



A Consideration of the Potential Taxation of Cannabis in South Africa

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DECLARATION

I declare that the mini-dissertation titled 'A consideration of the potential taxation of cannabis in South Africa' is my own work, that all sources used or quoted have been indicated and acknowledged by means of complete references and that it has not been previously submitted by me, or another person for degree purposes at this, or another, university.

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I have not allowed, and will not allow, anyone to copy this mini-dissertation with the intention of claiming it as his own work.

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ABSTRACT

Taxation is part of the daily lives of most persons in the world. A new product supplied into a market is likely to be subject to some form of taxation. Taxation of a new product for example cannabis requires rigorous planning due to its diversity and complexity.

South Africa has a long way to go considering the possible legalisation of cannabis and the resulting tax legislation of it. The most recent changes made were the finalisation of the Cannabis for Private Purposes Bill of 2020. According to a Government statement released on 06 August 2020, the submission to Parliament was approved by the Minister of Justice and Correctional Services and noted in the Government Gazette no 43595, vol. 662 on 07 August 2020. The mini-dissertation does not include this latest legislation, due to not being approved by Parliament yet.

Certain countries including various American states have not yet approved cannabis legislation. They have, however, legalised the recreational and medicinal use of it. Many other countries are exploring the possibilities should the use of cannabis no longer be prohibited.

Due to a lack of appropriate data and studies in South Africa, international studies and legislation could be used to supplement this shortage of information to formulate tax policies for cannabis in South Africa.

This report confirms that by legalising the recreational and medicinal use of cannabis, a government may reap enormous financial benefits, bearing in mind its versatility.

Careful consideration is needed in establishing the best tax policy, to avoid subjecting cannabis to over tax. New taxes are not required but rather that existing tax legislation should be enforced.

GLOSSARY OF TERMS

Term	Definition
Cannabis	Cannabis sativa, also known as hemp, is a species of the <i>Cannabaceae</i> family of plants.
Cannabinoid Hyperemesis Syndrome	Characterised by chronic cannabis use, cyclic episodes of nausea and vomiting, and frequent hot bathing.
Criminalised	Turned into a criminal offence by making it illegal.
Dagga	A common South African term for cannabis, also known as weed or marijuana (marihuana).
Decriminalised	Cease to treat (something) as illegal or as a criminal offence
Hemp	<i>Sativa L</i> , is an industrial crop cultivated all over the world
Legalisation	This is the process of changing the legal status of an activity to be permissible by law. It may still be regulated by law enforcement or other regulatory bodies.
Schizophrenia	Mental (complex brain) disorder.
Sin taxes	Excise duty and a levy imposed on high-volume daily-consumable products.

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CHAPTER 1: INTRODUCTION

1.1 Background

1.1.1 The history of cannabis

Cannabis is a drug that could cause mild hallucinations. It has relaxing probabilities for its user. And it has been around and used for over 6 000 years (Gustrow, 2003).

According to an article in the Drug Enforcement Administration Museum, the Chinese Emperor, Shen Nung, started using cannabis in 2727 B.C.. This is the oldest known written record (DEAM, 2009:1).

According to van Niekerk (2011) cannabis has always been included as an illegal drug in the world of drug trading and for personal use. The following is stated:

‘The war on drugs has failed! Humans have always taken psychoactive substances and prohibition has never kept them from doing so. The international evidence suggests that drug policy has very limited impact on the overall level of drug use. Making people criminals for taking psychoactive substances is in it-self criminal, for one is dealing with, at worst, a vice but not a crime.’
(Van Niekerk, 2011:80).

In 1870 South Africa became the first country to ban cannabis and made recreational use of it illegal (Van Kerken, 2013:21). Interpol indicated that South Africa was one of the top four cannabis suppliers in the world, making supplies to continental Europe, the United Kingdom, Ireland and South Korea (Gastrow, 2003).

The international users of cannabis are familiar with the quality and potency of it when supplied by South African suppliers in KwaZulu-Natal, Eastern Cape and even from neighbouring Lesotho (Minnaar, 2015:53). ‘Durban Poison’, a South African cannabis strain, has been rated among the 20 greatest strains of all times (Cited by De Villiers, 2018:2).

South Africa is the third country in Africa to start legalising cannabis, following

- Lesotho in September 2017, and
- Zimbabwe in April 2018

(De Villiers, 2018:2)

South Africa supplies large quantities of herbal cannabis to the United Kingdom and continental Europe, keeping in mind that it is still illegal in South Africa to sell cannabis products (De Villiers, 2018:1).

South Africa's cannabis explanation and awareness campaign attracted huge numbers of entrepreneurs and consumers. It took place after the Constitutional Court ruling in September 2018 (De Wet, 2019a:2).

The intent shown by Government to explore the possibility of also legalising cannabis for recreational and medicinal use could provide an enormous opportunity for it to increase its revenue collections. This has resulted in other parts of the world from the legalisation of cannabis (De Wet, 2019a:2).

The legalisation and taxation of cannabis would involve several economic and public health reasons, irrespective of how a person feels about it (Hamilton, 2017:1-2). Two of the main reasons for a country to legalise cannabis are the

- Vast increases in tax revenue collected from direct cannabis sales and indirect business income through cannabis trade, and
- concerns on public health.

Critics argued that teenagers and under-aged children would have easier access to cannabis once it is legalised (Hamilton, 2017:1-2). Yet the statistics show the opposite. Once cannabis was legalised in other countries and proper education supplied, the number of users of it decreased. With the correct price structure implemented for legalised cannabis products, it could also have a negative effect on the 'black market' (Hamilton, 2017:1-2).

The evidence presented and assessed in the *International Agency for Research on Cancer, Handbook Volume 14*, confirms the effectiveness of tax and price policies in the control of tobacco use and improvement of public health (cited by Chaloupka, Straif and Leon, 2011:2). This could have the same effect on cannabis if it is correctly priced and then subjected to an appropriate tax.

1.1.2 Versatility of cannabis

In South Africa's early days, various provinces prohibited or started to regulate cannabis, for example,

- the Cape Colony in 1891,

- Free State in 1903, and
- Natal in 1908,

while Transvaal was still selling it (Anglim, Curley, Keenan and Attwood, 2019a).

Cultivation, processing, sale and use of cannabis were still prohibited in 1922, when the amended Customs and Excise Duty Act (Regulation 14) was implemented (Anglim *et al.*, 2019a).

The potential impact that cannabis cultivation will have on legislation in South Africa could have the power to bring material benefits to various industries in South Africa, for example, the

- medicine,
- biofuel,
- textiles,
- building material,
- paper,
- food, and
- animal feed

industries (Sol CBD, 2015:1).

1.1.3 Progress in legalising cannabis in South Africa

Government policy on legalising cannabis in South Africa is evolving slowly. Legalisation does not have only health and criminal justice impacts, but also revenue implications for a country that chooses to subject it to tax (Davis, Hill and Phillips, 2019:2).

Cannabis is currently a controlled substance that is classified as a Schedule 7 drug (Medicines and Related Substances Act, 1965). Under legislative requirements, this makes it illegal to cultivate, analyse, research, use, sell or supply it without the necessary authorisation from the Department of Health (Koch, 2017:4).

The two departments who are mostly involved in the cannabis industry are the

- Department of Health, and
- Department of Agriculture, Forestry and Fisheries

(Gouws, 2017:4).

House of Hemp (Pty) Ltd was founded in 1999 and also managed to get into the government hemp project in 1999. The company has over 20 years' experience with industrial cannabis. It became the first South African entity to be awarded a research permit already in 2009, permitting them to legally cultivate and process cannabis for community research trials (Wallace, 2018:3).

On 25 November 2016 the Medicines Control Council issued a press release in which the following was stated:

'Under the Medicines and Related Substances Act 101 of 1965 all medical practitioners can apply to the [Medicines Control Council] for permission to access and prescribe unregistered medicines – including cannabis – or their patients in certain exceptional circumstances.' (Koch, 2017:3).

The first step taken was the judgment handed down on 18 September 2018 by the Constitutional Court, effectively decriminalising the private possession and use of cannabis by adults in South Africa (South Africa, 2018). It found that the banning of cannabis for private use was an infringement of section 14 of the South African Constitution, which gives all citizens the right to privacy (De Villiers, 2018:1). September 2020 is the cut-off date for the South African Government to redefine certain provisions of the law to decriminalise private cannabis usage (Anglim et al., 2019a:38). The second step is moving towards finalising the Cannabis for Private Purposes Bill of 2020. According to a Government statement released on 06 August 2020, the submission to Parliament was approved by the Minister of Justice and Correctional Services and noted in the Government Gazette no 43595, vol. 662 on 07 August 2020.

The South African Health Products Regulatory Authority granted the first licence for the cultivation of cannabis and the manufacture of cannabis-related pharmaceutical products for medicinal and research purposes to House of Hemp (Pty) Ltd in April 2019. Again, House of Hemp (Pty) Ltd was the first company to receive this licence, same as receiving the permit in 2009. This was a milestone into what could result in a lucrative and innovative field for medicinal cannabis and the cannabidiol sector (Richardson, 2019:1).

The latest change in South Africa's cannabis law was *Gazetted* on 23 May 2019 (Medicines and Related Substances Act 101 of 1965, 2019). It allows anyone the opportunity to sell any product that includes the ingredient cannabidiol, and not just pharmacists. This cannabis law change will be allowed for only one year (De Wet, 2019b:1).

The purchase and sale of cannabis under this concession is limited to products that are considered health supplements, and that contain

- a daily dose of less than 20mg / 0,0075% cannabidiol, and
- less than 0.001% tetrahydrocannabinol

(Medicines and Related Substances Act 101 of 1965).

CapeTalk's Barbara Friedman reported on 14 October 2019 that the first Western Cape commercial cannabis licence was granted to Polkadraai Strawberry Farm, located just outside Stellenbosch (Friedman, 2019). The owner of Polkadraai Strawberry Farm mentioned that medicinal cannabis will be cultivated under its trading company, Felbridge (Pty) Ltd (Friedman, 2019).

1.1.4 Medicinal application

Cannabis has a low fibre content and is unsuitable for fibre production while hemp (mainly cultivated for fibre and oil), due to its low tetrahydrocannabinol content, cannot be used as a drug.

The two major molecules of cannabis are tetrahydrocannabinol and cannabidiol:

- Tetrahydrocannabinol is the component that produces a sense of euphoria (makes users 'high') and is also effective in treating certain symptoms of multiple sclerosis.
- Cannabidiol influences tetrahydrocannabinol by reducing the psychoactive effects and can treat numerous symptoms.

