a choice instruments for data collection in this study. Malhotra (2019) discusses the difference between an interview and questionnaire. An interview is a specific form of oral communication between an interviewer and interviewees on a given topic. By contrast, a questionnaire is a data collection technique that uses written questions to collect written responses from respondents. Table 3.1 below summarises advantages and disadvantages of interviews and questionnaires as data collection instruments.

Table 3. 1: Advantages and Disadvantages of Interviews & Questionnaires

Instrument	Advantages	Disadvantages
Interviews	▪ Suitable for complex situations and collection of large amounts of detailed information ▪ Facilitates the collection of in-depth information. ▪ Easy to compliment with non-verbal communication such as incorporating observations whilst interacting with respondents and controlling who can or cannot respond.	▪ Time consuming ▪ Expensive (require large amounts of resources like money, personnel) ▪ Higher risk of bias when samples are either large or distributed over a wide geographical area or due to interview reactivity that affects the quality of data collected

	▪ Affords interviewer a flexibility to rephrase questions and consider language and complexity; explain questions to respondents and control the flow of questioning. ▪ Wider application that leads to higher response rates	
Questionnaire	▪ Cheap ▪ Makes provisions for anonymity of study participants. ▪ Suitable and cost effective if study samples are either too large or widely distributed.	▪ Limited application - Only suitable for literate sample units ▪ Low rates of responses ▪ Self-selecting biases[33] ▪ Lack of spontaneity ▪ Respondents can consult each other. ▪ Not easily complimented by information from other methods ▪ Very rigid ▪ Subject to omissions and ambiguous responses if respondents fail to understand a question. ▪ Slow way of gathering data

Source: Adapted from Kumar (2011)

The interview guides, outlined in appendices 1, 2 & 3, by being flexible encouraged study interviewees to share their views and experiences on government intervention aimed at promoting small-scale commercial cannabis farmers. All interviews, lasting at least half an hour, were personally conducted and recorded[34] by the Researcher following an appointment schedule at DARD policy makers' offices, and small-scale cannabis farmers' homes.

For this study, the Researcher used semi-structured interviews and questionnaires comprising open ended questions in order to collect qualitative data (narratives, meanings, perceptions, opinions and views) from commercial cannabis policy makers and small-scale farmers in order to address the various research objectives and questions. The interviews were conducted face to face in study participants' offices or homes whilst the questionnaires will be emailed to those that can avail themselves physically. These two data collection instruments enhanced collection of information during the study.

[33] Some respondents do not complete mailed questionnaires, and those that respond might have different characteristics non-respondents.

[34] This was done after securing prior consent of respondents.

The choice of semi-structured interviews and questionnaires as data collection instruments makes it possible for researchers to exercise judgment when gathering participant centered information (Saunders et al., 2011). Personal information provided by DARLD policy makers and small-scale cannabis farmers was processed and stored as per requirements of the Data Privacy and Protection Act of 1998 and the Protection of Personal Information Act (POPIA) 4 of 2014.

3.7.2 Preliminary Interviews

A researcher is supposed to conduct preliminary interviews once questions for interviews and questionnaires are formulated. Preliminary interviews must be done under conditions similar to the actual study, and use participants that shares similar traits with a study sample (Kumar, 2011).

Upon receiving an ethical clearance, the researcher conducted two preliminary interviews with 2 commercial cannabis policy makers working at Gauteng's DARD provincial office, and 2 small-scale commercial cannabis growers in the dagga belt of Eastern Cape Province.

3.7.2.1 Purpose of Preliminary Interviews

The aims of preliminary interviews were to: identify and correct any errors associated with the phrasing and interpretation of questions; enable an interviewer or interviewers gain confidence and experience prior to the actual interviews; generate key issues that can lead to further studies and verify acceptability (through feedback from respondents); validity (questions need to cover full scope of research question); reliability and guarantee reproducibility and consistency of findings (by means of control questions and tests).

3.7.2.2 Methodology Followed

The Researcher issued questionnaires to 1 commercial cannabis policy makers working at Gauteng's DARD provincial office and interviewed 2 small-scale commercial cannabis growers in the dagga belt of Eastern Cape Province.

3.7.2.3 Evaluation of Preliminary study

Preliminary interviews conducted showed that the chosen data collection instruments were satisfactory and relevant. Interviewees easily understood most of the questions

asked during semi structured interviews, and questionnaires were completed without any difficulties. After considering feedback from the preliminary interviews, the instruments were refined accordingly.

3.7.2.4 Consultant's Consideration of Preliminary Study

The data collection instruments were deemed effective enough to address the various research questions during semi-structured interviews and questionnaires.

3.8 Data Analysis

Data analysis is a process whereby a Researcher structures; summarises and interprets raw data to render it meaningful, answer research questions and test hypotheses (Johnson, 2022; Kothari, 2004 & Kumar, 2011).

Effective data analysis is a result of data processing (editing, coding, classifying and tabulating raw data); making inferences and comparisons and eliminating errors, false conclusions and misleading inferences.

The Researcher subjected the qualitative findings to a thematic analysis during this study with the aid of ATLAS tool. During thematic analysis findings will be systematically were arranged into similar pattern, themes in order to derive meanings and insights about DARLD policy makers' and small-scale commercial cannabis growers' experiences, views and opinions across a dataset.

3.9 Quality Assurance

Quality Assurance is process whereby a Researcher ensures validity and reliability of findings (Costa, 2022 & Creswell, 2014). Validity and reliability are underpinned by these aspects: trustworthiness, credibility, accuracy, transferability, dependability and reflectivity of findings. According to Lumsden (2022), determining quality assurance in qualitative research studies can problematic on account of the multiple philosophical worldviews associated with this research design. Therefore, Researchers are advised to adopt more flexible criteria for quality assurance.

The study enhanced the quality assurance by following certain measures. First, the Researcher collected qualitative data from different sources – DARLD official that involved in the formulation and implementation of commercial cannabis policies like the National Cannabis Master Plan, and small-scale farmers that grow cannabis

commercially growers – in order to effectively address the research goals and questions. Second, the Researcher subjected the data collection instruments to independent review by supervisor and conducted preliminary interviews. Third, similar data collection instruments (translated in languages[35] that was understood with ease by all participants) and recording devices used to gather information and record responses from policy makers and small-scale farmers. Lastly, the study findings analysed data through a thematic procedure aided by similar software.

It should be noted that the findings of this study hard a low degree of external validity, and therefore not easily generalised to other provinces of South Africa or countries where small-scale farmers grow commercial cannabis in rural areas. The reasons for this challenge are: the use of a mono research method; the lower numbers of study participants interviewed and geographical locations of small-scale farmers that will be interviewed.

3.10 Ethical Considerations

Bhandari (2021) defines research ethical consideration as “a set of principles that guide your research designs and practices. Scientists and researchers must always adhere to a certain code of conduct when collecting data from people”.

Since the study involved interaction with human subjects, compliance with Belmont’s three basic ethical principles as per the Belmont Report of 1979 was compulsory. These ethic principles are: respect for human participants (all participants had the autonomy to make voluntary and informed decisions regarding their participation in the study); beneficence (all participants were protected against all forms of harm during the study, and assured of anonymity, confidentiality and privacy and that data provided would only be used for research purposes only) and justice (all participants were treated equally and fairly).

A clearance was obtained from the research ethics committee after the proposal was evaluated by relevant faculty members for legal and ethical compliance and risk levels.

[35] Afrikaans, English, IsiZulu and IsiXhosa.

3.11 Limitations of the Study

Study limitations referred to as inevitable structural shortcomings or weaknesses associated with choices of research design, methodology, sampling techniques, data collection instruments and analysis (Kumar, 2011). Researchers are therefore expected to acknowledge and communicate to readers how identified limitations affect the findings of studies.

This study identified these limitations that either led to researcher biasness or influenced the generalisability of its findings to other contexts and studies:

3.11.1. Sampling Technique

The sampling techniques narrows down the geographical distribution of sample units intended for this study. That is a study sample of DARLD policy makers and rural based commercial cannabis small-scale farmers were selected from the provinces around, a total of 15 were selected through the non-random technique (purposive sampling). This excludes other DARLD policy makers and small-scale farmers outside these provinces that might have useful information regarding the research questions.

3.11.2. Resource Constraints

Since this was a self-funded study, the size and geographical distribution of the selected sample has to suit available financial resources and travel logistics. In this case, a smaller sample of small-scale farmers was drawn from nearby provinces (Gauteng, Kwa Zulu Natal and Mpumalanga) to provide qualitative data required to address the various research questions for this study.

3.11.3. Conclusion

This chapter on discussed methodology used in the study. It at looked at how interpretivist philosophical worldview influenced decisions of research design, sampling, target population, preliminary interviews, data collection and analysis methods choices aimed at achieving the study goals and addressing research questions. Interpretivism determined the qualitative nature of the study; purposive non-probability sampling; data collection instruments of semi-structured interviews and questionnaires and a thematic analysis of findings.

Lastly, the chapter looked at the basic Belmont Ethical Considerations that must be taken into account in any research study. The aim of research ethics is to safeguard the well-being and various human rights of participants and drive legal compliance during throughout the study.

Chapter 4 discussed the research findings that were gathered by means of semi-structured interviews and questionnaires from cannabis policy makers and small-scale farmers.

CHAPTER 4: PRESENTATION AND ANALYSIS OF THE FINDINGS

4.1 Introduction

Chapter 4 presents qualitative findings based on responses that were given by a group of 10 participants during semi-structured interviews, and 8 these of these participants were small-scale farmers that grow commercial cannabis on a small-scale in rural areas of this country. The other two individuals have been involved with policy making on commercial cannabis in various categories. Data was gathered by asking interviewees 13 open-ended questions (7 for farmers and 6 for policy makers).

Out of an initial sampled 15 participants only 10 responded (8 small-scale farmers and 2 policy makers from around Gauteng, Mpumalanga, and dagga belt in Free State, Eastern Cape, and Kwa-Zulu Natal to a face-to-face interviews. The responses were audio recorded using a recording device, and later transcribed by the interviewer.

In line with recommendations made by Monette et al (1986:156), the interview tool allowed the interviewer to explore participants' views and opinions on the effectiveness of various government interventions in promoting small-scale commercial cannabis farmers in South Africa. Among the questions, interviewees were asked to share their experiences as small-scale commercial cannabis farmers in this country and discuss how the Cannabis Master Plan is affecting commercial cannabis farming; various innovations brought about by the Cannabis Master Plan; the affordability of SAHPRA cannabis licensing procedures; the role of commercial cannabis farming in creating employment and poverty alleviation among small-scale farmers in the rural country and good practices and challenges associated with the Cannabis Master Plan.

A thematic analysis approach was used to analyse transcribed responses. According to Kothari (2004), a thematic analysis results is the arrangement of findings into similar themes and sub-themes in order to derive meanings about participants' experiences, views, opinion regarding research questions. This analysis approach led to the identification of several themes and sub-themes after a review of participants' responses on the impact of government interventions in promoting commercial cannabis farming among small-scale growers in the country. This flexible approach relied on the following steps to analyse qualitative findings: Data Familiarisation;

Generation of Initial Codes; Searching for Themes; Reviewing Themes; Definition of Themes and Sub-Themes and Report Writing.

These research questions were addressed during the thematic analysis of findings:

i. What role do various government frameworks (interventions and policies) play in eliminating entry barriers faced by small-scale farmers of cannabis in South Africa?

ii. How do various government frameworks (policies and interventions) promote inclusive, competitive and sustainable small-scale cannabis farming in South Africa?

iii. How do various government frameworks (policies and interventions) create employment opportunities amongst small-scale cannabis farmers?

iv. How do various government frameworks (policies and interventions) contribute towards poverty alleviation in South Africa?

4.2 Demographic Analysis

Displayed in Table 4.1 below is a profile of participants that took part in semi-structured interviews during the collection of primary data by the interviewer.

Table 4. 1 Profile of Study Participants

Respondent	Age	Gender	Role	Farming Experience in Years
P1	40	Male	Grower	12
P2	51	Female	Grower	13
P3	33	Male	Grower	6
P4	35	Male	Grower	7
P5	36	Female	Grower	10
P6	40	Male	Grower	2
P7	32	Male	Grower	5
P8	39	Male	Grower	9
P9	51	Female	Policy Maker	13
P10	49	Male	Policy Maker	15

Source: Author Derived (2023)

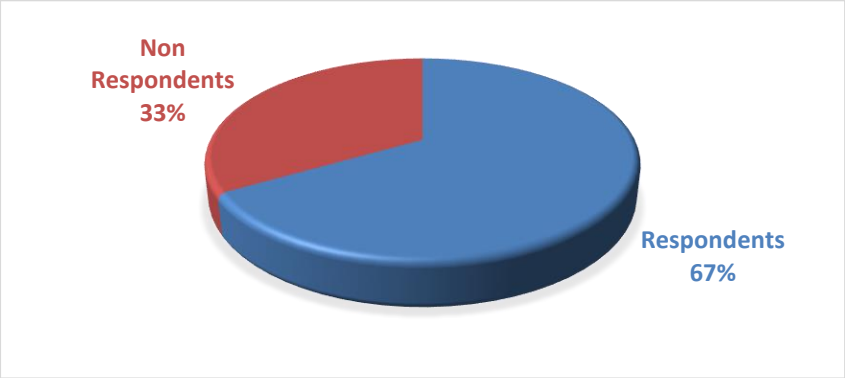
4.2.1 Response Rate

Initially 15 individuals were sampled to participate in this study – 10 small-scale growers of commercial cannabis and 5 commercial cannabis policy makers respectively. However, after interviewing 66.7% of the sampled individuals (8 growers and 2 policy makers), the interviewer decided to stop collecting further data upon

realising that no new information was forthcoming. This decision was made in adherence to the rule of saturation point as described by Majid (2018) & Kumar (2021). The aforementioned authors describe saturation point in qualitative research as the point at which the researcher decides that all relevant data required for addressing research questions has been collected.

In the opinion of Babbie (2007), a response rate of 60% in a qualitative study is considered to be good. This response rate is depicted in Figure 4.1 below.

Figure 4. 1: Study Participants' Response Rate

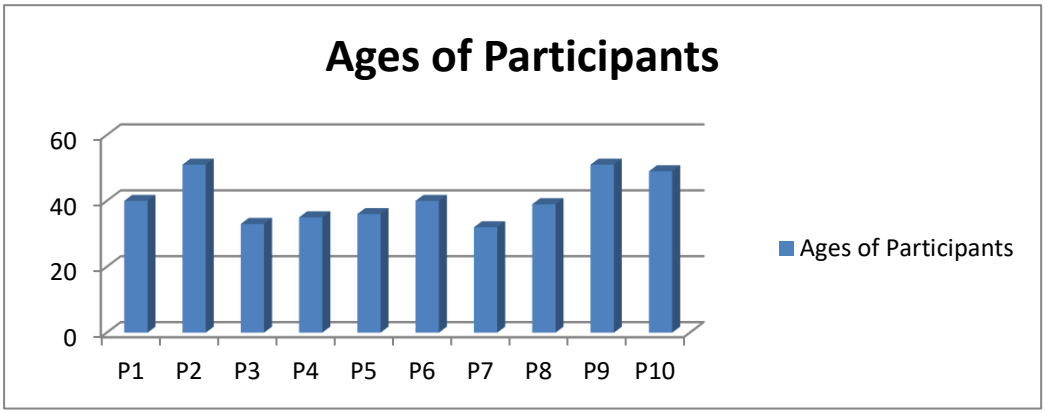


Source: Author Derived (2023)

4.2.2 Age

Figure 4.2 below displays the ages of individuals that participated in this study. Participants' ages ranged from 30 to 51, with a majority of them being in their 30s; two in their 50s and one in his 40s.

Figure 4. 2: Age Distribution of Study Participants



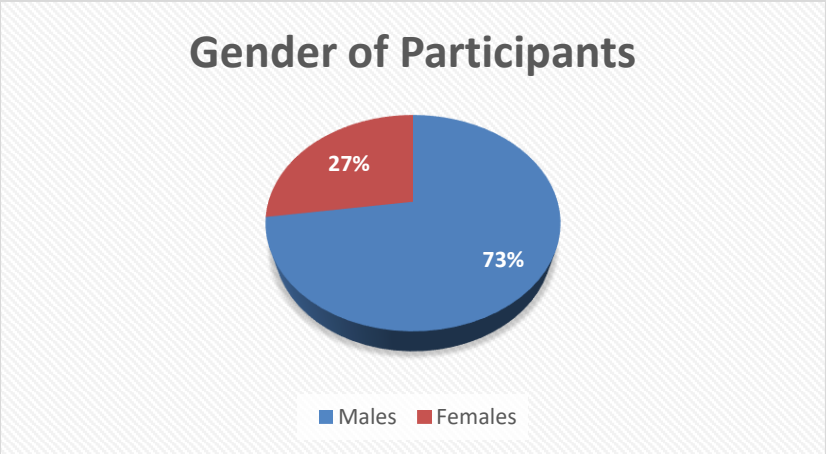
Source: Author Derived (2023)

The age distribution displayed in figure 4.2 above points to the fact that cannabis growers or policy makers are in the prime of their lives and thus economically active.

4.2.3 Gender

The commercial cannabis sector is characterised by male dominance. As shown in Figure 4.3 below, the majority of participants in this study were male – that is 73% male growers or policy makers as opposed 27% female.

Figure 4. 3: Gender of Participants

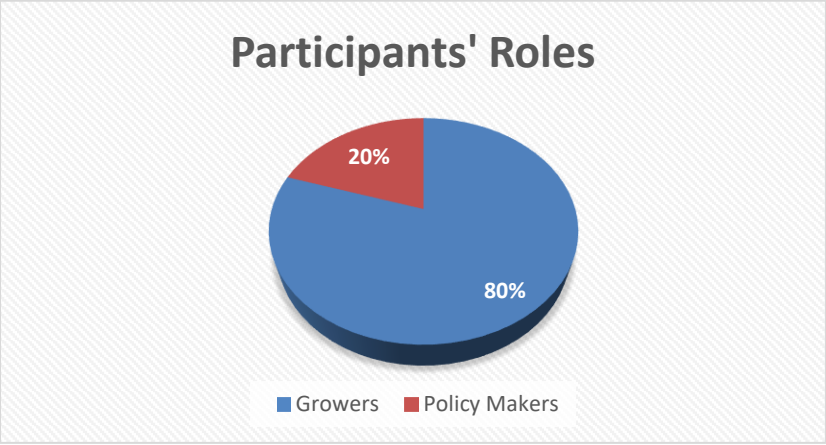


Source: Author Derived (2023)

4.2.4 Role

As depicted in Figure 4.4, the findings of this study came mostly from growers (80%) versus 20% from policy makers of commercial cannabis.

Figure 4. 4: Role of Study Participants in South Africa's Commercial Cannabis Industry

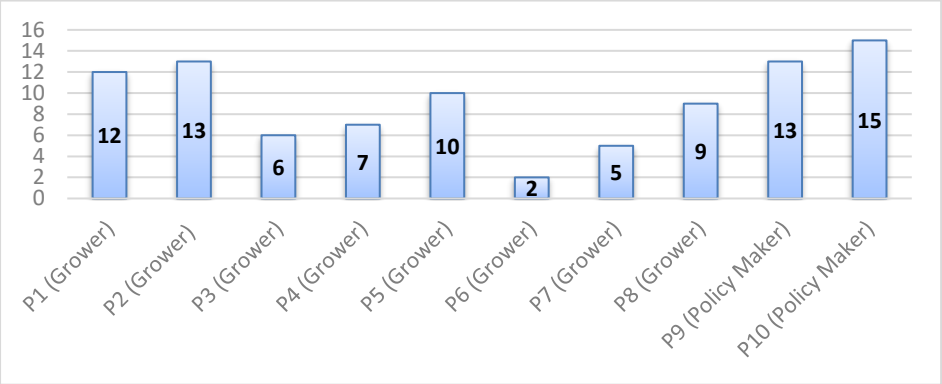


Source: Author Derived (2023)

4.2.5 Experience

The experience of study participants either as growers or policy makers varied between 2 and 15 years (see Figure 4.5). The findings point to a study group in possession of enough information, and therefore better positioned to answer various interview questions regarding the impact of government interventions aimed at promoting small-scale commercial cannabis farming in the country.

Figure 4. 5: Experience of Participants



Source: Author Derived (2023)

4.3 Analysis of Findings

The study findings were based on responses provided a sample group of cannabis growers and policy makers during face-to-face interviews. Part 1 Section 4.3.1 dealt with the analysis of findings from small-scale growers of commercial cannabis whilst Part 2 Section 4.3.2 dealt with findings from policy makers.

4.3.1 PART 1: Findings from Cannabis Small-scale Farmers

4.3.1.1 Section A

RQ 1: What role do various government frameworks (interventions and policies) play in eliminating entry barriers faced by small-scale farmers of cannabis in South Africa?

Interview questions 1: “How are government interventions and policies eliminating entry barriers faced by small-scale cannabis farmers in South Africa?”

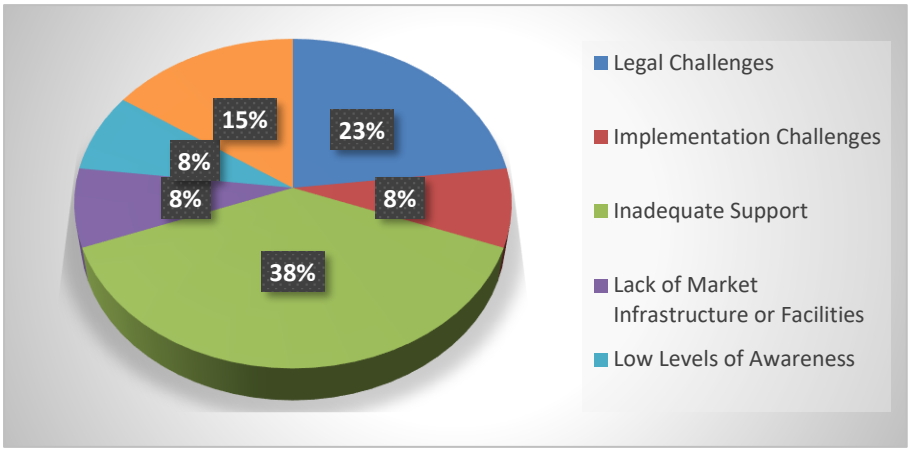
A review of responses from eight growers that answered the question led to identification of the main theme “Lack of government support” and various sub-themes outlined in Table 4.2 and Figure 4.6 below.

Table 4. 2: Interview Question 1 theme-Government intervention to eliminate barriers in cannabis farming.

QUESTION 1	P 1	P2	P3	P4	P5	P6	P7	P8
How are government interventions and policies eliminating entry barriers faced by small-scale cannabis farmers in South Africa?	Cannabis still classified as a prohibited substance under SA's Drug Trafficking Act of 1992 Arrest & Harassment from the police.	Cannabis Master is yet to published and it doesn't fully address legality of commercial cannabis. There is no assistance from the government (in terms of seeds, water facilities etc.) Stigmatisation by religious groups and communities Small-scale farmers sell their cannabis on the black market. Commercial cannabis policies driven by non-experts. Lack of progressive cannabis legislations	Lack of or inadequate support for small-scale cannabis farmers It is still illegal to sell or export non-medicinal cannabis produce. Lack of concrete implementation of government interventions	Harassment by law enforcers Lack of lucrative & formal markets for cannabis produce Stigmatisation by religious groups and communities Little or no awareness on commercial cannabis government interventions No evidence of government interventions except Phakisa initiatives so far	There is no support from the governmen t	If the government can allow us to sale in the market that will be good	We understand that we allowed to grow with the licence but nothing much.	Lack of local market is hampering the growers; government should encourage export of cannabis.
Sub themes Identified	Legal Challenges	Legal Challenges Implementation Challenges Inadequate support Stigma Lack market infrastructure or facilities	Inadequate support Legal & Implementation Challenges	Legal Challenges Lack market infrastructure or facilities. Stigma Implementation Challenges Low Levels of Awareness	No support from the governmen t	No government support	No support	Lack of government support

Source: Author Derived (2023)

Figure 4. 6:Themes identified in question 1



Source: Author Derived (2023)

Findings provided in Table 4.2 and Figure 4.6 indicated that small-scale farmers of commercial cannabis are still faced with various entry barriers despite government interventions that are in place. Mthombeni et al. (2019) & Porter (1979) discuss how entry barriers like the ones identified act as obstacles or constraints that reduce the competitiveness of business organisations within any given market environment. Outlined below are sub-themes on entry barriers that hinder the promotion of competitive and inclusive small-scale commercial cannabis farming sector in this country:

4.3.1.1.1 Legal Challenges

There is confusion and uncertainty surrounding the legalisation and decrimanalisation of cannabis supply chain in this country. In the findings, 23% of growers interviewed thought that the legalisation of commercial cannabis has not been fully clarified. For instance, under the 1992 Drugs & Trafficking Act cultivation and sale of cannabis with the exception of SAHPRA licenced hemp and medicinal cannabis are criminal offences. Bulose (2024) & Norvicki & Hendriks (2023) attribute 'legal grey area' to cannabis classification as a restricted schedule 6 substance by the Medicine Act's section 21 in this country despite a 2018 Constitutional ruling and the 2020 Cannabis for Private Purpose Bill.

The above sentiments are highlighted by Participant 1:

" *Cannabis still classified as a prohibited substance under SA's Drug Trafficking Act of 1992."*

In addition, SAPS officials allegedly ignore the SAPS directive of August 2023 that ordered them to stop people that grow or cultivate cannabis (Gontsana, 2023). As indicated by some of the participants' cannabis related arrests, and confiscation or destruction of cannabis plants have not stopped.

4.3.1.1.2 Implementation Challenges

8% of the participants said that the government has failed to implement the Cannabis Master Plan. These views are collaborated by Mathibe (2023) who said that the Cannabis Master Plan's working group is no longer active. As if this was not enough, the content of the plan is questionable. For instance, participant P3 alleged that the plan was drafted by non-experts and has not yet been published.

Participant 2 had this to say about the Master Plan implementation:

"Cannabis Master is yet to be published and it doesn't fully address legality of commercial cannabis. There is no assistance from the government (in terms seeds, water facilities etc.)"

4.3.1.1.3 Inadequate Support

Inadequate support from the government is seen by 38% of growers as market entry barrier into markets for small-scale farmers involved in SA's commercial cannabis sector. Despite the drafting of interventions like the Cannabis Master Plan and Phakisa Initiative, cannabis farmers hardly receive any support (such as high yield seeds; technical assistance; equipment; infrastructure; training; awareness on legal compliance procedures; provision of water etc.) from the DARLD and other departments, the downside of this entry barrier is small-scale growers find it hard to achieve economies of scales required to increase their competitiveness against well-resourced and large commercial firms on the market.

To quote Participant 5 *"There is no support from the government."*

4.3.1.1.4 Lack of Market Infrastructure or facilities

According to 8% of the participants, small-scale farmers in this country are denied access to formal and regulated domestic or export markets for commercial cannabis. The lack of access is driven either by farmers' non-compliance with SAHPRA requirements or non-existence of roads in remote areas[36]. As a result, these farmers sell their produce through informal and illicit markets at much lower prices (Chibba, 2023; Henning, 2022 & Snyed, 2022). The lack of access to formal markets is a cumulative effect of factors such as slow progress in the amendment of South Africa's Drug and Trafficking Act; unaffordable cannabis licenses and on-going social stigmatisation of cannabis. Even licensed small-scale growers find themselves sidelined from formal markets on account of stiff competition from well-resourced growers.

Participant 8 asserted that "*Lack of local market is hampering the growers; government should encourage export of cannabis".*

4.3.1.1.5 Low Levels of Awareness

There is not much that the government has done in the way of creating awareness about the benefits of commercial cannabis cultivation. 8% of the participants attribute this lack of information as contributing factor for entry into local and international markets.

Participant 7 in answering this question said "*We understand that we allowed to grow with the licence but nothing much."*

4.3.1.1.6 Stigma

15% of the participants cited existing stigmatisation as one of the challenges for small-scale commercial cannabis farmers. Accounts by Davids (2021) & Bottorff et al. (2013) describe how long held negative perceptions about recreational or medicinal cannabis overshadow efforts to reap economic benefits from the commercial cannabis industry in this country[37] and elsewhere. According to participants, narratives from certain religious groups and community groups contribute towards the stigmatisation of

[36] A common challenge experienced by smallholder cannabis growers in the Dagga Belt; and parts of Eastern and Northern Cape provinces.

[37] This industry an estimated worth of R28 billion in 2021 is viable option for job creation and economic growth.

cannabis as an ‘evil plant’ that fuels social problems like drug addiction and rampart crime within societies.

It is the opinion of Participant 2 that “*Stigmatisation by religious groups and communities, Small-scale farmers sell their cannabis on the black market.”*

4.3.1.2 Experience with law enforcement

Interview Question 2 - “What is your experience as small-scale cannabis growers with law enforcers in South Africa?”