Due to the vast amount of different strains of tetrahydrocannabinol and cannabidiol available it is necessary to be completely sure of the effects of the specific strain since it could have different impacts on a user's health (Mj Wellness, 2016b:3).

Medically, cannabidiol is the most important component of cannabis that determines whether a strain can be used for treatment. Those strains that contain over 20% of cannabidiol are considered to be more suitable for medicinal purposes (for example, in *ACDC*, tetrahydrocannabinol is 1% and cannabidiol is 23%) (Mj Wellness, 2016a:1).

Serious diseases, including

- cancer,
- multiple sclerosis,

- post-traumatic stress disorder, and
- Crohn's disease

can be treated with the correct strain of cannabis. Cannabidiol-rich strains are safe for use by children and can be prescribed for children with autism and epilepsy (and also for Dravet's Syndrome – one of the most severe forms of epilepsy) (Mj Wellness, 2016a:1-2).

The South African Depression and Anxiety Group, defines the word 'schizophrenia' as a mental disorder that affects around one in every 100 persons (South African Depression and Anxiety Group). There is no distinction between men and women. It affects both equally. It is rare before the age of 15 years, but can commence at any time after this age, mostly between the ages of 15 years and 35 years.

According to the National Institute on Drug Abuse (2014) on the effects of long-term or heavy-use of cannabis, an increased risk of chronic psychosis disorders, including schizophrenia, in a person with a predisposition to this disorder was found. It also warned that cannabis could exacerbate the course of illness in a patient that has schizophrenia.

Another review from the Yale University School of Medicine (2014) as published in May in the journal 'Frontiers in Psychiatry' noted that some analysts have found that between 8% and 14% of all schizophrenia disorders may be due to the use of cannabis (cited by Boffey, 2014:1).

Another study discovered positive results of using cannabidiol in treating schizophrenic patients (McGuire, 2015:1-2). The popularity of the use of cannabidiol in medicine is the main factor in the progressing with cannabis legalisation in America (Mj Wellness, 2016a:2).

A recently published survey, launched in May 2018 by MedScape showed that most physicians are in favour of legalising cannabis for recreational and medicinal purposes. This means that the views of medical professionals do not significantly differ from those of the general American population (Angell, 2018.)

1.1.5 Taxes (including excise duties, levies and value-added tax)

High-volume consumable products (for example, petroleum, alcohol and tobacco) are subject to tax by the reposition of an excise duty or levy. Approximately 10% of total revenue collected by the South African Revenue Service is due to these duties and levies (South African Revenue Service, 2019a:1).

Excise duty was previously implemented at different stages on alcohol and tobacco. The implementation of it was predominantly to

- assist Government with increased revenue, and
- control tobacco users' addictive consumption

(Van Walbeek and World Health Organisation, 2003:4). Hence, the double effect of extra collections and savings on various expenses for Government.

Excise duty was implemented in the tobacco industry in 1961 (Van Walbeek and World Health Organisation, 2003:4) and in the liquor industry in 1994 (National Treasury, 2014:4, 14). Excise duty plus value-added tax on tobacco and alcohol products is levied and payable by manufacturers of these products throughout the South African Customs Union.

International evidence shows that the most effective control measure on tobacco is the increase of excise duty (Van Walbeek and World Health Organisation, 2003:6). The structure applied in South Africa uses a transparent alcohol excise duty rate including value-added tax. It differentiates between alcoholic beverages in accordance with benchmarks determined in 2002, and adjusted in 2012 (National Treasury, 2014:4).

Excise duty including value-added tax on tobacco is levied at high rates in an attempt to deter consumers from using it. Evidence shows that subjecting tobacco to tax is associated with reduced tobacco consumption (Wilson & Thomson, 2005:1). This could have the same result for recreational cannabis.

Most medicines in South Africa do not qualify for normal tax and value-added tax concessions. According to the president of The Pharmaceutical Society of South Africa, cited by Mkhonza, announced on 4 May 2018 that it will make a submission to the recently-appointed panel of experts to review the current list of value-added tax exempt and zero-rated items (Mkhonza, 2018:1).

1.2 Motivation of topic

Globally, the perceptions about cannabis are changing, including the growing value which should raise the question of whether South Africa should get involved, either on its own or with joint efforts into research of this agricultural product. This will help the policymakers in assessing whether its production benefits can outweigh the unintended consequences (Sihlobo, 2019).

South Africa should rather focus the cannabis trade on the international market as an added crop to supply its existing export markets, for example, America, Canada and China. These

countries already have some regions that decriminalised cannabis. The increasing desire for cannabis and its products is interesting and could offer extra value if South Africa was to follow the route of producing the crop for international trade. It could also be used for medicinal use in a regulated environment (Sihlobo, 2019).

South Africa is slowly getting involved in the research of this crop, as can be seen with the explanation and awareness campaigns held in all the major cities. Cannabis is currently legalised in South Africa only for its private cultivation and use (Stansfield & Yeates, 2018:2). Neither recreational nor medicinal use has been legalised, hence, a possible tax method will have to be introduced. The motivation for this study is to provide a possible tax method, using existing tax types that could be used for cannabis once it has been legalised for all uses.

Miron (2005:2) states that the prohibition entails direct *enforcement* costs and prevents revenue generated through the taxation of cannabis on production and sales. Once legalisation of cannabis comes into force, enforcement costs may become insignificant. Government could then levy taxes on both the production and sale of cannabis, resulting in its collection costs declining and tax revenues increasing.

The Federal Government in America is quoted to have said that the public is not complaining about the taxation of cannabis, but only about the rate of the tax that is being levied. It understands that Governments need to subject these products to tax, since the costs of enforcement and education are likely to be high (Fraser, 2018:1).

1.3 Problem statement

South Africa is exploring both the positive and negative possibilities of a cannabis market. This is evident in the explanation and awareness campaigns that have been held to inform the public.

The consideration of a practical and suitable tax model for cannabis in light of its potential legalisation in South Africa, considering the multiple obstacles that could arise from the diversity of this cultivar, would therefore be useful. The question that arises for the South African legislature is which tax method, or methods, should be used once cannabis is legalised in South Africa?

1.4 Research objectives

1.4.1 Main objective

The main objective of this research study is to propose a possible tax model that could be used to subject legislated cannabis to tax in South Africa. Multiple tax systems of foreign countries and certain American states that have legalised cannabis have been considered.

1.4.2 Secondary objectives

To achieve the main objective, the following secondary objectives have been formulated:

- To analyse the various uses of cannabis in an attempt to establish the most favourable methods of taxation to be applied (Chapter 2).
- To consider the tax methods of countries that have already legalised cannabis. Canada and Uruguay are two countries that have been investigated due to being the only countries that have fully legalised the recreational use of cannabis. States in America that were considered for this research are California, Colorado and Washington. They are included due to
 - first, the partially legalisation of the recreational use of cannabis, and
 - secondly, the various tax system changes that occurred since legalisation was introduced and the different taxing methods that have been used.

Alaska, also included in figure 1.3, just a brief tax note.

No European countries are included due to a lack of relevant information (Chapter 3).

- To consider and suggest a suitable method for the taxation of cannabis in South Africa (Chapter 4).

1.5 Research design and methodology

1.5.1 Research design

Schutte and Van Der Zwan describe a 'realist' as a person who uses facts and past events, rather than being hopeful in predicting the future (cited by Schutte and Van Der Zwan, 2019).

A 'positivist' is a person who is certain or extremely confident of something. A researcher is disconnected from the research subjects, seeking objectivity in the clarification of social reality.

The relevant facts derived by him are based on verifiable evidence and tested theories (McKerchar, 2008:6-7).

This research study must be wide enough, for example, conducted on different countries and American states, for it to be more accurate and in the determination of the probable tax outcome once the approval of the cannabis legislation has taken place in South Africa.

Dudovskiy (2011a) describes 'exploratory research' as research that is not intended to provide evidence, but to study a problem that has not yet been clearly defined. New data and a changed perception on the part of the researcher should willingly allow him to change direction.

Advantages of exploratory research are that it is flexible and could easily adapt to change. It could also save time and other resources by the determination at the earliest possible stages of the types of research that are worth pursuing (Dudovskiy, 2011a:2).

Disadvantages of exploratory research are that it could be subject to bias, use too small a sample that may be unacceptable to represent the 'target' population and could be unuseful in decision making (Dudovskiy, 2011a:3).

1.5.2 Research methodology

Research processes have three major dimensions, namely,

- ontology,
- epistemology, and
- methodology.

In the determination of the research methodology, both ontology and epistemology have been used since they specifically impact the research paradigm within which the research was conducted (McKerchar, 2008:3).

'Ontology' is the study of being or existence. It tries to answer questions that begin with the word 'what'. This field is dedicated towards understanding whether a thing exists or does not exist (Dudovskiy, 2016b).

'Epistemology' deals with the aspect of procuring knowledge, for example, the study of knowing and how this knowledge is known. It is more concerned with the natural sources, scope and limits of knowledge in the field of study. It focuses on the known truth (Dudovskiy, 2016b).

Epistemology is divided into two sections, namely,

- first, the nature of knowledge, and
- secondly, the limits of knowledge.

There are traditionally two core research philosophical paradigms within epistemology. They are referred to as positivism and interpretivism (McKerchar, 2008:3).

Methodological studies are aimed at developing new methods (for example, questionnaires, scales and tests) of data collection (secondary-data analysis) and sometimes also validating a newly-developed instrument through several studies (Mouton, 2001:164).

The positivist paradigm would be most suitable to use since the role of the researcher is limited to the accumulation of data and its interpretation in an objective way while he is detached from the subject studied. This is in contrast to the interpretivist view. It cannot be detached from the subject studied (Dudovskiy, 2011b:1).

Knowledge of the proposed tax method to be used for subjecting cannabis to tax in South Africa has been gained through a subjective interpretation of different sources that have been used. International research establishes the effect on the tax system. It has been conducted through primary (including historical and legal documents) and secondary data collection, that is, for example, existing data collected from databases, websites, social media, peer journals (Dudovskiy, 2011b:1).

This data has been re-analysed to test hypothesis (proposed explanations made on the basis of limited evidence as a starting point for further investigation) or to validate methods. No sampling is possible, since existing data is being analysed (Dudovskiy, 2011b:1).

The benefit of using both primary and secondary data is therefore cost effective due to existing legislation and data being used. A limit on using secondary data is the lack of control over data collection errors by a previous researcher (Dudovskiy, 2011b:1).

A comparison is conducted between South Africa's tax legislation (various types of tax could be used to cater for subjecting cannabis to tax) and the tax legislation of foreign countries and certain American states that have legalised it.