Various participants’ responses and emerging theme of “Growers’ Experience with Law Enforcers” and various sub-themes from this question are summarised in Table 4.3 and Figure 4.7.

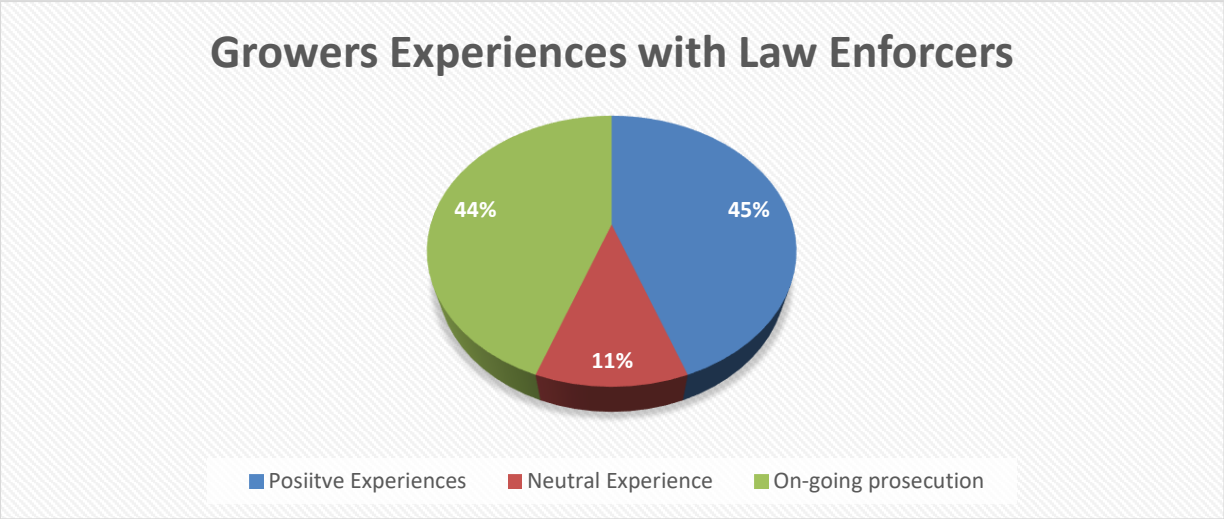
Participant 2 made an indication that “*Police are still arresting cannabis small-scale growers in areas such Upington, George and Sandton, On-going confiscation of cannabis produce by police, Rich cannabis growers exempt from arrest due to their ‘dagga dompasses’, Reports of various forms of human rights violations and abuse by detained growers”.*

Table 4. 3: Interview Question 2 theme - Experiences with law enforcement

QUESTION 2	P 1	P2	P3	P4	P5	P6	P7	P8
"What is your experience as small-scale cannabis growers with law enforcers in South Africa?"	Positive changes – no more arrests and confiscation and destruction of cannabis produce Some isolated misunderstanding – for examples the arrest of two that stopped at a roadblock whilst high. Case dismissed after they spent 7 days in custody and released on bail	Police are still arresting cannabis small-scale growers in areas such Upington, George and Sandton On-going confiscation of cannabis produce by police. Rich cannabis growers exempt from arrest due to their 'dagga dompasses' Reports of various forms of human rights violations and abuse by detained growers	No arrests of commercial cannabis growers nowadays Dealers still being arrested though	Continued arrests of small-scale cannabis growers, and confiscation and destruction of cannabis produce despite direct On-going prosecution.	Police are always giving us problems they arrest us and take our cannabis and destroy it.	At least we don't have much problem with police like we used to.	The law is better, but police still harass us to see licences.	The regulation is allowing us to be free and grow.
Sub themes Identified	Positive Experiences	On-going prosecution	Positive Experiences	On-going prosecution	Ongoing persecution	Positive experience	Neutral experience	Positive experience

Source: Author Derived (2023)

Figure 4. 7:Themes identified and analysed for Question 2



Source: author Derived (2023)

Based on Table 4.3 and Figure 4.7 above, these sub-themes came out after a review of participants' responses:

4.3.1.2.1 Positive experiences

44% of the participants pointed out that nowadays members of the SAPS no longer arrest licenced small-scale cannabis growers; confiscate or destroy their plants or produce. However, there are isolated incidences such as the one reported by participant 1. This involved the arrest of 2 licenced growers at a police roadblock because they were 'high'. However, the case was dismissed by a judge a few days later.

Participant 1 answered that *"Positive changes – no more arrests and confiscation and destruction of cannabis produce Some isolated misunderstanding – for examples the arrest of two that stopped at a roadblock whilst high. Case dismissed after they spent 7 days in custody and released on bail".*

4.3.1.2.2 On-going prosecution

The other 45% of participants said that small-scale growers of cannabis still face arrests and have their produce either confiscated or plants destroyed by members of SAPS. Participant 2 went further to make allegations that arrested growers have been

subjected to various human rights violations and abuse at the hands of the police in places like Upington, George and Sandton. It should be noted that these respondents did not indicate whether the victims were licenced growers or not. Participant 2 said that this negative treatment at the hands of law enforcers is taking despite a SAPS directive to desist from such actions. Gontsana (2023) concurs with what participant 2 alleged. There is indeed a SAPS directive issued on 23rd of August 2023 that advised officers to stop arresting individuals for personal cultivation or possession of cannabis. Perhaps the SAPS members in question are either unaware about the directive or choose to ignore it.

Participant 4 noted that "*Continued arrests of small-scale cannabis growers, and confiscation and destruction of cannabis produce despite direct On-going prosecution".*

4.3.1.2.3 Neutral experience

11% of the participants have neutral experiences regarding the encounters with the enforcement's agencies like the police.

SECTION B: Role of government intervention

RQ2: How do government policies and interventions promote inclusive, competitive and sustainable small-scale cannabis farming in South Africa?

4.3.1.3 Affordability of license for commercial growing of cannabis

Interview Question 3 – "How affordable are licence fees that are required for cultivation of commercial cannabis?"

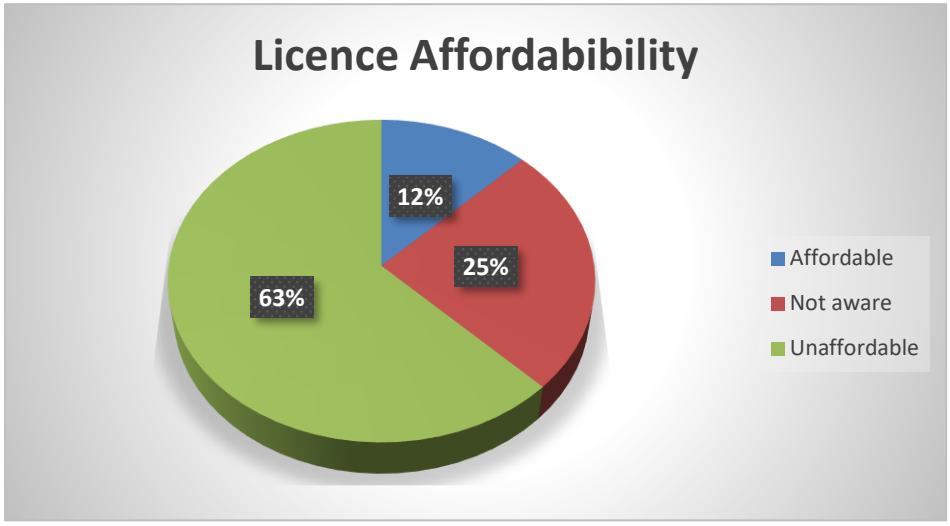
A review of participants' responses led to the theme of "Affordability of Licence Compliance", and various sub-themes that are shown in Table 4.4 and Figure 4.8 below.

Table 4. 4: Interview Question 3 theme - Affordability of Licence Compliance

QUESTION 3	P 1	P2	P3	P4	P5	P6	P7	P8
"How affordable are licence fees that are required for cultivation of commercial cannabis?"	Expensive to get a medicinal cannabis licence that costs around R10 million Therefore, using legal papers drawn up lawyers	Not affordable for cash strapped small-scale growers	Hemp licence affordable as opposed to medicinal one that is complicated and expensive	Costs too much especially one for medicinal cannabis	The licence is costing a lot of money for us small farmers we can't afford it	The licence is expensive only white farmers can afford.	I am not aware of the costs	Expensive especially if you want to grow medicinal cannabis
Sub themes Identified	Unaffordable	Unfordable	Affordable	Unfordable	Unfordable	Unfordable	Not aware	Not aware

Source: Author Derived (2023)

Figure 4. 8:Sub - Themes for Interview Question 3



Source: Author Derived (2023)

Tom (2021) states that obtaining a cannabis licence and meeting legal compliance to participate in the growing, distribution and sale of commercial cannabis is costly and entails stringent procedures. For example, in 2021 these licence fees ranged between R3 million and R5 million while permits required an average of R23, 000 each and potential growers had to fill a lengthy application form and undergo personal vetting. Therefore, a majority of smallholder farmers from impoverished rural areas can neither afford the licence fees nor comply with legal requirements. Emerging sub-themes represented in Table 4.4 & Figure 4.8 bear witness about this harsh reality about SAHPRA's commercial cannabis licence fees and compliance requirements in this country:

4.3.1.3.1 Licence affordability

10% participants stated that licence fees for commercial cannabis are affordable. This figure attests to the fact that those that afford SAHPRA are in minority. Tom, (2021) wrote that in the aftermath of the Cannabis Master Plan rollout only well financed growers could afford to pay the R25, 200 SAHPRA cannabis licence fees. At that time 11 out of 29 licences issued country went to growers from Gauteng province.

Participant 1 cited that "*Expensive to get a medicinal cannabis licence that costs around R10 million. Therefore, using legal papers drawn up lawyers".*

4.3.1.3.2 Unaffordable

By comparison, a majority of the participants (63%) found commercial cannabis licence fees to be exorbitant. These participants said they lack adequate financial resources to pay for cannabis licences. For instance, the cost of medicinal cannabis licences (around R10 million) is beyond the means of smallest scale cannabis growers. Instead, as P1 said some small-scale growers resort to legally drafted papers in order to avoid prosecution by the police. However, it seems that this challenge has not gone unnoticed by the DARLD. Khumalo (2023) described how the provincial DARLD in KwaZulu Natal recently issued 664 low THC[38] cannabis permits to farmers in the Bergville areas.

In the view of Participant 2 about cannabis licences are "*Not affordable for cash strapped small-scale growers".*

4.3.1.3.3 Lack of Awareness

25% of the farmers expressed that they are not aware that there are fees payable.

Participants 4 highlighted that fees payable are *"Complicated and too many requirements No awareness programmes on regulations and quality control in rural areas".*

4.3.1.4 Quality control and compliance

Interview Question 4 - "How do you find the requirements and quality control compliance procedures for commercial cannabis in South Africa?" A review of participants' responses gave rise to the theme 'Commercial Cannabis Compliance" and various sub-themes shown in Table 4.5 and Figure 4.8 below.

Participant 3 said that *"Compliance requirements applicable to distributors of cannabis only No quality control Stringent compliance requirements".*

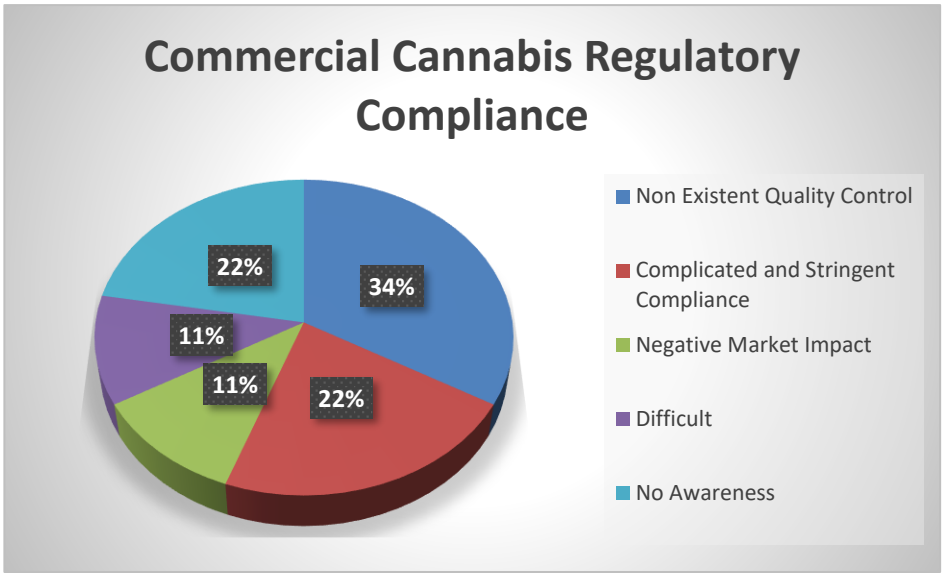
[38] These farmers can now legally grow commercial cannabis of less than 0.2% THC content.

Table 4. 5: Interview Question 4 theme - Commercial Cannabis Regulatory Compliance

QUESTION 4	P 1	P2	P3	P4	P5	P6	P7	P8
"How do you find the requirements and quality control compliance procedures for commercial cannabis in South Africa?"	No inspections of hemp growers Quality control for medicinal cannabis growers Easy compliance requirements	Not user friendly and applicable to majority (99%) of small-scale growers in South Africa No quality control SAHPRA licences negatively impact pricing of cannabis produced by small-scale farmers – i.e. led to the flooding of markets with facility weed sellers	Compliance requirements applicable to distributors of cannabis only No quality control Stringent compliance requirements	Complicated and too many requirements No awareness programmes on regulations and quality control in rural areas	They are complicated & strict	They are complicated we don't even understand them.	Difficult to understand we need someone to talk to us.	There are too many requirements needed to apply.
Sub themes Identified	Non-existent Quality Control	Complicated and Stringent Compliance Non-existent Quality Control Negative Market Impact	Non-existent Quality Control Complicated and Stringent Compliance	Complicated and Stringent Compliance No awareness programmes	Complicated and strict	Complicated	Difficult to understand	Too many requirements

Source: Author Derived (2023)

Figure 4. 9: Sub-Themes on Interview Question 4



Source: Author Derived (2023)

Below is an outline of the various emerging sub-themes represented in Table 4.5 & Figure 4.8 are discussed below:

4.3.1.4.1 Non-existent quality control

34% of the participants stated that regulators do not conduct cannabis quality control inspections on small-scale farms of commercial cannabis. The exception is for medicinal cannabis that is grown mostly by large firms. Walker (2023) discusses at length the importance of quality control[39] in cannabis cultivation. Quality control enables farmers to produce dependable and consistent commercial cannabis and comply with legal requirement demanded by SAHPRA. Therefore, this oversight puts smallholder cannabis farmers at a disadvantage in terms of market competitiveness since it is hard for them to produce quality cannabis harvests.

Participant 1 stated that "*No inspections of hemp growers Quality control for medicinal cannabis grower's Easy compliance requirements".*

[39] This involves several processes such as seed choice; cloning; propagation; harvesting; curing and storage of cannabis plants and training farmers.

4.3.1.4.2 Complicated and Stringent Compliance

22% felt that compliance procedures and requirements for commercial cannabis are very complicated and stringent especially those for medicinal one. These participants said that there are just too many compliance requirements and vetting procedures. Stringency compliance requirements such as those put in place by SAHPRA have negative unintended consequences for small-scale farmers (Rusenga et al. 2022). Lack of legal compliance is thus seen as one of the main drivers behind reduced inclusivity and competitiveness on the part of small-scale cannabis growers in this country.

Participant 4 indicated that "*Complicated and too many requirements, No awareness programmes on regulations and quality control in rural areas".*

4.3.1.4.3 Negative Market Impact

11% of the participants said that large and well-resourced growers' commercial cannabis that can easily comply with regulations and SAPHRA licence requirements negatively impact market competitiveness for small-scale growers. As stated by Rusenga et al. (2022), the inability to comply legally creates unfavourable market conditions for small-scale cannabis growers in this country. For instance, these farmers either find themselves locked out of formal market channels and have to sell their produce illegally or face reduced competitiveness against large firms in markets that are flooded with 'facility weed'.

Participant 2 argued that regulations and SAHPRA licence requirements are "*Not user friendly and applicable to majority (99%) of small-scale growers in South Africa. No quality control SAHPRA licences negatively impact pricing of cannabis produced by small-scale farmers – i.e., led to the flooding of markets with facility weed sellers".*

4.3.1.1.4 No Awareness Programmes

22% of the participants reported that government officials do not conduct awareness programmes on commercial cannabis' regulations and compliance requirements to

sensitise small-scale growers. Literature from Batyi (2020) & Marthe et al. (2022) provides reasons why awareness programmes are critical in promoting small-scale farming. Ideally DARLD officials are supposed to use awareness programmes to equip cannabis small-scale farmers with knowledge and skill sets on understanding regulatory compliance requirements and accessing commercial expertise; capacity building; financial aid and investments and mitigating various climate change related challenges.

In their opinion, Participant 4 said this on compliance requirements "*Complicated and too many requirements No awareness programmes on regulations and quality control in rural areas".*

4.3.1.5 Acceptance level cannabis deregulation

Interview Question 5 – "Elaborate on the acceptance level (buy in) of cannabis legalisation in South Africa".

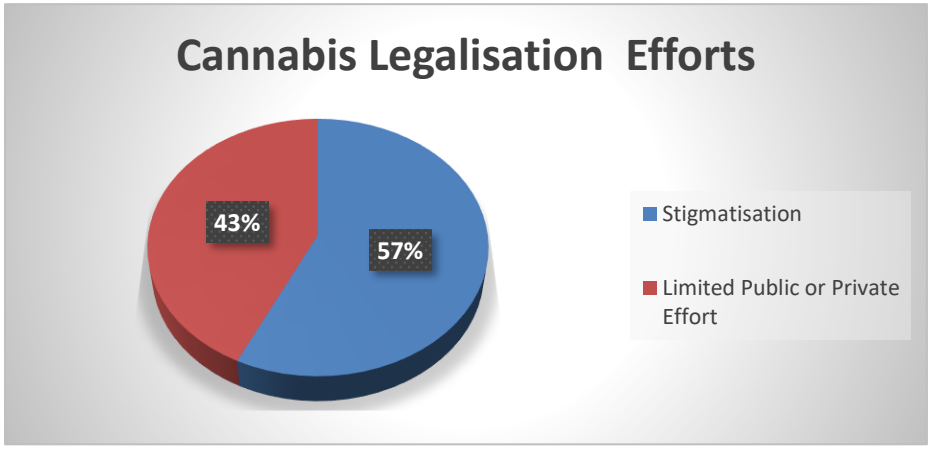
The theme of 'Cannabis Legalisation Efforts' and sub-themes emerged upon review of participants' responses (refer to Table 4.6 & Figure 4.10).

Table 4. 6: Interview Question 5 theme - Cannabis Legalisation Efforts

QUESTION 5	P 1	P2	P3	P4	P5	P6	P7	P8
"Elaborate on the acceptance level (buy in) of cannabis legalisation in South Africa".	Limited government efforts through programmes such as Phakisa Initiative Stigma – cannabis not treated like other cash crops	Stigma from religious and community groups that regard cannabis as a driver of social ills like addiction and crime. Limited and uncoordinated input from government departments – only few out of 22 departments are active	Some private effort from organisations like meridian Social stigma since cannabis seen as an evil drug	Social & religious driven stigma – people regard cannabis as a drug linked to addiction and criminal activities	It is not there yet people still are against the growing of cannabis.	People now understand that they can keep small amount at home for smoking.	We make little money to pay school fees and feed our families.	Not much.
Sub themes Identified	Stigmatisation Limited public or private efforts	Stigmatisation Limited public or private efforts	Limited public or private efforts	Stigmatisation				

Source: Author Derived (2023)

Figure 4. 10: Sub-Themes on Interview Question 5



Source: Author Derived (2023)

Below is a discussion on the emerging sub-themes from participants' responses.

4.3.1.5.1 Stigmatisation

Cannabis remains a highly stigmatised cash crop[40]. Views of 57% of the participants suggested that the crop faces structural (macro); social (meso) and personal (micro) stigma due to perceived harm from its psychoactive characteristics[41]. Structural stigma is driven a lack of legislative clarity and characterised by on-going criminalisation of cannabis supply chain despite the 2018 Constitution ruling and the 2021 Cannabis Master Plan. On the other hand, social and personal stigmatisation is fuelled by people with certain religious or community activism views resulting in prejudice against cannabis plants and their uses. These people think that cannabis is a dangerous drug responsible for public health harm, and social ills like addiction and criminality. As noted by Davids (2021); Bottorff et al. (2013) & Reid (2020) such negative perceptions about recreational or medicinal cannabis hinder acceptance of cannabis legal status like other cash crops.

[40] The stigma is driven mostly by both international and national anti-narcotic legislative frameworks and propaganda.

[41] At the moment there is lack of scientific findings that can be used to quantify the so called harm of recreational or medicinal cannabis here in South Africa and other parts of the world.

Participant 1 opined that *"Stigma from religious and community groups that regard cannabis as a driver of social ills like addiction and crime, limited and uncoordinated input from government departments – only few out of 22 departments are active".*

4.3.1.5.2 Limited Public or Private Efforts

With the exception of efforts from the Phakisa Initiative and Meridian, 43% of the participants said that both public and private organisations are not doing much to speed up the legalisation and decriminalisation of cannabis in this country. According to Bulose (2024); Hendriks (2023) & Mathibe (2023), perceptions about limited efforts to destigmatise cannabis have strong linkages to existing entry barriers and negative experiences with law enforcers discussed in interview questions 1 and 2.

According to Participant 2 there are *"Limited government efforts through programmes such as Phakisa Initiative".*

SECTION C: Creation of employment

RQ3: How do government policies and interventions create employment opportunities amongst small-scale cannabis farmers?

4.3.1.6 Cannabis growing in alleviating unemployment

Interview Question 6 – "Outline the extent to which government policies and interventions on commercial cannabis are alleviating unemployment levels in rural parts of South Africa."

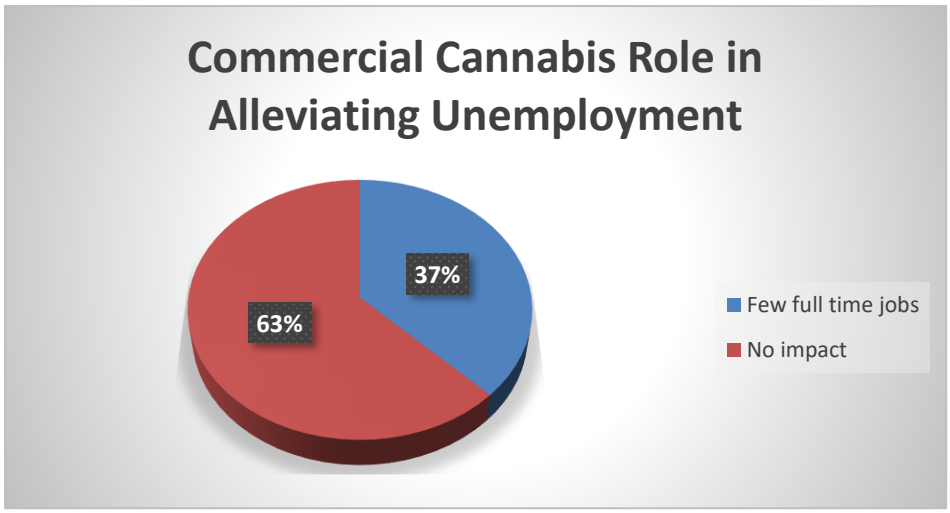
A review of responses led to the main theme 'How Commercial Cannabis Alleviates Unemployment' and sub-themes shown in Table 4.7 & Figure 4.11 below.

Table 4. 7: Interview Question theme – Alleviation of unemployment

QUESTION 6	P 1	P2	P3	P4	P5	P6	P7	P8
"Outline the extent to which government policies and interventions on commercial cannabis are alleviating unemployment levels in rural parts of South Africa."	Full time employment for licenced growers & supply chain participants such as buyers	No real jobs are created for growers or other supply chain players	Employment only for those involved in export of commercial cannabis	Very few people employed within the supply chain of commercial cannabis on account of legal grey areas (lack of clarification on legalisation and decriminalisation of cannabis so far)	Few people are employed within smallholding cannabis sector	No real jobs from small-scale cannabis farming	I do other jobs apart from growing cannabis in order to survive	I cannot depend on cannabis farming
Sub themes Identified	Few employment opportunities	No impact	Few employment opportunities	Few employment opportunities				

Source: Author Derived (2023)

Figure 4. 11: Sub-Themes on Interview Question 6



Source: Author Derived (2023)

Many experts agree that the commercial cannabis sector holds a great potential for job creation and economic growth in places previously associated with production of illicit cannabis (Chibba, 2023). A 2019 African Cannabis Report claimed that this emerging sector could be contributing around R33 billion towards SA's GDP by 2023. This fact is acknowledged by Slabber (2022) who quoted from President Ramaphosa's speech at the 2022 State of the Nation Address (SONA) saying that "the legal hemp and cannabis sector has a potential to create more than 130000 new jobs in South Africa". However, as noted by Davids (2021); Bottorff et al. (2013) & Reid (2020) existing entry barriers like ineffective cannabis policy implementation and other challenges hinder this sector's potential for alleviating unemployment in the country. Two emerging sub-themes (see Figure 4.11 above) provide insights on extent to government interventions on commercial cannabis have been alleviating unemployment in rural South Africa.

4.3.1.6.1 Few Full Time Jobs

37 per cent of the participants said that commercial cannabis sector has only managed to create limited full time job opportunities for licenced growers, and other supply chain players in rural areas.

Participant 1 said that jobs are only for "*Full time employment for licenced growers & supply chain participants such as buyers".*

4.3.1.6.2 No impact on unemployment

A majority of the participants (67%) conceded that the commercial cannabis industry has had no visible impact in alleviating unemployment levels for rural people in South Africa. Most of the jobs associated with this sector cannabis growing are either informal or temporary and low paying.

Participant 4 felt that "*Very few people employed within the supply chain of commercial cannabis on account of legal grey areas (lack of clarification on legalisation and decriminalisation of cannabis so far)".*

SECTION D: Alleviation of poverty

4.3.1.7 Alleviating Poverty among rural communities

RQ 4: How do government policies and interventions contribute towards poverty alleviation in South Africa?

Interview Question 7 - "How is commercial cannabis farming alleviating poverty among rural communities in South Africa?"

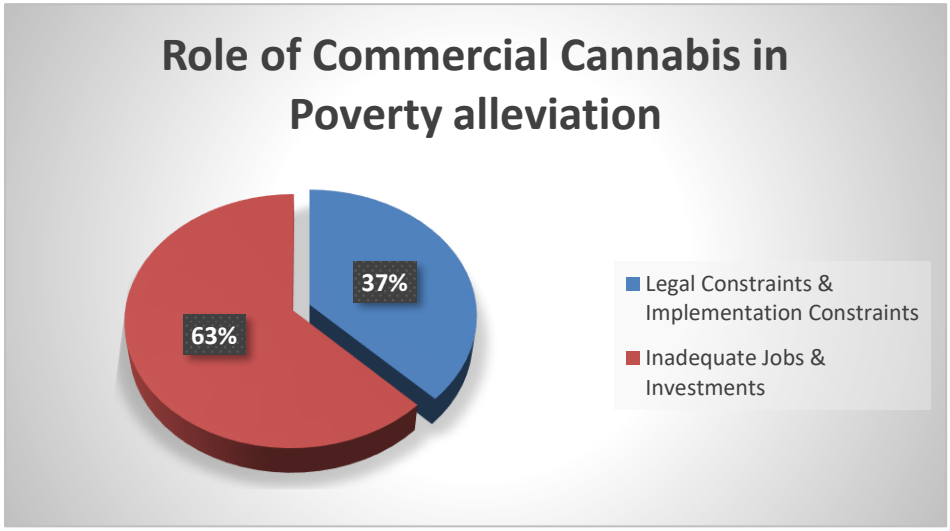
A review of answers provided by participants resulted in the main theme 'Role of Commercial Cannabis in Poverty Alleviation' and sub-themes are illustrated in Table 4.8 & figure 4.12.

Table 4. 8: Interview Question 7 Theme - Role of Commercial Cannabis in Poverty Alleviation

QUESTION 7	P 1	P2	P3	P4	P5	P6	P7	P8
"How is commercial cannabis farming alleviating poverty among rural communities in South Africa?"	Commercial cannabis has not tackled poverty since the crop is still illegal unlike other cash crops	There is a need for an all-purpose cannabis bill to fully decriminalise & legalise cannabis in order to achieve this goal	Has the potential of alleviating poverty if there are sufficient investments in commercialised cannabis	At the moment not much except for illegal growers and distributors involved in the cannabis black-market	High levels of poverty remain in rural areas that grow cannabis	The commercial cannabis is not doing much to reduce poverty	All you need to do is visit the dagga belt areas in order to witness for yourself the high poverty levels	No much – poverty remain rampart
Themes Identified	Legal and Implementation Constraints	Legal and Implementation Constraints	Inadequate jobs and Investments	Legal and Implementation Constraints	Inadequate jobs and Investments	Inadequate jobs and Investments	Inadequate jobs and Investments	Inadequate jobs and Investments

Source: Author Derived (2023)

Figure 4. 12: Themes identified and analysed for Interview Question 7



Source: Author Derived (2023)

All participants highlighted the failure of commercial cannabis sector as vehicle for alleviating endemic poverty among traditional or indigenous growers of cannabis in rural South Africa. In the opinion of Maposa (2021) & Mathibe (2023), the sector's lack of positive results can be attributed to the combined effects of constraints such as those dealt with in the 6 preceding interview questions. Two emerging sub-themes (shown Figure 4.12 and discussed below) indicate the root causes behind the sector's ineffectiveness to reduce poverty in rural South Africa.