Thomas (2006:237) explains that

'the general inductive approach provides an easily used and systematic set of procedures for analysing qualitative data that can produce reliable and valid findings. It provides a

simple straightforward approach for deriving findings in the context of focussed evaluation questions.'

The purpose for using an inductive approach was to

- summarise raw textual data,
- link this summarised data to research objectives, and
- develop a structure of processes that were obvious in the raw data

(Thomas, 2006:1). The raw data collected was first interpreted and then compiled.

The actual research explored the possible tax types that could be implemented to maximise the benefits of legalising cannabis in South Africa in the future.

Fundamental research does not usually generate findings that have immediate applications in a practical level. This research aims to answer the questions 'why', 'what' and 'how' and it tends to contribute to the pool of fundamental knowledge in the research area (Dudovskiy, 2011c:1).

1.5.3 Conclusion

South Africa does not have a method of taxation in place for the taxation of cannabis due to it not yet being legal. Parliament was given 24 months from September 2018 to bring its Constitutional Court's ruling in line with South African laws. It had ruled in favour of an adult citizen being able to use, possess or grow cannabis in private for personal use (South Africa, 2019).

The introduction of a new method of taxation could pose a problem for the South African Government. Research is therefore required to implement the most suitable method of taxation.

Research on the taxation of the cultivation, production, use or selling of cannabis is required to understand the process of Government trying to limit the recreational use of cannabis that will result in lower financial costs in the long term. If the history of cannabis is taken into account, this might not occur.

The next step would be to find a way of subjecting the production and sales of cannabis products to taxation, similar to other countries that have it already legalised. Research has been conducted using legal sources, previous theses and dissertations, newspaper reports, magazine features and journal articles.

1.6 Overview of the chapters

Chapter 1: Introduction and background to the study

Chapter 1 sets out the background and illustrates the relevance of the study. It briefly gives an introduction into the history and uses of cannabis, formulates the problem statement, outlines the main and secondary objectives and describes the research method to be used.

Chapter 2: Exploring the multiple uses of cannabis

Chapter 2 takes into account the vast variety of cannabis products already used in the market, mostly imported at this stage (the Grand West Cannabis explanation and awareness campaign in Cape Town) and the various sectors that would be involved in an attempt to potentially increase South Africa's tax revenue collections. A considerable number of cannabis uses are explored to get an understanding of them and to form the best possible method of its taxation.

Chapter 3: To consider tax methods implemented by countries and certain American states that have already legalised cannabis

Chapter 3 deals with analysing other countries' tax methods in the search for a tax model to be used in South Africa. This tax model will have to be adjusted to fit into its current tax system since a new tax could take too long to develop and may be too costly to implement. Some American states have been subjecting cannabis to tax for more than five years and their tax methods provide valuable information as to which method should be considered for use in South Africa.

Chapter 4: Conclusion and recommendations

Chapter 4 serves as the conclusion to this study. It presents a summary of the findings on the research question and its main objective. Possible future research areas have also been identified. A practical and suitable tax solution has been considered for the legalisation of cannabis in South Africa, bearing in mind the multiple obstacles that could arise from the diversity of this cultivar, for example, medicinal use, recreational use and a variety of all the hemp-product alternatives. Cannabis could be subject to a number of existing tax types, for example, excise duty, value-added tax, normal tax and a licence fee. The introduction of a specific new tax for cannabis should not be considered.

CHAPTER 2: EXPLORING MULTIPLE USES OF CANNABIS

2.1 Introduction

Several researchers, including Lakcević (2015), have reported that the cannabis plant is grown almost everywhere in the world. The plant species can be divided into two sub-species, namely, the

- recreational or medicinal, and
- industrial (hemp).

A distinct difference exists between the two plant species, yet observation alone, will not identify the differences. Although the plants are cultivated differently, for example, hemp is grown closer together for height while psychoactive cannabis plants are grown less densely to maximise flower yields (Lakcević, 2015: 13-14).

It is the strain composition that causes the major differences. The strain composition (cannabidiol and tetrahydrocannabinol components) is an important factor to distinguish between these sub-species. The South African Hemp Feasibility Report has proposed that a control mechanism should be implemented on potential industrial hemp-growing sites. Strain differences would also have an effect on the price of the cannabis produced. The higher the tetrahydrocannabinol content, the more expensive it becomes (Lakcević, 2015: 13-14).

The objective of Chapter 2 is to provide a thorough indication of the several uses of the cannabis plant under the secondary objective as detailed in Chapter 1 (to analyse the various uses of cannabis in an attempt to establish the most favourable methods of taxation to be applied by considering the tax methods of countries that have already legalised cannabis and then to suggest a suitable method for the taxation of cannabis in South Africa). This will result in gathering reliable information to form an objective opinion as to which taxes could be considered. This chapter also indicates the diverse amount of economical possibilities that cannabis could hold for a country.

It has been stated by Vij, (2014:672) that the cannabis plant produces a psychoactive drug that is used for medicinal and recreational purposes. Cannabis occupies fourth place in the world-wide popularity among psychoactive drugs, after caffeine, nicotine and alcohol (Vij, 2014:656).

Cannabis can be divided into the following three categories of use:

- First, medicinal use. It refers to cannabidiol-rich plants being used for medical purposes that should contain less than 0,3% tetrahydrocannabinol, the substance that makes a user 'high', and uses the same plant species as industrial hemp (Docmj, 2017).
- Secondly, recreational use. It refers to the cannabis used without medical justification, with a higher tetrahydrocannabinol content, that makes it a psychoactive variety and provides a user with the 'high' feeling (Docmj, 2017).
- Thirdly, industrial use (hemp). It refers to the non-psychoactive variety of cannabis grown throughout the world for agricultural and industrial purposes (Kentucky, 2015).

2.2 Medicinal use of cannabis

The term 'medical cannabis' refers to using the whole, unprocessed cannabis plant or its basic extracts to treat symptoms of illness and other conditions (National Institute on Drug Abuse, 2019b:1). Although many American states now permit dispensing cannabis for medicinal purposes, there is mounting anecdotal evidence for the efficacy of cannabis-derived compounds. The American Food and Drug Administration have not, however, approved medicinal cannabis. Safe medicines based on cannabinoid chemicals derived from the cannabis plant have been available for decades and more are being developed (Volkow, 2019:1). As mentioned before, cannabis is still considered a Schedule 1 drug under the American Controlled Substances Act (Anderson, 2019:1). It remains illegal to export or move cannabis across borders. This situation also applies in South Africa.

Cannabinoids are the substances in the cannabis plant related to tetrahydrocannabinol. They produce a 'high' or a sense of euphoria. The body is capable of producing its own cannabinoids that regulate emotions including

- pleasure,
- memory,
- thinking and concentration,
- awareness of time,
- appetite, and
- pain.

(National Institute on Drug Abuse, 2019b).

It also plays a role in a person's senses, namely,

- taste,
- touch,
- smell,
- hearing, and
- sight

(National Institute on Drug Abuse, 2019b).

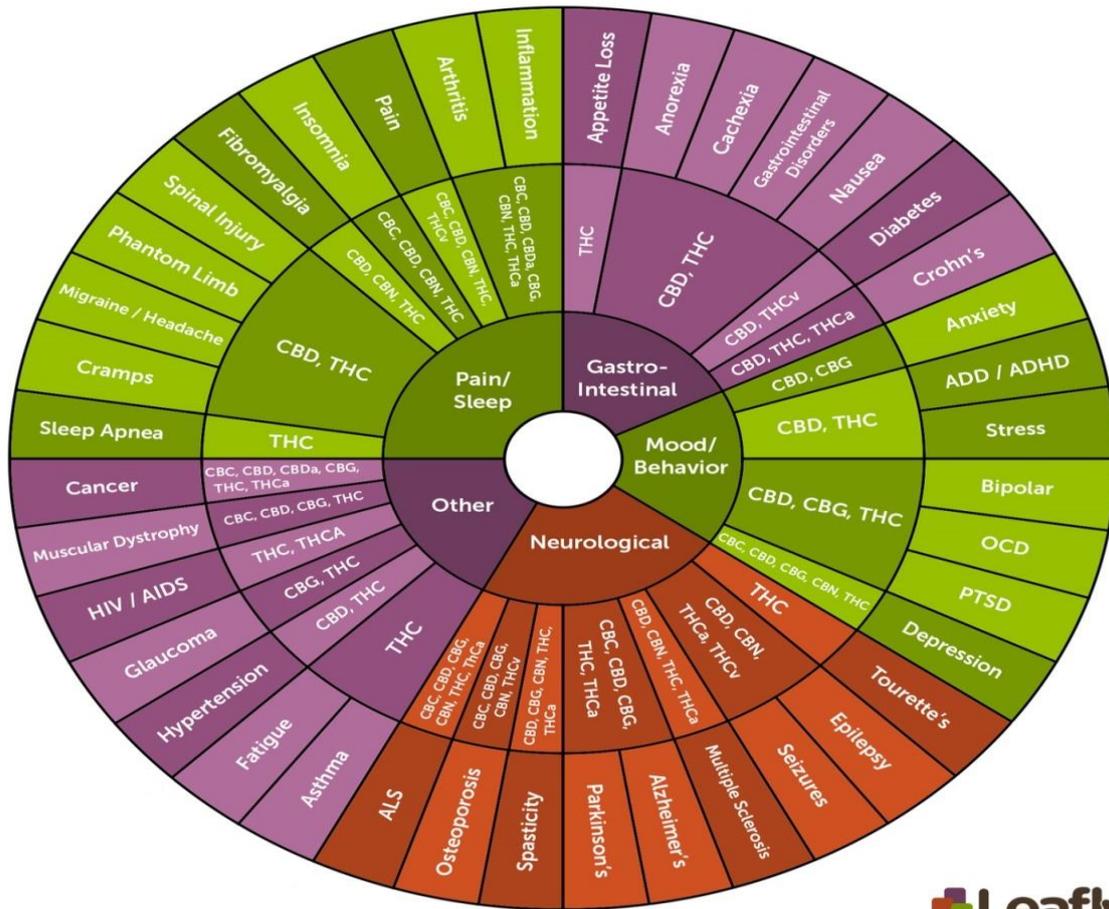
The cannabis plant consists of more than two cannabinoids, but the two mainly used are tetrahydrocannabinol and cannabidiol.

- Tetrahydrocannabinol is used for possible pain relievers and inflammation and muscle control problems. It also reduces nausea and increases appetite.
- Cannabidiol does not have the ingredient that causes a sense of euphoria. It may also be useful in reducing pain and inflammation and it controls epileptic seizures, and possibly even for treating mental illness and addictions. It also has antipsychotic effects (National Institute on Drug Abuse, 2019b).

The American Food and Drug Administration approved a cannabidiol-based liquid medication called Epidiolex® for treatment of two forms of severe childhood epilepsy, namely, the

- Dravet syndrome, and
- Lennox-Gastaut syndrome.

Many research projects funded by National Institute of Health in America are continuing to explore the possible uses of tetrahydrocannabinol, cannabidiol and other cannabinoids for medical treatment (National Institute on Drug Abuse, 2019b:2-3).



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Figure 2-1: Cannabinoids' wheel

Source: (Rahn, 2014)

The above cannabinoids' wheel serves as a resource in the determination of which cannabinoids may help treat symptoms associated with

- mood,
- eating or gastrointestinal disorders,
- neurological disorders,
- pain,
- sleep disorders, and
- other medical conditions

(Rahn, 2014).

2.2.1 Treatment of different conditions

2.2.1.1 Alzheimer's disease

Alzheimer's disease affects the brain in a serious way by destroying memory and other important mental functions. Salk Institute scientists have

'published preliminary evidence that tetrahydrocannabinol and other compounds found in cannabis can promote the cellular removal of amyloid beta, a toxic protein associated with Alzheimer's disease' (Schubert, 2016:1).

2.2.1.2 Seizure disorders

The American Food and Drug Administration approved Epidiolex in June 2018 as therapy for a person, including a child of two years or older, with severe or hard-to-treat seizures (the Lennox-Gastaut syndrome and the Dravet syndrome). It is made from cannabidiol. Studies confirm that some people had a dramatic drop in seizures after using this drug (Mj Wellness, 2018.)

2.2.1.3 Cancer cell killing at the animal testing stage

Recent animal studies have shown that cannabis extracts may help

- kill certain cancer cells, and
- reduce the size of others.

Evidence from a cell-culture study using rodents suggests that purified extracts from whole-plant cannabis can slow the growth of cancer cells from a serious type of brain tumour.

Research using mice showed that treatment with purified extracts of tetrahydrocannabinol and cannabidiol, when used with radiation, increased the cancer-killing effects of the radiation (Scott, Dalglish and Liu, 2014:529-537).

2.2.1.4 Other conditions

Conditions including

- appetite loss,
- Crohn's disease,
- eating disorders, for example, anorexia,
- glaucoma,

- mental health conditions like schizophrenia and post-traumatic stress disorder (used in
- veterans who are returning from combat zones),
- multiple sclerosis,
- muscle spasms,
- nausea, pain, and
- wasting syndrome associated with HIV (cachexia)

have not yet been proven (Bonn-Miller, 2018:1-6).

Bonn-Miller (2018) maintains that

'the greatest amount of evidence for the therapeutic effects of cannabis relate to its ability to reduce chronic pain, nausea and vomiting due to chemotherapy, and spasticity (tight or stiff muscles) from MS'.

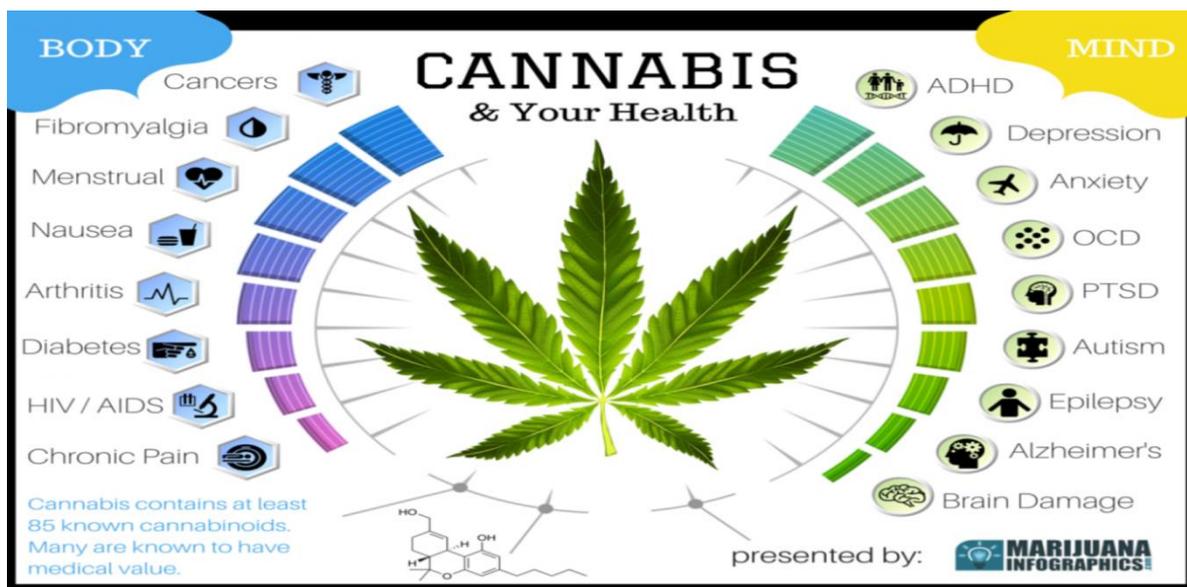


Figure 2-2: Cannabis and health

Source: (Brown, 2016)

The above visual on cannabis and a person's health was shared by HempPress on 22 February 2016 in *Health*. It demonstrates a small list of conditions and diseases that cannabis can be used for in treatments presented by Marijuana Informatics (Brown, 2016).

2.2.1.5 Synthetic prescription cannabinoid products

Although cannabis remains a Federal DEA Schedule 1 controlled substance, which is the same as a Schedule 7 drug in South Africa (Medicines and Related Substances Act 101 of 1965), research has resulted in the development and marketing of medications that are synthetic prescription cannabinoid products. The first approved man-made synthetic products by the American Food and Drug Administration are available as Marinol (dronabinol) and Cesamet (nabilone). They are mainly used

- for treatments of nausea and vomiting caused by chemotherapeutic agents used in the treatment of cancer, and
- to stimulate appetite in AIDS patients.

Epidiolex, a cannabidiol-approved product that was approved in 2018 is used for rare and severe forms of epilepsy, including the

- Lennox-Gastaut syndrome, and
- Dravid syndrome

(Bonn-Miller, 2018:1-6).

2.2.2 Method to obtain medical cannabis in America

In America, a patient must have a condition that qualifies for medical cannabis before it can be used by him. A licensed doctor (according to the states where it is legal) is then required to supply him with a written recommendation (which they are often unwilling to do) (Bonn-Miller, 2018:5). Each state has its own list of qualifying conditions. A state may also require a patient to have a medical cannabis identity card. It allows the patient to purchase medical cannabis from stores called dispensaries (Bonn-Miller, 2018:5).

2.3 Recreational use of cannabis

It was stated by Anderson that

‘only [11] American states and Washington, have legalised the use of recreational cannabis; not all of them permit the commercial sale of recreational cannabis’ (Anderson, 2019:5-6).

A serious crime will be committed in a state that does not permit the distribution and sale of cannabis. Cities, municipalities, employers, landlords and universities may have special policies about its use (Anderson, 2019:5-6).

The cannabis plant contains the mind-altering chemical tetrahydrocannabinol and other related compounds. It can be used by

- smoking,
- vaporizing,
- in food (edibles), or
- as an extract.

Smoking and vaping tetrahydrocannabinol-rich extracts from the cannabis plant is called 'dabbing' and this method of use is increasing (National Institute on Drug Abuse, 2019a).

2.3.1 Different ways to use cannabis

The second most important consideration with cannabis (after its flowers) is the delivery method, since the mental and physical benefits received from cannabis depend largely on the way it is consumed. Williams (2014) discussed the following three basic delivery methods:

- First, inhalation, where gases enter the lungs before absorbing it in the bloodstream, by
 - smoking (including hand pipes, water pipes (bongs and bubblers), rolling papers, hookahs (a single or multi-stemmed instrument used for vaporizing and smoking flavoured cannabis through a water base) and homemade one-time use devices). Each of these provides different experiences and influences the grade of smoke inhaled, and
 - vaporization (it involves inhaling heated oil) and has fewer health concerns than smoking, but could cause a lung injury called a 'popcorn lung' which harms the lungs, according to the American Lung Association

(Aremu and Cirino, 2020); (Williams, 2014).

- Secondly, oral methods used, including
 - tinctures (liquid cannabis) is a topical application through the mouth that can be absorbed within 15 minutes into the bloodstream, unlike edibles or drinks, and are one of the oldest methods of consuming cannabis medicine in America. Effects last for a shorter period, peak at about 90 minutes and can last for four to eight hours, depending on dosage (Leaf Science Editorial Team, 2017),

- ingestible oils (can either be eaten or swallowed in easily-ingested capsules) with side effects, for example, sedation, mental health, gastrointestinal tract, lower blood pressure and a change in appetite, and
- infused foods or drinks (edibles – any food that contains cannabis has longer onsets and tend to cause powerful full-body, psychoactive effects)
- Thirdly, topical application. It does not make a person ‘high’. It is therefore the appropriate method of use by a consumer in need of a clear head or for localised relief, for example, muscle aches or soreness

(Williams, 2014).

2.3.2 Short-term side effects

The short-term side effects of using cannabis may include

- altered senses (seeing brighter colors),
- changes in mood,
- impaired body movement,
- difficulty with thinking and problem-solving,
- impaired memory,
- hallucinations,
- delusions, and
- psychosis (paranoia or anxiety).

By smoking cannabis, the tetrahydrocannabinol component that causes the sense of euphoria passes quickly (within 30 minutes to an hour) from the lungs into the bloodstream, where it is carried to the brain and other organs (National Institute on Drug Abuse, 2019a).

2.3.3 Long-term side effects

A teenager using cannabis is more vulnerable since its long-term use may affect his brain development.

According to a study from New Zealand conducted in part by researchers at Duke University cited by Meier *et al.* showed that

'people who started smoking cannabis heavily in their teens and had an ongoing cannabis use disorder lost an average of eight intelligence quotient (IQ) points between the ages of 13 years and 38 years.' (Meier, Caspi, Abler, Harrington, Houts, Keefe, McDonald, Ward, Poulton and Moffitt, 2012).

The lost mental abilities fail to fully return in an adult who stops using (quits) cannabis. An adult who started smoking cannabis at a later stage is unlikely to show a notable IQ decline (Meier *et al.*, 2012).

2.3.4 Other health effects

2.3.4.1 Physical effects

Cannabis smoke irritates the lungs and this could lead to breathing problems. A frequent-cannabis smoker may have the same breathing problems as a person who smokes tobacco. This could include

- daily cough and phlegm,
- more frequent lung illness, and
- a higher risk of lung infections.

Researchers have not determined a higher risk for lung cancer in a person who smokes cannabis (National Academies of Sciences, Engineering and Medicine, 2017:189-193).