Participant 1 argued that "*Commercial cannabis has not tackled poverty since the crop is still illegal unlike other cash crops".*

4.3.1.7.1 Legal & Implementation Constraints

Efforts to create meaningful jobs or eliminate various entry barriers and thus alleviate poverty are hampered by existing legal and implementation constraints surrounding the commercial cannabis sector. According to 33% of the participants, South Africa lacks effective legislative frameworks needed to speed up full legalisation and decriminalisation of the commercial cannabis supply value chain, and effective implementation strategies to unlock the economic potential of this sector. Consequently, these oversights push small-scale farmers into less sustainable informal and illegal cannabis supply chain values within rural areas.

Participants 2 argued that "*There is a need for an all-purpose cannabis bill to fully decriminalise & legalise cannabis in order to achieve this goal".*

4.3.1.7.2 Inadequate Jobs & Investments

67% of the participant's blame inadequate job creation and investments for continued high levels of poverty among commercial cannabis growers in rural areas. For instance, most participants felt incomes earned from growing cannabis are too meagre to make drive meaningful poverty alleviation efforts in rural areas.

Participant 7 said that "*All you need to do is visit the dagga belt areas in order to witness for yourself the high poverty levels".*

4.3.1.8 Summary analysis of growers' response

Section A thematically analysed the qualitative data obtained from interviewing 8 small-scale commercial cannabis producers in South Africa. A review of this data led to the identification of several interlinked main themes and sub-themes that shed light on the research topic. At the moment government interventions have not yielded their intended outcomes of promoting small-scale farming of cannabis despite the rollout of policies such as the Cannabis Master Plan and the Phakisa Initiative.

4.3.2 PART 2: Responses from Policy Makers (Master Plan and Phakisa initiative)

Part 2 tackled research question 4 by collecting qualitative data from 2 out of 5 purposively sampled policy makers. The other 3 policy makers failed to avail themselves without giving any reasons.

4.3.2.1 Experience in policy making.

Interview Question 8- "Would you please state your official position, and experience in years as part of the policy drafting team in the department of Agriculture?"

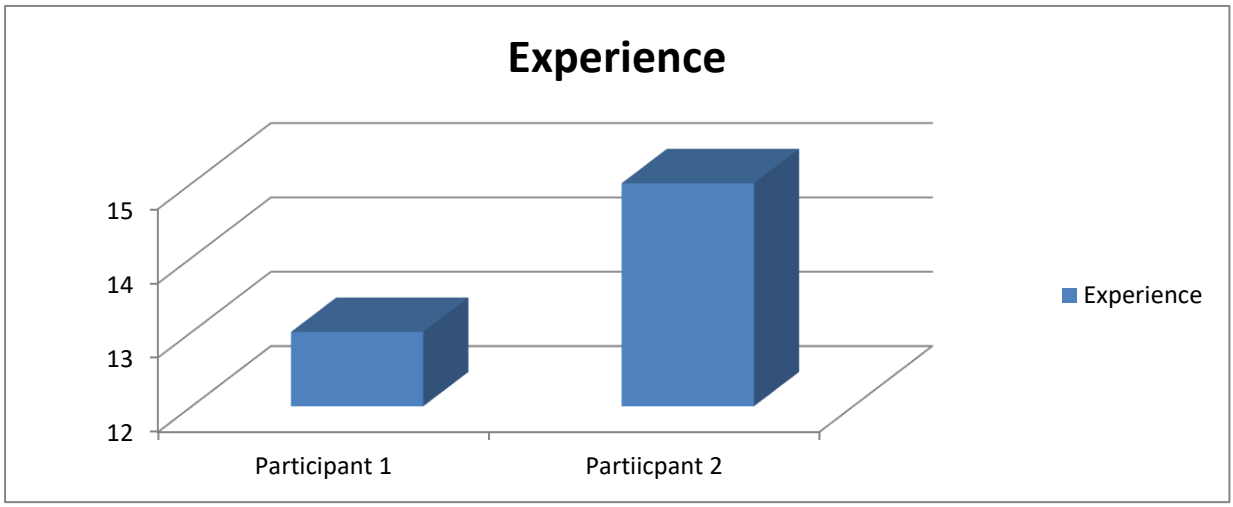
A review of participants' response gave rise to the theme of 'Role as a Policy Maker' and themes outlined in Tables 4.9 & 4.13.

Table 4. 9: Interview Question 8 Theme - Role as a Policy Maker

QUESTION 8	P1	P2
"Would you please state your official position, and experience in years as part of the policy drafting team in the department of Agriculture?"	I have 13 years' experience; currently working as MD for Fields of Green; I attended the drafting of Phakisa Initiative as an 'uninvited guest' in addition to various international cannabis forums organised by UN Also listed as a plaintiff in a case known as "the Trial of the Plant" Involved as a guest launch of Phakisa Initiative, and attended several UN meetings of commercial cannabis	I am an ex-deputy director of Trade & Industry Department with 15 years' experience; Was involved in drafting of Cannabis Master Plan
Themes	More than 13 years' experience Guest at policy meetings	15 years' experience Guest at policy meetings

Source: Author Derived (2023)

Figure 4. 13: Participants' Experience on SA's Commercial Cannabis Policies



Source: Author Derived (2023)

The two participants possess a combined experience of over 20 years in their involvement with South Africa's commercial cannabis policies. Participant 1 was roped in from the private sector as a guest at the launch of national cannabis policies or initiatives and attended several United Nations (UN) meetings on commercial cannabis overseas. On the other hand, participant 2 a former deputy director in the Department of Trade and Industry (DTI), was part of the think tank tasked with the drafting and implementation of SA's Cannabis Master Plan.

4.3.2.2 Cannabis Master Plan in Promoting

Interview Question 9 “Discuss the extent to which the Cannabis Master Plan has promoted inclusivity among small-scale farmers in the rural areas of South Africa.”

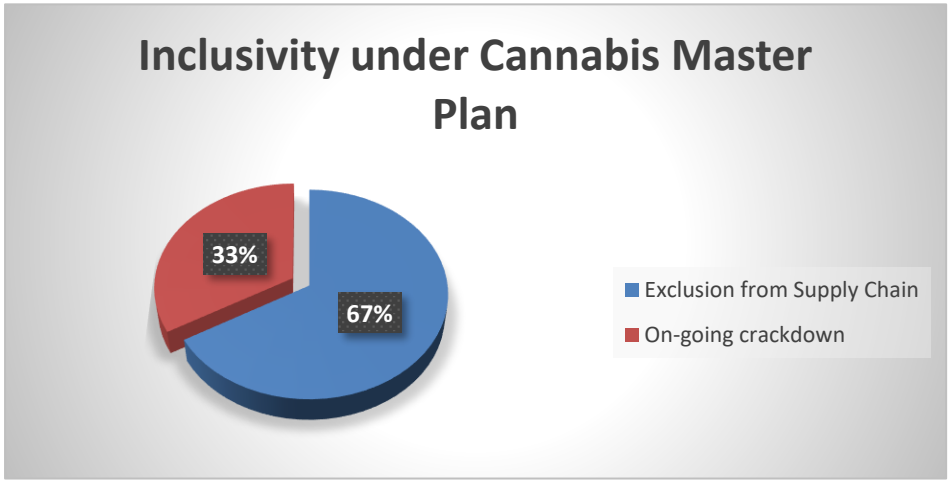
The theme ‘Cannabis Master Plan as a Driver of Inclusivity’ and sub-themes (refer to Table 4.10 & Figure 4.13) emerged after reviewing responses given by participants.

Table 4. 10: Interview Question 9 Theme – Inclusivity under Cannabis Master Plan

QUESTION 9	P1	P2
Discuss the extent to which the Cannabis Master Plan has promoted inclusivity among small-scale farmers in the rural areas of South Africa.”	Small-scale growers of commercial cannabis in rural are excluded from mainstream cannabis supply chains	The Cannabis Master Plan has performed badly in promoting inclusivity of small farmers – especially among blacks from rural areas associated with indigenous cannabis cultivation. Inability to comply with legislative requirements excludes most smallholder farmers from formal and regulated domestic and export cannabis markets and makes victims of continued police crackdown.
Sub-Themes	Exclusion from supply chain	Exclusion from supply chain Ongoing crackdown

Source: Author Derived (2023)

Figure 4. 14: Sub-Themes on Interview Question 8



Source: Author Derived (2023)

Discussed below are the sub-themes that emerged after reviewing participants’ responses on the level of inclusivity of small-scale cannabis farmers:

4.3.2.2.1 Exclusion from the Supply Chain

The two participants (67%) participants were convinced that the Cannabis Master Plan has failed to promote inclusivity among rural growers of cannabis. These participants inferred that many small-scale growers are excluded from the formal and regulated supply chain of commercial cannabis. The exclusion is high among black farmers from rural areas. Dube (2023); Henning (2022) & Masiwa (2022) wrote that this exclusion exposes most black small-scale growers from rural areas to police harassment and drives them to use illicit market structures for domestic or export sale of their produce.

On exclusion Participant 1 is of the opinion that "*Small-scale growers of commercial cannabis in rural are excluded from mainstream cannabis supply chains".*

4.3.2.2.2 On-going crackdown

Participant 2 reported that there is on-going crackdown of small-scale cannabis growers in rural areas. Authorities seem to be indifferent about the legal plight of rural smallholder growers of cannabis (Masiwa, 2022). Instead, these farmers are subjected to regular arrests; confiscation and destruction of their cannabis plants or produce.

Participant 2 says "*Inability to comply with legislative requirements excludes most smallholder farmers from formal and regulated domestic and export cannabis markets and makes victims of continued police crackdown"*

4.3.2.3 Accessibility to innovation

Question 9 – "Describe the various forms of affordable, accessible and modern innovations the Cannabis Master Plan has introduced in rural areas for small-scale commercial cannabis so far."

A theme of 'Innovations under Cannabis Master Plan' and one sub-theme were identified after reviewing responses from participants.

Table 4. 11: Interview Question 9 - Theme 'Innovations under the Cannabis Master Plan'

QUESTION 9	P1	P2
"Describe the various forms of affordable, accessible and modern innovations the Cannabis Master Plan has introduced in rural areas for small-scale commercial cannabis so far."	None so far	Little or no innovations introduced by the Cannabis Master Plan
Sub-Themes	No innovations	No innovations

Source: Author Derived (2023)

Participants categorically stated that the implementation of the Cannabis Master Plan has not introduced any affordable, accessible and modern innovations that can help small-scale growers in rural areas. At present many small-scale farmers still cultivate low yield cannabis strains and struggle with accessing formal markets and information and mitigating climate changes related challenges such as drought, water scarcity etc. Mbatha & Muchara (2016) & Zwane (2020) highlighted the critical role that institutional and technologically driven innovations play in promoting small-scale farming. According to these authors, innovations better position small-scale farmers to increase productivity and incomes; access formal markets; become more competitive and bridge the digital divide. On a broader level, innovations can contribute towards the successful implementation of SA's development and policy initiatives aimed at achieving inclusive and sustainable agriculture, economic growth and poverty alleviation in rural areas.

Participant 2 believes that "*Little or no innovations introduced by the Cannabis Master Plan".*

4.3.2.4 Promoting sustainability livelihood for small-scale farmers.

Interview Question 10– "Discuss the various ways in which the Cannabis Master Plan is promoting sustainable livelihoods for small-scale cannabis growers in rural South Africa."

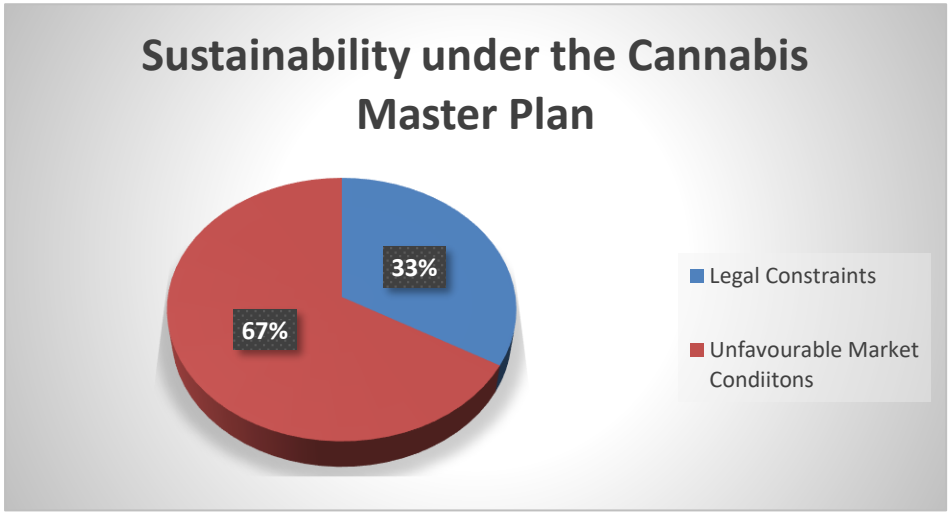
The main theme 'Sustainable Livelihoods under the Cannabis Master Plan' and a number of sub-themes emerged from a review of responses on in this question.

Table 4.12: Interview Question 10 - Theme 'Sustainable Livelihoods under the Cannabis Master Plan'

QUESTION 10	P1	P2
"Discuss the various ways in which the Cannabis Master Plan is promoting sustainable livelihoods for small-scale cannabis growers in rural South Africa."	The plan has not promoted sustainable livelihoods for small-scale growers in rural areas. These growers rely on the risky black market or street markets to sell their produce	Small-scale growers cannot afford licences for either hemp or medicinal cannabis Markets flooded with illicit cannabis and produce from large growers
Sub-Themes	Unfavourable market conditions	Legal Constraints Unfavourable market conditions

Source: Author Derived (2023)

Figure 4. 15: Sub-Themes on Question 10



Source: Author Derived (2023)

Below are emerging sub-themes (see Figure 4.15) that provided insights on why the Cannabis Master Plan and other government interventions have proven lacklustre in promoting a sustainable smallholding cannabis sector within rural areas.