For three hours after a person has smoked cannabis, his heart rate will increase. This could also increase the chances of a heart attack, especially with an older person. A person with a heart problem may also be at a higher risk (National Institute on Drug Abuse, 2019a).

In a study of dispensaries, non-medical employees employed at cannabis dispensaries were recommending cannabis to pregnant women for nausea, but medical experts warned against it.

This concerns medical experts since cannabis used during pregnancy is linked to a lower birth weight of a baby (National Academies of Sciences, Engineering and Medicine, 2017:245-266) and the increased risk of both brain and behavioural problems in the baby.

If a pregnant woman uses cannabis, the drug may affect certain developing parts of the foetus's brain. A child exposed to cannabis in the womb has an increased risk of problems with his attention (Goldschmidt, Day and Richardson, 2000:309-320).

Regular, long-term cannabis use can lead a person to develop the Cannabinoid Hyperemesis Syndrome. This causes a user to experience regular cycles of severe nausea, vomiting and

dehydration, sometimes requiring emergency medical attention. The only cure for this problem is to completely stop using cannabis (Galli, Sawaya and Friedenber, 2011:241-249).

2.3.4.2 Mental effects

A person with a history of long-term cannabis use may experience mental illness, including

- temporary hallucinations,
- temporary paranoia, and
- even worse symptoms in patients with schizophrenia (a severe mental disorder with symptoms, for example, hallucinations, paranoia, and disorganised thinking).

Other mental health problems that could also be caused by a cannabis intake could include problems for example,

- depression,
- anxiety, and
- suicidal thoughts among teenagers.

Study findings have, however, been mixed (National Institute on Drug Abuse, 2019a).

2.3.4.3 Other points to remember

It is unlikely that a person will fail a drug test or get 'high' from passive exposure by inhaling second-hand cannabis smoke (Cone, Bigelow, Herrmann, Mitchell, LoDico, Flegel and Vandrey, 2015; Röhrich, Schimmel, Zornlein, Becker, Drobnik, Kaufmann, Kuntz and Urban, 2010).

There are no reports of a teenager or an adult dying from using cannabis on its own (no overdosing). Yet, cannabis use can cause uncomfortable side effects, as mentioned above (National Institute on Drug Abuse, 2019b).

2.4 Industrial use of cannabis (Hemp)

The remainder of Chapter 2 is a discussion on

- the hemp industry,
- the possible uses, and
- relevant issues concerning hemp products.

Once the hemp side has been dealt with, the structuring of a suitable tax model commences.

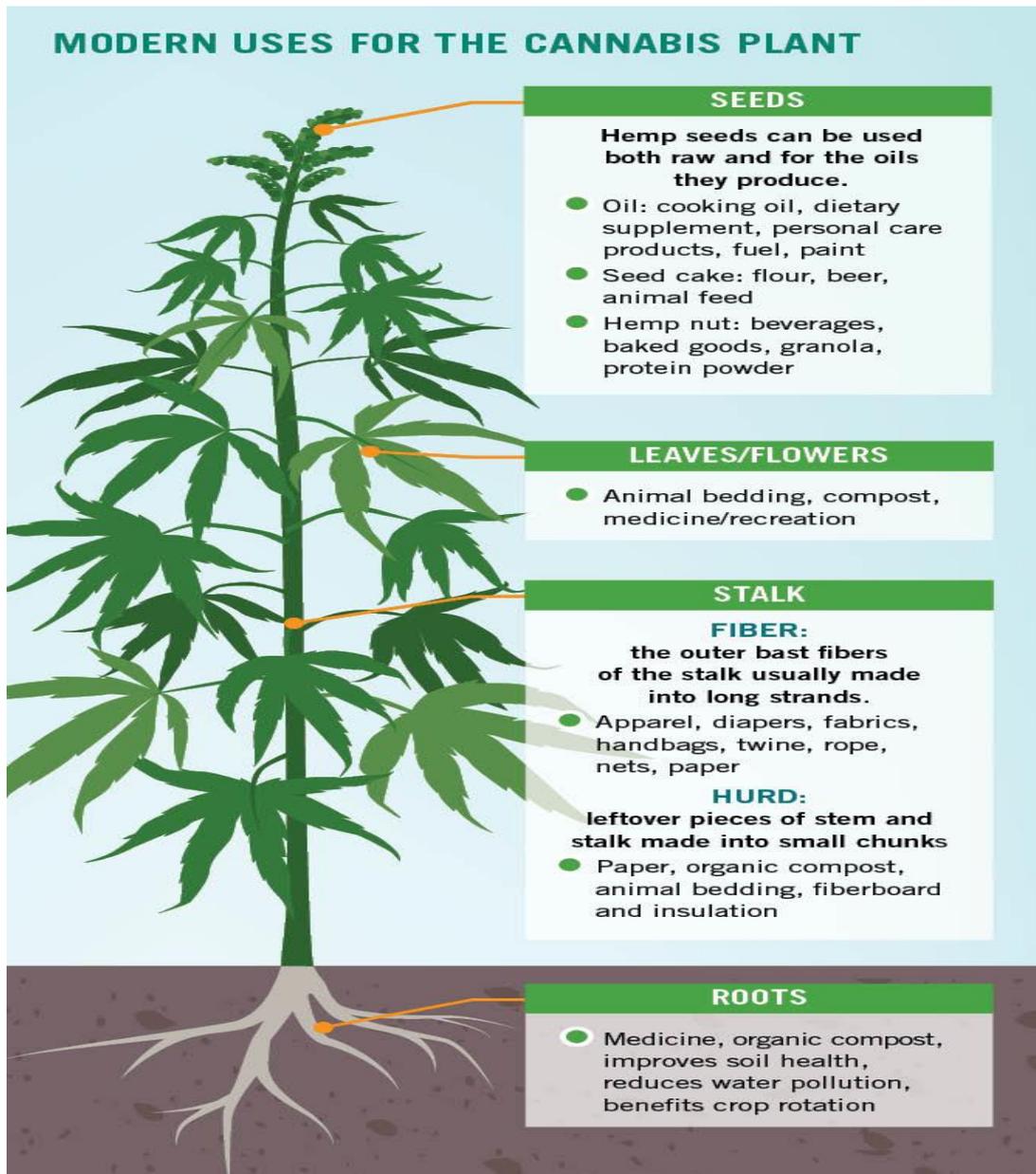


Figure 2-3: Modern uses for the Cannabis Plant

Source: (Schadler, 2019)

The above infographic displays different and alternative uses for the cannabis plant. It summarises the cannabis plant, from its

- seeds,
- leaves and flowers, and
- stalk and its roots.

Over 25 000 products can be made from the cannabis plant, resulting in various industries that carry on business using these different parts of the plant (Schadler, 2019).

Although cannabis as a drug and industrial hemp both derive from the species *Cannabis sativa L* and contain the psychoactive component tetrahydrocannabinol, they are distinct strains with unique phytochemical compositions and uses (Swanson, 2015:613).

Hemp has lower concentrations of tetrahydrocannabinol and higher concentrations of cannabidiol. These decrease or lower its psychoactive effects.

2.4.1 Hemp history

Hemp is in demand since hemp products are sought after. It is a fast-growing plant. And parts of it are used for a wide range of products (Ruggeri, 2019:2).

Ruggeri provides the following brief history of cannabis:

Cannabis commenced from 8000 B.C.. It was used for everyday use in various countries, including Mesopotamia, Egypt and China. In 1454 the *Gutenberg Bible* was printed on hemp paper. This was the world's first printed book, made using a movable printing press. He continued by stating that it was required from all farmers in 1619 to grow hemp. This was accepted in payments of debt and taxes (Ruggeri, 2019:7).

An important document, namely, the *Declaration of Independence* was written on hemp paper in 1776 by Thomas Jefferson and George Washington. They were both hemp farmers.

Levi Strauss & Co made its first pair of jeans from hemp in 1853. This started a revolution, and in 1920, 80% of all clothing was made from hemp. Hemp was predicted to become a billion-dollar crop, according to a write-up on it in a 1938 issue of *Popular Mechanics* (Ruggeri, 2019).

In 1930, the new Commissioner of the Federal Bureau of Narcotics, namely, Harry Anslinger, had family ties in the banking sector. Andre Mellon was a powerful American banker and his friends, Carnegie and Rockefeller who both had significant investments in the paper, synthetic textiles, plastics and oil industries, and William Randolph Hearst from the lumber industry, launched a major campaign to derail hemp and all the products that were derived from the cannabis plant species (Ruggeri, 2019:2).

The public was lead to believe that the use of all varieties of cannabis was dangerous. Hemp products were again used during World War II to meet the demand for uniforms, rope and canvas, but shortly after that hemp was yet again blocked (Ruggeri, 2019:2).

Hemp started slowly to gain full government support in America and other nations once governments realised the benefits of it. During 2014 the Hemp Industries Association estimated

a total retail value of all hemp product sales in America at \$620 million. Raw hemp material had to be imported from other countries since the Controlled Substances Act of 1970 classified all forms of cannabis as a Schedule 1 drug, making it illegal to cultivate it in America (Kentucky, 2014).

2.4.2 Hemp uses

Hemp is used in many ways. It is resistant to heat, mildew, pests, light, and rot. The parts of a hemp plant that can be used are its seeds, oils, fibres, hurds and roots.

Hemp is both eco-friendly and renewable. As previously stated, it is probably one of the fastest-growing plants in the world. It produces about 10 tons of dry products an acre a year (Hemp University, 2016).

A short description of the several aspects of the cannabis plant (refer Figure 2-3) follows below (Hemp University, 2016):

- Hemp seeds

The term 'hemp seed' is confusing, since 'hemp seed' is a fruit and not a seed. It is extremely nutritious for both human and animals (including birds).

It was stated by the Hemp University that hemp seeds consist of

- 25% protein,
- 30% carbohydrates, and
- 15% insoluble fibre.

Hemp seeds are used whole, or crushed to make several food sources. They are also used, amongst other uses, to be pressed into hemp-seed oil, which is used for nutrition, soaps, cosmetics, paints and varnishes (Hemp University, 2016).

- Hemp oil

It was stated by the Hemp University that hemp oil matches the balance as required by the human body due to its high nutritional value. This is due to its 3:1 ratio of omega-6 to omega-3 essential fatty acids.

It is also used for

- cleansing and moisturizing the skin,

- in fuel (biodiesel),
- in paints,
- in plastics, and
- in the production of some health-care products

(Hemp University, 2016)

- Hemp fibre

The stalks of the cannabis plant supply a natural fibre that is extremely durable. Hemp fibre is useful for a variety of products including textiles and clothing (hemp fabric is softer, warmer, more water resistant and more durable than cotton and uses fewer chemicals to produce). It is also used as

- canvas,
- rope,
- cordage, and
- both ethanol and methanol (most cost-efficient and valuable of all the fuel crops).