4.3.2.4.1 Legal Constraints

Sustainability efforts are negatively impacted by high costs and stringent compliance requirements for obtaining cannabis licences, and resultant lack of support for equipment, infrastructure, research etc. Participant 2 felt that small-scale farmers see legal expenses as an insurmountable entry barrier for them to easily earn a living from cultivation of commercial cannabis. A large body of literature suggest that this sub-theme is a serious entry barrier that reduces efforts of creating a sustainable

smallholding cannabis sector in rural South Africa (Bulose, 2024; Gontsana, 2023 & Norvick & Hendriks, 2023). In other words, existing policy interventions on SA's commercial cannabis are fraught with many 'legal grey areas' that constrain sustainability.

Participant 2 agreed that "*Small-scale growers cannot afford licences for either hemp or medicinal cannabis Markets flooded with illicit cannabis and produce from large growers".*

4.3.2.4.2 Unfavourable Market Conditions

Both participants pointed out that rural based cannabis small-scale growers face a number of unfavourable market conditions. Both domestic and export markets for commercial cannabis markets are dominated large growers, and some illicit producers. In addition, participant 2 admitted that the Cannabis Master Plan has failed to boost the product demand aggregate of cannabis produced by rural growers. As acknowledged by Chibba (2023); Henning (2022) & Syned (2022), these combined market conditions are associated with reduced domestic and export market competitiveness and low incomes for SA's smallholding cannabis farmers. In light of such market challenges, it is therefore difficult to develop a sustainable commercial cannabis sector within rural areas.

Participant 1 argued that "*The plan has not promoted sustainable livelihoods for small-scale growers in rural areas. These growers rely on the risky black market or street markets to sell their produce".*

4.3.2.5 Creating economies of scale for small-scale farmers.

Interview Question 11– "Elaborate on how the Cannabis Master Plan is creating economies of scale for small-scale cannabis growers in rural South Africa."

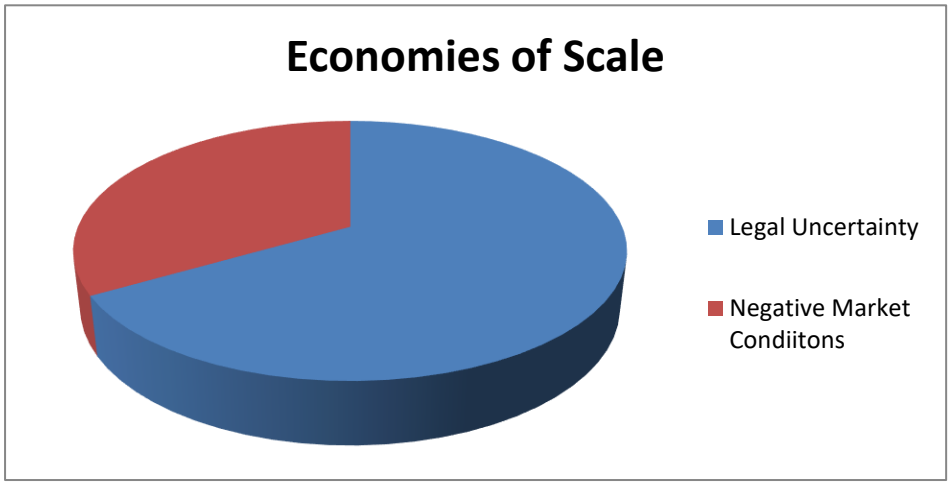
A review of participants' responses led to the identification of the main theme 'Economies of Scale under the Cannabis Master Plan' and several sub-themes illustrated in Table 4.13 below.

Table 4. 13: Interview Question 11 Theme 'Economies of Scale under the Cannabis Master Plan'

QUESTION 11	P1	*P2*
"Elaborate on how the Cannabis Master Plan is creating economies of scale for small-scale cannabis growers in rural South Africa."	The Cannabis Master Plan does not recognise private cannabis clubs e.g., 600 shops in Durban that are responsible for commercial cannabis industry and create many jobs.	*No economies of scale for small-scale farmers who cannot compete against urban based and international growers.* *Classification of cannabis as a schedule 7 substance by SAHPRA is a challenge.* *Small-scale farmers produce low quality commercial cannabis*
Sub-Themes	Legal Uncertainty	Legal Uncertainty Negative market conditions

Source: Author Derived (2023)

Figure 4. 16:Sub-Themes on Interview Question 11



Author Derived 2023

Two emerging sub-themes on economies of scale under the Cannabis Master Plan are outlined below:

4.3.2.5.1 Legal Uncertainty

67% of the participants cited legal uncertainty as stumbling block that has thus far prevented the creation of economies of scale for small-scale cannabis farming in South Africa. As discussed by Kenton (2024), stringent compliance requirements and high licence fees for cultivating commercial cannabis are examples of external

constraints that minimise smallholders' opportunities of attaining economies of scale within cannabis sector. In the end, noncompliance locks out small-scale cannabis farmers from lucrative and regulated domestic and cannabis markets. Compliance requirements deplete investment capital and raise production costs on the part of smallholders that legally cultivate commercial cannabis.

Participant 1 felt that "*The Cannabis Master Plan does not recognise private cannabis clubs e.g., 600 shops in Durban that are responsible for commercial cannabis industry and create many jobs".*

4.3.2.5.2 Negative Market Challenges

Participant 2 said that the Cannabis Master Plan has not succeeded in creating economies of scale for small-scale growers in rural areas. The plan has not done much to level the playing field for small growers within the commercial cannabis sector. Presently a majority of SA's small-scale cannabis farmers have to contend with lack of government support; small sized farms; inferior cannabis produce and high production costs driven by expensive seeds, labour, SAHPRA licence compliance requirements and fees, difficulties in accessing formal markets and inability to mitigate negative climate change impact. According to Gartenstein (2024) & Kenton (2024), the lack of economies of scale like those experienced by small-scale farmers in rural areas reduces market competitiveness and incomes.

Participant 2 is of the opinion that "*No economies of scale for small-scale farmers who cannot compete against urban based and international growers, Classification of cannabis as a schedule 7 substance by SAHPRA is a challenge Small-scale farmers produce low quality commercial cannabis".*

4.3.2.6 Implementation of cannabis master Plan

Interview Question 12 – "Outline the progress that various agriculture stakeholders and governing bodies have made in implementing the Cannabis Master Plan, and its areas of good practice and challenges."

A main of 'The Cannabis Master Plan Review' and sub themes emerged after from the review of participants' responses as illustrated in Table 4.14 below.

Table 4. 14: Interview Question 12 theme - The Cannabis Master Plan Review

QUESTION 12	P1	P2
"Outline the progress that various agriculture stakeholders and governing bodies have made in implementing the Cannabis Master Plan, and its areas of good practice and challenges."	The Cannabis Master Plan has not yet been published. The plan is characterised by a high degree of uncoordinated efforts by those tasked with its implementation. It's a move in the right direction to recognise and legalise cannabis as a cash crop option for small-scale farmers in rural areas of South Africa	Despite its slow implementation progress, the Cannabis Master Plan has laid a foundation for legislative reforms and policy initiatives such as Phakisa Initiative leading to some degree of monetising cannabis, removal of certain restrictions on THC levels for commercial cannabis cultivation & research into the economic potential of landrace cannabis by certain SA universities. A majority of small-scale growers from areas traditionally associated with indigenous cannabis industry are excluded from formal and regulated markets. No regulatory support from government Inadequate political in the implementation of this plan
Sub-Themes	Challenges Good Practices	Challenges Good Practices

Source: Author Derived (2023)

Two sub-themes - good practises & challenges - emerged from participants' views on the progress of the Cannabis Master Plan.

4.3.2.6.1 Good Practices

Both participants concurred that despite being unpublished and slow implementation, the Cannabis Master Plan has some evident areas of good practices. Examples of good practices include legal cultivation and sale of cannabis under SAHP+RA licences; the launch of the Phakisa Initiative; improved relations with law enforcers and research into landrace cannabis strains. However, these claims are unsubstantiated by objective findings. So far, the promised 'R100 billion -a- year' economic potential of commercial cannabis remains unrealised (Fraser, 2023 & Mathibe, 2023).

Participant 1 opined that "*The Cannabis Master Plan has not yet been published. The plan is characterised by a high degree of uncoordinated efforts by those tasked with its implementation It's a move in the right direction to recognise and legalise cannabis as a cash crop option for small-scale farmers in rural areas of South Africa".*

4.3.2.6.2 Challenges with Masterplan

According to the two participants, the Cannabis Master Plan has many challenges such as slow and uncoordinated implementation processes: unresolved legal issues regarding commercial cannabis supply chain and lack of political will. Discussions by Fraser (2023; Henning (2022; Masiwa (2022) & Mathibe (2023) indicate the extent of the plan's inability to unlock the full potential of the emerging commercial cannabis sector in South Africa many years since its adoption.

This is what Participant 2 had to say *"Despite its slow implementation progress, the Cannabis Master Plan has laid a foundation for legislative reforms and policy initiatives such as Phakisa Initiative leading to some degree of monetising cannabis; removal of certain restrictions on THC levels for commercial cannabis cultivation & research into the economic potential of landrace cannabis by certain SA universities A majority of small-scale growers from areas traditionally associated with indigenous cannabis industry are excluded from formal and regulated markets No regulatory support from government and Inadequate political in the implementation of this plan*".

4.3.2.7 Summary analysis of policymakers' response

Section B thematically analysed qualitative data provided from interviews with 2 SA's commercial cannabis policymakers. The emerging themes and sub-themes demonstrated that despite inherent lofty and excellent intentions, implementing commercial cannabis policies has been and remain a difficult journey. At present, policies like the Cannabis Master Plan and Phakisa Initiative seem to be benefiting mostly large-scale cannabis growers whilst creating several challenges and unintended consequences for a majority rural based small-scale cannabis farmers. There are many questions about how effective government policies have been in meeting expected outcomes to promote smallholder cannabis growers in this country.

4.4 Conclusion

This chapter thematically analysed qualitative data gathered from face-to-face interviews of 10 participants. During the analysis several themes and sub-themes emerged after reviewing participants' responses on 13 interview questions. The themes and sub-themes successfully addressed the 4 research questions regarding the impact of government interventions intended to promote small-scale cannabis farming in South Africa. The next chapter will discuss findings that came out of the analysis.

CHAPTER 5: DISCUSSION OF THE FINDINGS

5.1 Introduction

Chapter 5 provides a detailed discussion of qualitative findings from interviews with 10 small-scale commercial cannabis growers and policy makers on the impact of government interventions. The ensuing discussion will show how the various themes and sub-themes that emerged during data analysis are correlated to theories and literature discussed earlier during chapter 2. In addition, these findings will be compared to existing studies and literature on SA's and other countries' commercial cannabis sectors in order to deepen understanding and relevance of conclusions on the study.

5.2 Themes and Sub-Themes

This section discussed the extent to which various government policies and interventions like the Cannabis Master Plan have been impacting small-scale farmers within South Africa's commercial cannabis sector. The discussion is underpinned by themes and sub-themes on each of the four research questions.

5.2.1 Role of government frameworks

Research Question 1- What roles do various government frameworks (interventions and policies) play in eliminating entry barriers faced by small-scale farmers of cannabis in South Africa?

Findings on this research question, addressed through by interview questions 1 to 7 (for growers) and 8 and 12 (for policy makers), have shown that a majority of black smallholder farmers from rural areas continue to face several entry barriers into the commercial cannabis sector. Various government interventions have either failed to eliminate or unintentionally created entry barriers that make it harder for small-scale farmers to fully benefit from the emerging commercial cannabis industry. Many of the identified entry barriers are externally imposed by a combination of constraints like legal challenges; stigmatisation; inadequate access to formal or regulated markets and road infrastructure, government support and low levels of awareness.

Studies conducted by Carlton (2005)[42] and Roberts (2016) discuss the negative impact of exogenous entry barriers like those experienced by many SA's small-scale cannabis growers. These entry barriers create uncertainty; increase sunk and production costs whilst decreasing economies of scale, economic growth and market competitiveness for businesses or entrepreneurs. As a result, it becomes harder to make profits or earn sustainable livelihoods when faced with such entry barriers. What the commercial cannabis needs are government interventions and policies that eliminate or minimise various forms of exogenous entry barriers in order to benefit rural cannabis small-scale growers.

5.2.2 Policies and interventions

Research Question 2 -How do various government frameworks (policies and interventions) promote inclusive, competitive and sustainable small-scale cannabis farming in South Africa?

Research question was answered through interview questions 2, 4 and 5 (for policy makers) and 1 to 5 (for growers).

Qualitative findings from this study cast serious doubts about the ability of government frameworks in promoting inclusive, competitive and sustainable small-scale commercial cannabis farming in the country.

Literature documented by Askarova (2021); Petersen (2019); Ianchovichina & Lundstrom (2012) & Walby (2018) explore how government policies are linked to inclusive, competitive and sustainable economic growth. Quoting heavily from proponents of inclusive growth like Kuznets (1957) & Chenery (1960), the argument from these writers is that poorly drafted and implemented government policies do actually hinder inclusivity. Evidence of this point is data discussed in Tables 4.2 to 4.7 that describes how a majority SA's small-scale cannabis farmers from rural areas experience high levels of exclusion. Rural based farmers are locked out of formal and regulated supply chain channels and lack domestic or international market competitiveness. Government frameworks for the commercial cannabis sector have been ineffective in establishing a pro poor and gender balanced commercial cannabis

[42] Carlton of Chicago University's Business School draws heavily from the works of experts like Joe Bain (1956); George Stigler (1968) & Harold Demsetz (1968) to highlight the negative impact of exogenous entry barriers for businesses and entrepreneurs.

sector; increasing levels of public investment, support and quality job opportunities; eradicating discriminatory practices and high poverty levels in rural areas traditionally associated cannabis cultivation. Therefore, barring drastic policy changes and reforms, the commercial cannabis farming will continue to be an exclusive, uncompetitive and unsustainable economic activity for the majority of small-scale farmers in South Africa.

5.2.3 Creating employment opportunities.

Research Question 3 - How do various government frameworks (policies and interventions) create employment opportunities amongst small-scale cannabis farmers?

This research question was tackled through open–ended interview question 6 (for growers). According to study findings, government frameworks on commercial cannabis have had little or no impact on alleviating unemployment within rural areas of South Africa. The few jobs created within the commercial cannabis sector are mostly informal, of poor quality and unproductive (see Table 4.8).