And it is also used for

- archival grade paper,
- composite fibres (replacing heavier toxic fibres), and
- building materials made with recycled plastic and fibre

(Hemp University, 2016)

Well known members of the fashion industry, for example, Calvin Klein, use hemp fibre. It is also an excellent yarn for towels, bath linens and carpet wraps (Hemp University, 2016).

Hemp is so versatile that it is has even been used to build a house.



Figure 2-4: The house that hemp built in Noordhoek, Western Cape, South Africa

Source: (Coleman, 2016)

According to Rossouw of WEA Home, cited by Coleman, a house located in Noordhoek Western Cape, South Africa is now eight years old. It is warm in winter and cool in summer. The electricity costs incurred in it are a fraction of similarly sized conventional building. Most of its walls were grown in four months.

Tony Budden from Hemporium in South Africa stated the following:

‘hempcrete is one of the products made from hemp hurd (chipped hemp stalks, currently being imported) – blended with a local lime-based binder to make Hempcrete, a natural, breathable, eco-friendly cement. The hemp stalk is porous and the lime particles are absorbed into these pores, calcifying inside the hurd. It is here that the carbon in the hemp bonds with the calcium in the lime to form calcium carbonate, petrifying over time’ (Coleman, 2016).

- Hemp hurds

The following has been stated by the Hemp University about 'hemp hurds':

'Hurds serve as an amazing source for renewable materials. The bulk of the woody stalks can be used for paper, animal bedding, oil absorbent, soil amendment, chemicals, plastics (Henry Ford used hemp-and-sisal cellulose plastic to build car doors and fenders in 1941, which made it stronger and more durable than steel), fuels (ethanol, methane, co-firing with coal, etc.). These fuels burn cleaner and are more efficient than other fuels not made with hemp.'

(Hemp University, 2016).

- Hemp roots

Even the roots of the cannabis plant are useful and can be used

- for medicine,
- for organic compost, and
- to improve the soil health.

Hemp roots also

- reduce water pollution, and
- benefit crop rotation

(Schadler, 2019).

2.5 Cannabis and religion

Religions including

- Taoism in China,
- Hinduism in India, and
- Rastafarianism in Jamaica,

resulted in many people using cannabis at their religious ceremonies to reach a 'higher plane'. These different religions have varying stances on the use of cannabis (Stober, 2018).

With cannabis legalised in Canada and several American states, its recognition has increased. The Sisters of the Valley in California is an excellent example of a movement being formed around cannabis. The Sisters of the Valley are a group of nine women who dress as nuns and who call themselves the 'weed nuns' (Stober, 2019:10). They grow and sell cannabis in various forms, for example,

- hemp with high cannabidiol levels suitable for medicinal use, and
- for use in topicals, like balms, tinctures, oils and soaps

(Stober, 2019).

Rastafarians use cannabis mainly for their religious beliefs and spiritual lives (Minnaar, 2015:53). In the modern era, they use cannabis as a sacred herb. They do not use cannabis to get 'high', but use it, to understand certain issues. Hence it is called 'wisdom weed' in their culture (Stober, 2019:8).

Rastafarians consume cannabis at a ritual called 'reasoning sessions'. In these sessions, they debate on how to live according to the Rastafarian outlook. This is an important requirement, and factor, in Rastafarianism (Stober, 2019:8-9).

2.6 Conclusion

It would be difficult, but not impossible, to levy a specific excise tax on recreational cannabis due to the variety of products that are produced from it and that are available to be purchased, for example, as cigarettes, edibles, liquids, or vapours (Bishop-Henchman, 2014:2).

The *Department of Agriculture, Forestry and Fisheries 2012 Report* proposed that the world, including South Africa, cannot ignore hemp since it is an important fibre crop that has been around the longest of all fibre crops. It has a never-ending list of benefits (Lakcević, 2015: 2).

Recreational, medicinal and industrial cannabis have been illegally cultivated in South Africa and exported from South Africa for many years. A number of history books on the subjects of hemp and cannabis confirm that this has been the situation.

A change in South Africa's law towards cannabis could create and strengthen existing illegal industries (Lakcević, 2015: 2). The South African Government was under pressure to reconsider its stance on medicinal cannabis, hence the granting by it of the first cultivation licences for medicinal purposes earlier this year. Globally, more countries are exploring the benefits of legalising cannabis.

Cannabis was still being classified as an illegal drug on the America's Federal State level (Child, 2018), and in South Africa (Lakcević, 2015: 2). The American Federal State has been under pressure to fully legalise cannabis at federal level. Hence, on 20 November 2019 the House Judiciary Committee approved to legalise it at federal level, by recommending that it be removed from Schedule 1 of the Controlled Substances Act. It now has a good chance of approval in the full House where democrats control the chamber. It might not, however, be easy

to obtain the approval of the Republican-controlled Senate (Lovelace, 2019). It took several countries (including South Africa) almost 100 years after global criminalisation to begin the process of relaxing laws which controlled the medical or recreational use of cannabis (Steyn, 2016).

Taking the above uses of cannabis into account, the next question to ask is why should the sale of cannabis then be subjected to tax? The two most logical reasons according to Phillips (2015:1) would be to

- reduce the impact of its use by discouraging its consumption, and
- raise revenue to offset its social costs.

Careful consideration will be needed to establish a balance between

- reducing the current illegal market sales,
- increase revenue, and
- reduce the use of cannabis (Carnevale, Kagan and Murphy 2017).

Whether cannabis can be treated and subjected to tax in the same way as tobacco and alcohol needs to be explored. Cannabis is in some ways similar to tobacco and requires strict controls, for example, significant excise taxes at all tiers of Government (Phillips, 2015:1).

Oglesby, (2018) suggested that the following four questions should be considered and researched when designing a federal tax on cannabis:

- What should be subjected to tax? That is, what should the base of the cannabis tax be (it could include price, tetrahydrocannabinol potency and weight of various products (for example, flowers and concentrate))?
- What kind of tax and which tax rate should be used?
- Should medical cannabis be subjected to tax? A possible exemption may have to be considered.
- Should a dealer in cannabis be allowed to deduct all its expenses incurred in the determination of taxable income, including advertising, selling and administration expenses (the section 280E rule in America disallows advertising, selling and administration deductions in the determination of taxable income)?

Regulating the cannabis industry is critical since the pricing of its products is different and more complex than tobacco and alcohol, due to its diversity. Hence, careful consideration should be taken upon the taxation of this diversified product.

It could be argued that the recreational side of cannabis should be treated in the same way as tobacco. The recreational side also includes edibles. The recreational use of cannabis could be subject to different kinds of taxes and levies. Hemp and medicinal products are uncomplicated hence subjecting them to tax should be straight forward.

Chapter 2 clarified the several uses of cannabis. This would allow the researcher under the first objective to propose a possible tax method that could be used to subject legislated cannabis to tax in South Africa and under the secondary objective to analyse the various uses of cannabis in an attempt to establish the most favourable methods of taxation to be applied by considering the tax methods of countries that have already legalised cannabis and then to suggest a suitable method for the taxation of cannabis in South Africa, as set out in Chapter 1.

Chapter 3 explains the taxing methods used in some countries and some American states. This could guide South Africa in a certain way since many problems have already been dealt with in the other countries.

CHAPTER 3: TAX METHODS IN COUNTRIES WHO LEGALISED CANNABIS

3.1 Introduction

Chapter 3 gives an overview of the methods of taxation that are used in different countries and certain American states. They have either fully or partially, legalised cannabis under the secondary objective as discussed in Chapter 1 (the various tax systems that have been used since legalisation was introduced and the different taxing methods that have applied). These countries and American states that are discussed in this dissertation have been included due to their methods of taxation that provide relevant material that could be used in drawing up a model of taxation for South Africa.

America consists of 50 states, each run by its own government at state level. Policies regarding the medicinal and recreational use of cannabis vary greatly, and conflict significantly with federal law.

According to the National Conference of State Legislators only 33 states legalised the medical use of cannabis that requires a doctor's recommendation. On the recreational side, a mere 11 states legalised small amounts of cannabis for adult use, namely, Alaska, California, Colorado, Illinois, Maine, Massachusetts, Michigan, Nevada, Oregon, Vermont and Washington (National Conference of State Legislators, 2019).

The first American states to legalise recreational use for adults were Colorado and Washington in 2012. The first taxable sale in America of recreational cannabis was in Colorado in January 2014. A number of other countries followed shortly after that (Davis *et al* 2019:2). California legalised the same use in 2016. Henceforth, many years of data is available on the methods of taxation that can be collected for this research (National Conference of State Legislators, 2019).

Lopez (2018) mentioned that

'one of the reasons cannabis legalisation is so rare is due to countries being bound for decades by international treaties that established prohibition across the world. If a country tried to relax its cannabis laws, it could be seen as acting in violation of the treaties, which could lead to a loss in international standing and credibility'.

Countries are concerned about money, more specifically, either saving money or generating more money. The legalisation of cannabis is increasing since more countries are relaxing

legislation controls due to the economic benefits they can reap by collecting tax revenue from it (Technavio Blog, 2018).

Why would a government rather prohibit production, consumption and distribution of drugs as opposed to subjecting them to tax in the same manner as alcohol and tobacco?

When comparing cannabis consumption in South Africa, at present an illegal drug, to the consumption of alcohol and tobacco, that are price inelastic, it follows that cannabis should be treated in a similar manner by legalising it, subjecting it to tax and making it subject to the same regulations, for example, restrictions on its sale to minors (Clements & Zhao, 2009:245).

Uruguay and Canada were the first two countries to fully legalise cannabis. Other countries that have not yet legalised it, have maintained relaxed approaches to its use and sales, for example,

- by allowing its citizens to keep and cultivate some cannabis and to control coffee shops that sell it (Netherlands),
- permit cannabis clubs, where people can use the drug, when it is officially illegal to sell it (Spain), and
- in North Korea where there is no law restricting the use of cannabis and the law is effectively unenforced

(Lopez, 2018).

With an estimated compound annual growth rate of 37% in 2020 in America there has been an increase in the medicinal cannabis market (Technavio Blog, 2018). This is also predicted by so-called industry experts for the recreational market, once it is legalised (Technavio Blog, 2018). The benefits of legalising cannabis in Colorado and Washington were identified by Technavio Blog as

- economic growth,
- restraining the black market for cannabis,
- positively contributing to the creation of employment opportunities, and
- showed increased growth in tourism.

A benefit could be the drop in sales of spirits, beer, wine and related products. At this stage it is further impossible to predict the impact that legalising cannabis for recreational use would have on the various sin taxes, but it has raised market expectations (Technavio Blog, 2018).

This being a mini-dissertation it allows for only a few countries and American states to be included in the research due to the vast amount of information available. As mentioned in Chapter 1, Uruguay and Canada were included due to being the first countries that fully legalised cannabis. California, Colorado and Washington were included as these states are subjecting cannabis to tax since 2012 and made changes to the tax methods since then. A small note on Alaska was inserted due to its relevance in figure 3-1.

This Chapter explains firstly some history, secondly, more relevant cannabis laws and thirdly the taxing methods of each country and American state.

3.2 Uruguay

Uruguay became the first country outside America to fully legalise cannabis. It did so in 2013. It has legalised the cultivation, distribution and use of cannabis. The law assigns a significant role to the state on matters of drug regulation and commercialisation (Walsh & Ramsey, 2016).

Government oversees each step of the cannabis-production chain, from seed to sale. This is carried out to undermine drug traffickers by supervising production. Commercial cultivators are contracted directly by the state to produce the drug. And recreational cannabis can be sold only in licensed pharmacies. Authorities in Uruguay have vowed to make cannabis available in pharmacies at a price equal to the 'black market' rate price of about 25 Uruguayan pesos (one dollar) per gram (Walsh & Ramsey, 2016).

Uruguay has appointed only two licensed suppliers (ICC Labs Inc and Fotmer Life Sciences) who will produce the cannabis products and supply them to pharmacies. Only a few pharmacies used the opportunity to engage, estimated at about 50 pharmacies of about 1 200 pharmacies. The reason argued for this low involvement is the lack of communication and understanding of the process needed

- to carry out the necessary setup of the sales system,
- for profitability concerns,
- to combat the criminal aspect, and
- for the possibility of loss of clients

(Cerdá, 2017).

Of the estimated 50 pharmacies who sell recreational cannabis, only 17 of them were still trading in it during 2019. The reason for this is the banks who lent them funds are American banks. Even though Uruguay is a sovereign country, it is still affected by America's strict

financial laws on controlled substances. A bank will allow a pharmacy to trade only if a customer pays cash for it. A pharmacy only receives 20% of the purchase price from each packet it sells (Maybin 2019).

A cannabis customer has to be registered (via fingerprints) with the Institute for Regulation and Control of Cannabis (the regulator) before he can purchase cannabis at a pharmacy. The quantity allowed to be purchased per month per customer is 10 grams a week (enough to make 20 'joints'), or 40 grams a month. The regulator also controls the strength and prices of the cannabis (Maybin 2019).

ICC Labs Inc is involved in the production of both recreational and medicinal cannabis. Medicinal cannabis has higher profit margins and potential export markets. Aurora, a large Canadian company, purchased ICC Labs Inc for \$220 million in 2019. The deal positioned Aurora then as the market leader in Latin America (Maybin 2019).

3.2.1 Exclusive methods of access

The Institute for Regulation and Control of Cannabis has established separate registries of prospective users of cannabis to regulate the two methods of access. A cannabis user must choose a method of obtaining it, and is bound by his choice (Walsh & Ramsey, 2016:9).

- Home growing

Home growing allows a registered individual (he must be a member of state-regulated smoking club), who has obtained permission from the Institute for Regulation and Control of Cannabis to cultivate up to six flowering female plants in his own home (only three flowering at any given time), restricted for his own use, and not for recreational use (Walsh & Ramsey, 2016:9).

- Commercially restrained

Businesses are disinterested in the recreational side of cannabis since they are unable to advertise it. Also regulations prohibit contests, tournaments or public events that promote the consumption of psychoactive cannabis. And tourists are also not allowed to purchase cannabis drugs (Walsh & Ramsey, 2016).

3.2.2 Taxing cannabis in Uruguay

With a population of merely 3,474,000, Uruguay's cannabis legalisation law was not passed to maximise state income, unlike Colorado and Washington, but to move buyers from the illegal market to a new legal market. Cannabis is exempt from taxes otherwise imposed on agricultural

goods. Its sale is, however, subject to value-added tax at rates of between 10% and 22% (Walsh & Ramsey, 2016).

The regulator has also been tasked with charging a potential commercial cultivator variable fee. This fee is used to keep the price competitive with the 'black market' and not to maximise state revenue (Walsh & Ramsey, 2016).

Uruguay may not be collecting local taxes from recreational cannabis, but rather positions itself as an exporter of medicinal cannabis. This could be the reason why the regulator plans to issue four or five new licences to grow cannabis, more for medicinal use, where it would earn more income from exporting the product (Maybin 2019).

3.3 Canada

Canada also has a legal national cannabis marketplace (Johnson and Gillies, 2018). Smoking 'pot' was criminalised in 1923 (Schwartz, 2014). On 30 July 2001, regulated medicinal cannabis became legal under conditions outlined in the Marihuana for Medical Purposes Regulations. It was later superseded by the Access to Cannabis for Medical Purposes Regulations.

Canada is the first G7 and G20 country to fully legalise cannabis (Ross, 2018). The legislation to legalise it for recreational use (Cannabis Act C-45) was passed on 27 November 2017. The Canadian Senate required certain amendments to be made to the Cannabis Bill C-45, and on 18 June 2018 the House of Commons passed the Bill including most of Senate's amendments. It was accepted the following day by the Senate (Scotti, 2018). On 17 October 2018 the consumption and retail sale of non-medical cannabis became legal (Tasker, 2018).

Canada has a unique, but complex, system of taxation due to provinces and territories that have different taxes and tax rates. Regulations vary between provinces and territories. But there are some general rules regarding promotion, packaging and advertising of cannabis (Burr, 2018).

3.3.1 Taxing cannabis in Canada

A cannabis producer for medicinal purposes is subjected to tax on his taxable income in the same way as other businesses in Canada. This did not change when recreational cannabis was legalised. The tax rate that a producer pays depends on the entity, for example,

- a sole proprietor is subject to tax on his taxable income (profits) at his marginal tax rates. These rates vary between provinces.

- a corporation, has a lower tax rate than an individual. It also varies by province and could reach between a minimum rate of 26,5% and a maximum rate of 31%. These are the tax rates for a corporation that is not classified as a small business and that qualifies for a small business concession. The normal tax rate for a small business can be between 10% and 18%, depending again on the province

(Rotfleisch, 2018).

Furthermore, Canada subjects cannabis to tax at two levels. The taxes involved are

- an excise tax, the higher of a flat rate or *ad valorem* rate, and
- a goods and services tax or harmonised sales tax and provincial sales tax

(Burr, 2018).

3.3.1.1 Excise tax

The excise duty on non-medical cannabis sales will be imposed under the Excise Act, 2001. It will apply to all cannabis products that were legally produced and are available for purchase (Canada Revenue Agency, 2019a).

The Canada Revenue Agency issues licences to cannabis cultivators and manufacturers and remits the duty (Canada Revenue Agency, 2019a). Upon licence application accepted by the Canada Revenue Agency, excise stamps are issued (Burr, 2018).

According to the Budget of 2018, excise duty will apply at the higher of two rates, cited by Burr:

‘(1) a flat rate on the quantity of cannabis or seeds and seedlings contained in a product at the time of final packaging (for example, when put in a container intended for sale to a final retail consumer); and

(2) an *ad valorem* rate imposed at the time of delivery of any product containing cannabis to a purchaser (e.g., a provincially authorized distributor), which is in essence a percentage of the sales price of the product not counting, the flat-rate duty – currently 10% of producer’s price/pre-tax transaction).

‘The flat-rate duty will be calculated on a dollar-per-gram basis (or in the case of seeds or seedlings a dollar-per-seed or seedling basis) and will be higher on flowering material than on non-flowering material. The duty is payable by the licensee who packages the product for final retail sale and will be payable at the time of delivery of a cannabis product to a provincially authorised distributor.’

The provincial, or territorial market, has its own colour code that appears on the excise stamp. No product is allowed to be distributed from the licensee's premises without using an excise stamp. All cannabis products delivered through the mail, in accordance with the Cannabis Act (Canada), are subject to the appropriate duty (Burr, 2018).

Tetrahydrocannabinol concentrated products with less than 0,3% tetrahydrocannabinol and cannabis-derived pharmaceutical products with a drug identification number that are available only through prescription are not exempt from the duty (Burr, 2018).

In the federal government's 2019 budget of Canada it was proposed that from 1 May 2019 all edibles, extracts and topicals (lotions or ointments) be subjected to excise duties at a rate of 1c per milligram of total tetrahydrocannabinol. Since producers were having compliance issues for cannabis oils, government therefor maintained that the proposed tetrahydrocannabinol-based rate would simplify the excise duty determination for specific cannabis products (Norman, 2019).

3.3.1.2 Harmonised sales tax or goods and services tax and provincial sales tax

Harmonised sales tax on goods and services or value-added tax applies to cannabis products (including seeds and seedlings). The harmonised sales tax is a combination of a 5% federal part and an 8% or 10% provincial part. The rate of this tax is 15% for four of the 10 provinces, namely, New Brunswick, Newfoundland and Labrador, Nova Scotia and Prince Edward Island, and 13% for the Ontario province. The other five provinces, namely, Alberta, British Columbia, Manitoba, Quebec and Saskatchewan have either only a goods and services tax or a combination of a goods and services tax and a provincial sales tax. These rates differ from a 5% goods and services tax to a 0% to 14,975% provincial sales tax (Sweeney, 2019).

3.3.1.3 Tax credits for medical cannabis patients

Cannabis is the only medical product that has an excise tax. It was proposed in the federal government's 2019 Budget that amendments to the Canadian Income Tax Act (R.S.C., 1985, c. 1 (5th Supp.)) reflects the current regulations for accessing cannabis for medical purposes.

In this regard Norman (2019:2) states the following:

'[Q]ualifying medical expenses, including amounts paid for cannabis products, may be eligible for a 15% tax credit that "recognises the effect of above-average medical or disability-related expenses on an individual's ability to pay tax".'

Included in its federal government 2019 budget, it was stated that certain low-tetrahydrocannabinol products (for example, cannabis oils) would also be subject to lower excise duties. This would provide further tax relief for cannabis products that are typically used by individuals for medical purposes (Norman, 2019).

Section 118.2 of the Income Tax Act R.S.C., 1985, c. 1 (5th Supp.) reads as follows:

‘For the purpose of subsection (1), a medical expense of an individual is an amount paid on behalf of the patient who is authorized to possess marihuana, marihuana plants or seeds, cannabis or cannabis oil for their own medical use under the Access to Cannabis for Medical Purposes Regulations or section 56 of the Controlled Drugs and Substances Act, for the cost of marihuana, marihuana plants or seeds, cannabis or cannabis oil purchased in accordance with the Access to Cannabis for Medical Purposes Regulations or section 56 of the Controlled Drugs and Substances Act.’ (Canadian Revenue Agency, 2019b).