A 2008 report from the Commission on Growth and Development claims that poor quality and unproductive jobs, like those created by SA's commercial cannabis industry, are ineffective drivers of alleviating unemployment, poverty, and achieving broader economic and development aligned to the National Development Plan (NDP) and United Nation's Sustainable Development Goals (SDGs) (Ianchovichina & Lundstrom (2018). What the sector needs are government policy frameworks that can effectively lead to an increased demand for formal and high paying job opportunities within rural communities that traditionally cultivate cannabis in South Africa.

5.2.4 contributing towards poverty alleviation.

Research Question 4 - How do various government frameworks (policies and interventions) contribute towards poverty alleviation in South Africa?

This question was addressed through open-ended interview questions 7 (for growers) and 2, 3, 4 & 5 (for policy makers). The Study findings indicated that various government frameworks have contributed very little towards poverty alleviation within

rural communities where people traditionally grow commercial cannabis on a small-scale basis (see Sections 5.2.1; 5.2.2 & 5.2.3). Ayoo (2021) & Mokgomo (2022) wrote about the relationship between the effectiveness of government frameworks and the success of poverty alleviation programmes in any country. The two authors suggested that effective poverty reduction is a sum of pro-poor, well drafted and implemented policies and interventions. Governments must strive for policies and interventions that are better at creating conditions that stimulate real economic growth characterised by more formal employment opportunities; decent wages; increased incomes, livelihoods and public investment on infrastructure; access to financial aid and markets. However, in the South African context government policies and interventions on commercial cannabis have had less impact in dealing with the endemic poverty experienced by small-scale cannabis farmers. The frameworks in question have thus far made very little progress in eliminating various entry barriers and exclusivity and creating quality job opportunities.

5.3 Conclusion

Chapter 5 evaluated the impact of various government frameworks on promoting small-scale cannabis farming in the country. The evaluation was based on thematic findings linked to each of the four research questions. The study findings have demonstrated that various government interventions and policies have had minimal impact in promoting small-scale farming of commercial cannabis in South Africa. On the contrary, most of the existing interventions and policies unintentionally disadvantage many small-scale commercial cannabis farmers around the country. In the following chapter, various recommendations, study limitations, and conclusion of the study will be discussed.

CHAPTER 6: CONCLUSION

6.1 Introduction

Chapter 6 provides a summary of this qualitative study on how government interventions and policies have been promoting small-scale commercial cannabis farming in South Africa. The summary is based on an analysis of findings that explored the views of participants on the state of small-scale commercial cannabis farming in order to address four research questions; recommendations for policy makers and further studies; study limitations and a conclusion.

6.2 Summary of Findings

Aside from contributing towards the existing body of knowledge on commercial cannabis sector, the findings from this study have some practical implications for policy makers and legislators in this country. The study has provided evidence on the current government commercial cannabis frameworks' impact regarding the promotion of small-scale commercial cannabis in rural South African communities. With the exception of few smallholders, a majority of impoverished and marginalised black farmers have been negatively impacted in various by the country's commercial cannabis policies. Most of these smallholders, who have been involved in the traditional cultivation of cannabis for a long time, find themselves locked out of this emerging industry. Therefore, in order to effectively promote small-scale commercial cannabis farming in rural areas, the government needs to redraft its interventions and policies. This calls for speedy legislative reforms of drug laws, increased public investment and support and intensifying research efforts into landrace and other cannabis strains suitable for South African climatic conditions. These reforms can lead to more pro-poor, gender balanced and well-implemented strategies that are aligned to sustainable development initiatives such as the National Development Plan (NDP) and the UN's Sustainable Development Goals (SDGs) just to mention a few. In addition, revised interventions and policies have an increased potential of eliminating existing entry barriers; creating quality and productive job opportunities and alleviating poverty within rural communities where livelihoods depend on the cultivation of commercial cannabis.

On the academic side, the study findings represent many potential opportunities waiting to be exploited. For instance, academics and students can conduct further investigative studies to provide more insights about this emerging industry of commercialised cannabis. These studies can be conducted independently to fulfil various academic requirements or in collaboration with private or public stakeholders.

6.3 Study Limitations

As noted by Miles (2019), this study had a number of limitations imposed by external factors that in turn influenced quality assurance of the findings. Therefore, findings of this study regarding credibility, transferability, dependability, confirmability and reflectivity should be seen in light of the following limitations:

6.3.1 Literature Gaps

Many literature gaps were encountered during the collection of secondary data for this study. These gaps are attributed to the availability of few research studies or documented evidence on commercial cannabis cultivation by small-scale since this is an emerging industry in many parts of globe. This challenge was partly overcome by the gathering of primary data during interviews with cannabis growers and policy makers.

6.3.2 Resource and Cultural Constraints

This study was conducted in the face of resource and cultural constraints. First, there limited financial resources because this was a self-funded research study. As a result, this constraint directly impacted the selection and distribution of study participants. Ideally the participants should have been selected from all areas that associated with cannabis growing by small-scale or indigenous farmers. Instead, the study group comprised purposively sampled farmers from the Gauteng and Mpumalanga provinces only rather some from the ‘dagga belt’ in Free State, Eastern Cape, and Kwa-Zulu Natal. Lastly, a few sampled individuals declined to be part of study group because of cultural constraints surrounding the research topic – these people were uncomfortable to discuss such a topic that still carries a fair amount of stigma and shrouded in legal controversy.

6.3.3 Sample Size and Composition

The study used a small sample size to collect data. This consequently affected the depth of responses especially during Section B of the semi structured interviews on commercial cannabis policy frameworks - that is only two out of five sampled policy makers availed themselves for questioning. One of these participants was part of think tank tasked the drafting or implementation of the government policy frameworks such as the Cannabis Master Plan and Phakisa Initiative. A larger sample of individuals that either drafted or are involved in implementing such policy frameworks would have enhanced the quality of findings for this study.

6.4 Recommendations

6.4.1 Recommendations for Commercial Cannabis Policy Makers

Study participants raised a number of issues that can positively increase the effectiveness of implementing government frameworks aimed at promoting commercial cannabis farming in this country. Examples of these are:

- The Drug and Trafficking Act of 1992 must be overhauled or amended in order to clarify the legal status of commercial cannabis and remove certain legal grey areas faced by small-scale farmers of cannabis.
- SAHPRA should introduce less stringent licensing compliance requirements and affordable licence fees for commercial cannabis so as to include more cash strapped small-scale growers into formal cannabis sector.
- There should be more interdepartmental coordination among public stakeholders mandated with the implementation of government frameworks.
- Authorities should put in place various oversights mechanisms to monitor, deter and deal with wrongful treatment of small-scale cannabis farmers at the hands of law enforcers.
- Government leaders and heads of departments that are part of the Cannabis Master Plan should show more political will to overcome some challenges linked to the implementation such policy initiatives.
- There is need for increased investment and introduction of cost and labour-saving innovations that can help in the creation of economies of scale for small cannabis farmers

6.4.2 Recommendations for further studies

In light of study limitations and emerging themes and sub-themes, there is a need of further research studies that should mixed methodologies to explore various aspects of commercial cannabis farming in the country and elsewhere. Below is list of suggested study topics:

i. Determining the role of private stakeholders can play in promoting commercial cannabis industry in South Africa's Dagga Belt.
ii. Study of entry barriers faced by small-scale cannabis within the commercial cannabis supply chain.
iii. A case study on the role indigenous cannabis strains within South Africa's emerging commercial cannabis sector
iv. Evaluating the competitiveness of South Africa's commercial cannabis on a global.
v. The impact of commercial cannabis farming in rural South Africa: Quantifying benefits for indigenous cannabis growers since the implementation of the Cannabis Master Plan.

6.5 Conclusion

The study was successful in assessing the impact of government policies and interventions that promote small-scale commercial cannabis production in South Africa. According to the study, only a limited number of small-scale farmers have benefitted from cannabis commercialisation in rural regions. In contrast, the bulk of people remain excluded from this profitable economic sector. However, there are some good practises associated with the various commercial cannabis frameworks, such as the partial legalisation and decriminalisation of cannabis as a cash crop option, as well as the introduction of the Phakisa Initiative, which resulted in the removal of THC restrictions for commercial cannabis cultivation.

REFERENCES

Askarova, M., 2021. Possibilities and challenges of inclusive economic growth in countries

Ayoo, C., 2021. Poverty reduction strategies in developing countries

Bottorff, J.L. et al. 2013. Perceptions of cannabis as a stigmatized medicine: a qualitative descriptive study, *Harm Reduction Journal* 10, Article No. 2 (2013)

Carlton, D.W., 2005. Barriers to entry, University of Chicago, NBER Working Papers Series 11645

Chibba, S., 2023. South Africa's cannabis industry: a potential powerhouse

Davids, N. 2021. Destigmatise SA's multi-billion-rand cannabis sector to achieve economic growth

Dhillon, R. & Moncur, Q., 2023. Small-scale farming: A review of challenges and opportunities offered by technological advancement

Dube, I., 2023. Investigating small-scale farms and barriers to entry in cannabis cultivation in South Africa

Almqvist, I. (2020). Medicine of the Imagination: Dwelling in Possibility: An Impassioned Plea for Fearless Imagination. John Hunt Publishing.

Bhandari, P. (2021, July 7) An Introduction to Correlational Research. Retrieved from: Scribbr. https://www.scribbr.com/methodology/correlational-research/ on 25 October 2023

Ballenger, J. (2010). Women's Access to Higher Education Leadership: Cultural and Structural Barriers. In Forum on Public Policy Online (Vol. 2010, No. 5). Oxford Round Table. 406 West Florida Avenue, Urbana, IL 61801.

Batyi, O., 2020. Cannabis engagement

Benfer I. et al. 2018 The impact of drug policy liberalisation on willingness to seek help for problem drug use: A comparison of 20 countries May 2018. *The International journal on drug policy* pp. 56

Beres D, 2016, How did marijuana become illegal in the first place? Retrieved from: www.bigthink.com on 9 March 2023

Borodino, O., & Prokopa, I., 2019. Inclusive rural development: a scientific discourse

Braun, V., and Clarke, V., 2013. Successful qualitative research: A Practical Guide for Beginners. London: SAGE.

Bryman, A. (2016). Social research methods. Cape Town: Oxford University Press

Bulose, S. (2024). Cannabis laws and legalisation in South Africa, Retrieved from: https://cms.law/en/int/expert-guides/cms-expert-guide-to-a-legal-roadmap-to-cannabis/south-africa on 5 June 2023

Burange, L.G., Karnik, N.N., & Ranadive, R.R. (2014). The experience of India's inclusive growth. Review of development and change

Buxton J, Chinnery-Hesse M & Tindari K, (2020). Drug policies & development – conflict and coexistence, Vol 12, Brill / Nijhoff

Calasuomo, A. (2021). The history of Durban poison and landrace strains

Chouvy P.A. (2023) Why the concept terroir matters for drug cannabis production.

Chouvy, P.-A. (2019). Cannabis cultivation in the world: Heritages, trends and challenges. EchoGéo,

Clemencot, J, (2019). Cannabis, An African gold rush. The African Report. Retrieved from: https://www.theafricareport.com/19723/cannabis-an-african-green-gold-rush/ on 25 May 2023

Coppola, A., et al. (2018). Endogenous and exogenous determinants of agricultural productivity: What are the most relevant for the competitiveness of the Italian agricultural systems?

Costa, M. (2022). How to ensure data quality in field research? Retrieved from: https://www.surveycto.com/data-collection-quality/how-to-ensure-data-quality/ on 5 April 2023.

Cresswell, J.W. (2009). Research design: Qualitative, quantitative and mixed methods approaches. 3rd Ed. Los Angeles: SAGE.

Creswell, J.W. (2011). Controversies in mixed methods research. The SAGE handbook of qualitative research. 4th Ed. Thousand Oaks: Sage. pp. 269-284.

Creswell, J. (2014). Research design: Qualitative, quantitative and mixed methods approaches. USA: SAGE.

Creswell, J., Fetters, M.D., & Ivankova, N.V. (2004). Designing a mixed method study in primary care. *Annals of Family Medicine*, 2(1): pp. 7–12

Johnson, R.B., & Christensen, L. (2010). Educational research: Quantitative, qualitative, and mixed approaches. 4th Ed. California. SAGE.

Debons C. (2022). The decriminalisation of dagga in South Africa: A landmark precedent? Retrieved from: https://www.researchgate.net/publication/361110944_The_Decriminalization_of_Dagga_in_South_Africa_A_Landmark_Precedent/citation/download on 26 May 2023

Department for International Development (DFID), (2008). Sustainable Livelihoods guidance sheets. Department for international development. Retrieved from:http://www.livelihoods.org/info/infoguidancesheets.html on 28th July, 2023.

Dwivedi V. (2022) Indigenous people and communities: The role of social workers as human rights workers

EC Lubaale, EC. & SD Mavundla,SD. (2019).'Decriminalisation of cannabis for personal use in South Africa' (2019) *19 African Human Rights Law Journal* pp.819-842

Fraser, L. (2023). Trouble for South Africa's R100 billion-a-year high hopes

Gastrow, P., 2022. The prospects and challenges for South Africa's emerging cannabis industries

Gratton, P. (2024). Porter's Five Forces explained and how to use the model

Greenfield M, & Zwielich M. (2021), Time to understand the cannabis supply chain Retrieved from: www.berdon.com on 9 April 2023.

Gonstana, M.A. (2023). Cops cautioned over arresting people for cannabis use and possession

Grooten TS. (2023). Harvesting Hope: Exploring the untapped potential of smallholder cannabis farming in South Africa – A Case of inclusion of ancestral landrace f arms in Mpondoland

Gwala RS. (2023). Chapter 6, The Legalisation of Cannabis in South Africa: Proposing an Economic Value Chain Model for South Africa, University of Kwa Zulu Natal, ResearchGate

Hayami, Y. & Rutan, V. (1971). Induced Innovation in Agricultural Development. . *Centre for Economic Research*, Discussion Paper No.3University of Minnesota: Minneapolis.

Hayes, A. (2023). Barriers to entry: Understanding what limits competition, Retrieved from: https://www.investopedia.com/terms/b/barrierstoentry.asp on 6 July 2023

Hayami, Y. & Ruttan, V. (1984) Toward a Theory of Induced Institutional Innovation. *Journal of Development Studies* pp. 203-223.

Hayes, A., 2021. Return on innovation investment: What it means, how it works. Retrieved from: https://www.investopedia.com/terms/r/return-on-innovation.asp#:~:text=The%20return%20on%20innovation%20investment,R2I%22%20or%20%22ROI2.%22 on 25 April 2023.

Hazekamp, A., Tejkalová, K., & Papadimitriou, S. (2016). Cannabis: From Cultivar to Chemovar II—A Metabolomics Approach to Cannabis Classification. Cannabis and Cannabinoid

Henning, C. (2022). Inclusion of South African cannabis smallholders remains a challenge

Hudak J. (2020). Marijuana: A short history, Brookings Institute Press

Idahosa, G., & Vincent, L. (2019). Strategic competence and agency: Individuals overcoming barriers to change in South African higher education. Third World Quarterly, 40(1), pp. 147-162

Johnson, S (2014) Leadership Skills, Job Satisfaction, and motivation in workplace: A Phenomenological Research Study, University of Phoenix ProQuest Dissertations Publishing, 28314490.

Johnson, B., & Christensen, L. 2012. Educational research: Qualitative, quantitative and mixed approach. 4th Ed. California. SAGE.

Johnson, D., (2022), What is data analysis? Research types & examples

Kenton W, 2022, Economies of scale: What are they and how are they used?

Kirsten JF & van Zyl J. (1998). Defining small-scale farmers in the South African context. Agrekon, Vol 37, No 4.

Kothari, C.R., (2004), Research Methodology – Methods & Techniques

Khumalo, G. (2023). Permits to change the lives of farmers. Retrieved from: https://www.sanews.gov.za/features-south-africa/permits-change-lives-farmers on 2 February 2023

Kumar, R. (2011). Research Methodology – a step by step guide for beginners. 3rd Edition 2nd Edition revised.

Ianchovichina, E., and S. Lundström (2009). 'Inclusive Growth Analytics: Framework and Application. WB Policy Research Working Paper 4851. Washington, DC: World Bank.

Lewis, M. (2022). Cannabis in the Eastern Cape – a policy discussion document. Retrieved from: https://www.ecsecc.org/documentrepository/informationcentre/cannabis-in-the-eastern-cape-paper-web_76550.pdf on 7 July 2023.

Lowitt, S. (2020). Initial considerations for the creation of an inter-regional hemp value chain between Malawi and South Africa. Retrived from:

https://www.wider.unu.edu/sites/default/files/Publications/Working-paper/PDF/wp2020-23.pdf on 5 July 2023.

Lumsden, K. (2022). Assessing the quality of qualitative research

Machete R & Dintwe K, (2023). Cyclic Trends of Wildfires over Sub-Saharan Africa

Malhotra, N.K. (2019). Marketing research – An applied orientation. Georgia Institute of Technology. 7th Edition.

Mathibe, M. (2023). UP expert opinion: Cannabis industry plans for South Africa have stalled: How to get them moving again. Retrived from: https://www.up.ac.za/news/post_3139354-up-expert-opinion-cannabis-industry-plans-for-south-africa-have-stalled-how-to-get-them-moving-again 27 July 2023.

Marthe, L.K., et al. (2022). Education, financial aid and awareness can reduce smallholder farmers' vulnerability to drought under climate change.

Mazenda, A., & Masiya, T. (2022). South Africa's small-scale farmers still can't find a place in the value food chain. The Conversation.

Masiwa, D. (2022). The harsh realities of Mzansi's cannabis smallholders. Retrived from: https://www.foodformzansi.co.za/the-harsh-reality-of-mzansis-cannabis-smallholders/ on 5 July 2023.

McCombes S. & George T. (2022), How to define a research problem / ideas & examples

Mintzberg, H. (1989). Mintzberg on management: Inside our strange world of organizations. Simon and Schuster.

Mkhize V, (2022). Pondoland: South Africa's cannabis growers left behind by legislation plans, BBC

Morse, S., & McNamara, N. (2013). The theory behind the Sustainable Livelihood Approach. EM: Sustainable Livelihood Approach: A critique of theory and practice

Muzekenyi M, Zuwarimwe J & Beeta K. (2019). Review of South Africa's small-scale farming entrepreneurial constraints and opportunities: A rural perspective,

Mokgomo, M.N. (2022). The impact of government agricultural development support on agricultural income, production and food security of beneficiary small-scale farmers in South Africa

Mthombeni, S., et al. (2019). An analysis of finance as a barrier to entry and expansion

Muzekenyi, M., Zuwarimwe, J., & Beata, K. (2019). Review of South Africa's small-scale farming entrepreneurial constraints and opportunities: A rural perspective. *J. Agric. Allied Sci, 8*(1), pp.79-85.

Norwicki, L. & Hendriks, A. (2023). We bought dagga. It's probably illegal. Here's why. Retrived from: https://groundup.org.za/article/we-bought-dagga-but-it-was-probably-illegal---heres-why/ on 6 June 2023.

Pathak, V., et al. (2013). Qualitative research. Perspectives in clinical research.

Pettinger, T. (2019). Definition of economies of scale. Retrieved from: https://www.economicshelp.org/microessays/costs/economies-scale/#:~:text=8%20December%202019%2028%20June,size%2C%20they%20become%20more%20efficient. On 5 July 2023.

Petersen, I. (2019). Promoting alignment between policy and inclusive development in South Africa

Roest K., et al. (2018). Specialisation and economies of scale or diversification and economies of scope? Assessing different agricultural pathways. *Journal of rural studies.* Vol. 59, pp. 222-231

Rusenga, C., et al. (2018). Cannabis policy changes are welcome. But small-scale producers are losers.

Ndlovu C & Masuku, A. (2021). Small-scale farming and access to market: challenges and opportunities in South Africa, *Journal la Sociale*, Vol 2

Neethling B. (2023). Small-scale cannabis farmers strangled by red tape, daily investor.

Nkosi, et al. (2020). Historia 65, (pp 61-86)

Okon E. (2022). Interaction of corruption, governance, institutional quality and underground economy in Nigeria, *Global Journal of Business, Economics, and Management:* Current Issues Volume 12, Issue 3, (2022) pp. 211-222 Retrieved from: www.wjbem.eu on 25 March 2023

Pedram M. (2023). AI Risk Assessment Tools Amid the War on Drugs: Productive or Counterproductive?

Phillip, K. (2010). Inequality and economic marginalisation. *Law, Democracy & Development*. Volume 14.

Ramashala, T. (2021). Draft National Cannabis Master Plan for South Africa. Retrieved from: https://qure.co.za/wp-content/uploads/National-Cannabis-Master-Plan- for-South-Africa-Version-5.pdf on 2 April 2023.

Reid, M. (2020). A qualitative review of cannabis stigmas at the twilight of prohibition, *Journal of Cannabis Research*

Roberts, R. (2016). Barriers to entry and implications for competition policy, University of Johannesburg

Saunders, M., Lewis, P. & Thornhill, A. (2003). Research method for business students. 3rd ed. New York: Prentice Hall.

Saunders, M., Lewis, P., & Thornhill, A. (2009). Research method for business students. 5th ed. New York: Prentice Hall.

Saunders, M.N., Lewis, P., & Thornhill, A. (2011). Research methods for business students. 5th Ed. Essex: Pearson Education.

Saeed, Y. (2020). Convenience Sampling Definition: Why and How to Convenience Sample – Advantages, Disadvantages of Convenience Sampling. Retrieved

from :https://ascholarship.com/convenience-sampling-definition-why-and-how-to- on 20 March 2023.

Sihlobo.W, (2018). The Promise of the Eastern Cape's Cannabis-belt? Retrieved from https://wandilesihlobo.com/2018/11/19/the-promise-of-the-eastern-capes-dagga-belt/ on 09 May 2023.

Singh VA, 2019, The need for decriminalisation of the use of cannabis – a comparative legal study.

Simplilearn, C.(2023). What Is Data Collection: Methods, Types, Tools. Retrieved from https://www.simplilearn.com/what-is-data-collection-article on 01 September 2023

Scoones, I. (2015). Sustainable livelihoods and rural development (Ser. Agrarian change and peasant studies series, 4). Fernwood Pub.

Shyam R et al., (2022). Recreational cannabis and opioid distribution Short Research Article Health Economics Letters. Retrieved from: https://pubmed.ncbi.nlm.nih.gov/36653623/ on 25 March 2023.

Sihlobo, W. (2018). The promise of the Eastern Cape's Cannabis Belt? Agriculture Economic Today. Retrieved from: https://wandilesihlobo.com/2018/11/19/the-promise-of-the-eastern-capes-dagga-belt/ on 5 January 2023.

Slabbert D. (2017). Weed tourism means big business, First Rand, Retrieved from: https://www.firstrand.co.za/media/1932/denise-slabbert-weed-tourism.pdf on 5 May 2023.

Slabber, J. (2023). South African cannabis industry poised for huge growth in 2023. Retrieved from: https://mg.co.za/thought-leader/opinion/2022-12-12-south-african-cannabis-industry-poised-for-huge-growth-in-2023/ on 27 March 2023.

Stares, P. (2021). Drug legalisation? Time for a real debate. Retrieved from: https://cms.law/en/int/expert-guides/cms-expert-guide-to-a-legal-roadmap-to-cannabis/south-africa on 5 January 2023.

Svrakic M.N, et al. (2012). Legalisation, decriminalisation, & medical use of cannabis: A scientific & public health perspective

Tom, S. (2021). Gauteng growers lead the way in cannabis licence rush, Retrieved from: https://www.foodformzansi.co.za/gauteng-growers-lead-the-way-in-cannabis-license-rush/ 10 February 2023.

Tharakan J. (2016). Indigenous knowledge systems for appropriate technology development.

National Commission for the Protection of Human (1979). The Belmont Report, (1979). Ethical principles and guidelines for the protection of human subjects of research.

UNODC (United Nations Office on Drugs and Crime). (2019). Strengthening our actions at national, regional and international levels to accelerate the implementation of our joint commitments to address and counter world drug problem, Ministerial Declaration, (Vienna UN)

Walby, S. (2018). Policies for inclusive economic growth, Researchgate. Retrieved on:https://www.researchgate.net/publication/326650967Policies_for_inclusive economic_growth 5 June 2023.

Walker, T. (2023). The importance of quality control in cannabis cultivation. Framer's Weekly, Vol. 2023 No. 23011

Warren, K. (2020). Qualitative data analysis methods 101 – the “big 6” methods + examples. Retrieved from: https://gradcoach.com/qualitative-data-analysis-methods/ on 26 January 2023.

Wenwu, Z., et al. (2014). On the mode of production of agricultural modernisation – conception and the policy system of establishing the countryside Datong’s society

WESGRO. (2021). Investing in cannabis in SA. Retrieved from: https://www.wesgro.co.za/invest/resources/investing-in-cannabis-in-south-africa on 21 June 2023

Zwane, E. (2020). Role of agricultural innovation system in sustainable food security, *South African Journal of Agricultural Extension*

APPENDICES

Appendix 1: In depth interview Questions for small-scale farmers

SECTION A: What roles do government interventions and policies play in eliminating entry barriers faced by small-scale farmers of cannabis in South Africa? - Question 1 & 2

1. Discuss how government interventions and policies eliminate market entry barriers faced by small-scale cannabis farmers in South Africa
2. Discuss the nature your experiences as small-scale cannabis growers with law enforcers in South Africa.

SECTION B: How do government policies and interventions promote inclusive, competitive and sustainable small-scale cannabis farming in South Africa? - Questions 3, 4 & 5

3. How affordable are licence fees that are required for cultivation of commercial cannabis plants?
4. How do you find the regulations and quality control compliance procedures for commercial cannabis farming in South Africa?
5. Elaborate on the acceptance level (buy in) of cannabis legalisation in South Africa.

SECTION C: How do government policies and interventions create employment opportunities amongst small-scale cannabis farmers? - Questions 6

6. Outline the extent to which government policies and interventions on commercial cannabis are alleviating unemployment levels in rural parts of South Africa

Section D: How do government policies and interventions contribute towards poverty alleviation in South Africa? - Questions 7

7. Identify ways in which commercial cannabis farming is alleviating poverty among rural communities in South Africa.

Appendix 2: Questionnaire - Interview Instrument

Interview Questionnaire



Topic: Assessing the impact government interventions have in promoting small-scale commercial cannabis farming in South Africa

PART 1: BIOGRAPHICAL INFORMATION

Name of Respondent…….....

Designation of Respondent…….

Date: ……

Please indicate your preferred answer with an X in the appropriate box

1. Gender

Male	
Female	

2. Highest academic level you have achieved

Matriculation	
Diploma	
Degree	
Postgraduate	
Doctorate	

3. Is this farm engaged in commercial farming?

Yes	
No	

4. Your work experience in farming and growing cannabis

Less than 2 years	
2 to 3 years	
4 to 5 years	
More than 5 years	

PART 2: INTERVIEW QUESTIONS

SECTION A: What roles do government interventions and policies play in eliminating entry barriers faced by small-scale farmers of cannabis in South Africa?

1. How are government interventions and policies eliminating market entry barriers faced by small-scale cannabis farmers in South Africa

_____

_____

_____

_____

2 What is your experience as small-scale cannabis growers with law enforcers in South Africa.

_____

_____

_____

_____

SECTION B: How do government policies and interventions promote inclusive, competitive and sustainable small-scale cannabis farming in South Africa? - Questions 3

3 How affordable are licence fees that are required for cultivation of commercial cannabis plants?

_____

_____

_____

_____

4 How do you find the regulations and quality control compliance procedures for commercial cannabis farming in South Africa?

_____

_____

_____

_____

5 Elaborate on the acceptance level (buy in) of cannabis legalisation in South Africa.

_____

_____

_____

_____

SECTION C: How do government policies and interventions create employment opportunities amongst small-scale cannabis farmers?

Questions

6 Outline the extent to which government policies and interventions on commercial cannabis are alleviating unemployment levels in rural parts of South Africa

_____

_____

_____

_____

Section D: How do various government policies and interventions contribute towards poverty alleviation in South Africa?

Questions

7 How is commercial cannabis farming alleviating poverty among rural communities in South Africa?

_____

_____

_____

_____

_____

Appendix 3: In depth interview Questions for Policy Makers

Section A: Biographical Information

8 Would you please state your official position, and experience in years as part of the policy drafting team in the Department of Agriculture?

Section B: Evaluation of the Master Cannabis Plan – incorporation of theories; implementation; good areas of practice and challenges

9 Discuss the extent to which the Cannabis Master Plan has promoted inclusivity among small-scale farmers that grow commercial cannabis in the rural areas of South Africa.

10 Describe the various forms of affordable, accessible and modern innovations that the Cannabis Master Plan has introduced in rural areas for small-scale commercial cannabis so far.

11 Discuss the various ways in which the Cannabis Master Plan is promoting sustainable livelihoods for small-scale cannabis growers in rural South Africa.

12 Elaborate on how the Cannabis Master Plan is creating economies of scale for small-scale cannabis growers in rural South Africa.

13 Outline the progress that various agriculture stakeholders and governing bodies have made in implementing the Cannabis Master Plan, and its areas of good practice and challenges.