3.3.2 Taxation revenue split

Table 3-1: Proposed combined federal and provincial or territorial excise duty rates for cannabis plant products (split in taxation revenues) are as follows:

Cannabis Plant Product	Federal Rates Higher of the Two Rates Applies		Additional Rates in Respect of a Province or Territory Higher of the Two Rates Applies	
	Federal Flat Rate	Federal <i>Ad Valorem</i> Rate	Provincial or Territorial Additional Flat Rate	Provincial or Territorial <i>Ad Valorem</i> Additional Rate
Flower	\$0.25 / gram	2.5% of the dutiable amount of a cannabis product packaged by a cannabis licensee to a purchaser	\$0.75 / gram	7.5% of the dutiable amount of a cannabis product packaged by a cannabis licensee to a purchaser
Trim	\$0.075 / gram		\$0.225 / gram	
Seed	\$0.25 / seed		\$0.75 / seed	
Seedling	\$0.25 / seedling		\$0.75 / seedling	

Source: (Burr, 2018)

The original agreement between government and the provinces or territories was a 50 / 50 share on the higher of the two federal rates. This split was amended in the 2018 budget to a 75 / 25 split in favour of the provinces and territories for the initial two years after legalisation (refer Table 3-1).

The federal portion of cannabis excise duty revenues is limited to \$100 million annually for the first two years after the introduction of the relevant legalisation (Burr, 2018). The amounts in excess of the \$100 million cap will be distributed to the provinces and territories that have concluded a Coordinated Cannabis Taxation Agreement with the federal government (Mancell, 2018).

As per the Coordinated Cannabis Taxation Agreement between the Government of Canada and the Government of Quebec, that once the initial two year period has expired, the provinces and territories are obliged to sign the Co-ordinated Cannabis Taxation Agreement with the federal government. This agreement stipulates that the additional duty will stay as per table 3-1.

3.3.3 Conclusion

A cannabis producer of medicinal cannabis is subject to normal tax on his taxable income (profits) in the same way as other business in Canada. The rates of tax vary according to the business structure and province (Rotfleisch, 2018).

Cannabis is subject to excise tax, and depending on the province, either

- a harmonised sales tax or a goods and services tax, or
- a goods and services tax or a provincial sales tax.

The Excise Tax Act – R.S.C., 1985 c. E – 15, was amended to ensure that cannabis products are not exempt in terms of:

- non-taxable importations (Schedule VII) section 12, or
- zero-rated (Schedule VI section 2A)

(Canada Revenue Agency, 2019a).

Canada's federal and provincial governments earned C\$186 million in tax revenues from direct sales of cannabis in the first five and a half months of the legalisation being introduced (Johnson, 2019).

'Black-market' sales are still outrageous, taking into account that the illicit producers do not pay for cultivation licences or sales permits and do not pay tax. The excise tax is a major obstruction for Canada, allowing the 'black-market' to price its products much lower than the price obtained by licenced suppliers, hence dominating the market (Williams, 2019).

3.4 America – California

California legalised cannabis for

- medicinal use in 1996, and
- recreational use in November 2016.

One reason for the legalisation of cannabis in California was the prospect of generating new tax revenues.

California is the sixth biggest economy in the world and its impact on cannabis is extensive (Theofanis, 2018:156-158). California has strict laws, that are highly regulated, with 219 pages of legislation on the recreational use of cannabis, known as the

‘Bureau of Cannabis Control Notice of Approval of Emergency Regulatory Action & Final Text of Regulations’.

A provision in the cannabis legislation prohibits the transporting of cannabis using a drone (unmanned vehicle) or a bicycle. It must be transported in an enclosed vehicle, and delivered person to person (Child, 2018).

According to California Cannabis Law, cited by McGrath, although California decriminalised cannabis, its counties and cities could decide whether they would do the same (McGrath, 2019).

In *City of Riverside v Inland Empire Patients Health & Wellness Centre Inc.*, 300P.3d 494, 56 Cal. 4th 729, 156 Cal Rptr.3d 409, the California Supreme Court decided, in 2013, that

‘although a qualified patient may have the right to use medical cannabis, State law does not mandate that a local jurisdiction must permit access to medical cannabis.’ (McGrath, 2019).

The Medical Cannabis Regulation and Safety Act was established in 2015 and the Adult Use of Marijuana Act, Proposition 64, was approved on 9 November 2016. It allows adults 21 years and older, to legally

- grow,
- possess, and
- use

non-medicinal cannabis, with certain restrictions. The selling and distribution of cannabis was allowed only from 1 January 2018.

In June 2017 the two acts were integrated to form the new Medical and Adult-Use Cannabis Regulation and Safety Act. Three state departments are involved in the implementation of the cannabis system, namely, the

- Bureau of Cannabis Control,
- CA Department of Food and Agriculture, and
- CA Department of Public Health

(McGrath, 2019).

3.4.1 Taxing cannabis in California

According to the California Department of Tax and Fee Administration all retail sales whether (discounted or not) of tangible personal property are subject to tax unless they are exempt under a specific provision in the law. This includes cannabis and cannabis products.

California has two different cannabis categories of taxation. It uses a dispensary sales tax and a cultivation tax.

The dispensary sales tax includes

- an excise tax (on legal cannabis sales for both medical and adult-use). It is a business tax charged to the retailer and paid to the distributor at a fixed rate,
- a state sales and use tax. It varies depending on where a person is and is charged in addition to the sales price and cannabis business tax, and
- a cannabis business tax. It may also be charged by local governments (city or county) at its discretion

(Cohen, 2018).

The cultivation tax is a tax that applies to all harvested cannabis that enters the commercial market. It is paid by a cannabis cultivator to the distributor of cannabis or the manufacturer of cannabis products. It is not at a fixed rate, but is based on the weight of harvested cannabis. The distributor is the entity who pays the final cultivation tax to the California Department of Tax and Fee Administration (California Cannabis, 2018.)

Cannabis tax is required to be declared and paid by all distributors dealing with cannabis and cannabis products by completing a cannabis tax return. This is done electronically and filed with

the California Department of Tax and Fee Administration on the last day of the month following the reporting period (quarterly) (California Department of Tax and Fee Administration, 2019a).

Strict rules apply when a distributor makes the sale and uses tax or cannabis tax for purposes other than paying it across to the government. A non cash exemption request form needs to be completed. Once approval has been granted, the distributor is allowed to pay the above taxes in cash. Estimated monthly tax liabilities of over \$20 000 for cannabis tax accounts and \$10 000 for sales and use tax accounts, must be paid using electronic funds transfers. A 10% penalty is payable if this provision is not adhered to. Another penalty of 50% is raised and payable for failing to pay the cultivation tax or cannabis excise tax when due (California Department of Tax and Fee Administration, 2019a).

The cannabis distributor is the link between all relevant cannabis businesses and is required by the California Department of Tax and Fee Administration to invoice, collect and pay over all relevant cannabis taxes (sales, use and excise taxes). It is an entity that procures, sells or transports cannabis between licenced cannabis businesses, including the cultivator, manufacturer or retailer. No cannabis retailers are allowed to donate cannabis or cannabis products, unless authorised to do so by the Bureau of Cannabis Control (California Department of Tax and Fee Administration, 2019a).

3.4.1.1 Excise tax

Certain products (for example, cannabis, cigarettes, alcohol and gasoline) are charged an extra tax, in addition to the standard sales tax. This is a specific tax and has been levied since 1 January 2018 at 15% on the average market price of retail sales payable by the purchaser (California Department of Tax and Fee Administration, 2019b:11).

3.4.1.2 Cultivation tax

All harvested cannabis (in weight in ounces (refer table 3–2 below)) bears another tax called a 'cultivation tax' in addition to the excise tax. This 'cultivation tax' is levied on medicinal or adult use that enters the commercial market. It is linked to inflation, with an annual adjustment done by the California Department of Tax and Fee Administration. It has also applied from 1 January 2018. Proper recordkeeping of purchases made prior to this date is important since these purchases are not subjected to cultivation tax. Immature plants, clones and seeds are exempt from the 'cultivation tax', but not from the excise and the sales or use taxes (California Department of Tax and Fee Administration, 2019b:5).

Table 3-2: Cannabis excise and cultivation tax table

Cannabis Excise Tax			
Effective Date	Excise Tax Rate of Average Market Price (at arms' length or non-arms' length)		Mark-Up Rate* for Arm's Length Transactions
1 January 2018 to date	15%		60%
Cultivation Tax			
Effective Date	Cannabis Flower	Cannabis Leaves	Fresh Cannabis Plant**
1 January 2018 to date	\$9,25 per dry-weight ounce	\$2,75 per dry-weight ounce	\$1,29 per ounce

* The mark-up rate is determined by the California Department of Tax and Fee Administration on a biannual basis in six-month intervals. It should be used only to determine the excise tax and is not intended in the determination of the amount for which each party sells their products. Sellers of the cannabis can use any mark-up rate.

** For the 'fresh' plant qualification the unprocessed cannabis must be weighed within two hours of harvesting.

Source: (California Department of Tax and Fee Administration, 2019b:5)

3.4.1.3 State sales tax and use tax

State sales tax, similar to value-added tax in other countries, is levied on all sales of physical merchandise in California, while use tax is levied on purchases of taxable items from businesses outside California (for example, internet or mail order transactions), but that are used inside the country. It applies to the use, storage or other consumption of items in the state that are not subject to sales tax in that state. Use tax was implemented in July 1935. It was introduced to 'level the playing field' between the in-state retailers who are required to collect tax and the out-of-state retailers who are not required to collect this tax.

The receipt issued determines whether the use tax is payable. If no tax was charged on the receipt, it will then be levied. To determine the use tax, a tax table is used. It is available on the California Department of Tax and Fee Administration website under the heading, 'taxes and fees'. The relevant adjusted gross income amount on the receipt is used to calculate the use tax figure according to the tables. Value-added tax paid on the item is included in the figure to determine the use tax (California Department of Tax and Fee Administration, 2019a).

Many ways exist to declare and pay the use tax, depending on whether the retailer has a seller's permit. It must be included in his sales and use tax return in the period when he first

used, stored or consumed the item. For a qualified purchaser the use tax due is paid by filing a return for the previous calendar year by 15 April of the current calendar year.

In all other situations the retailer is required to either

- report and pay the use tax on his California State income tax return, or
- pay the use tax directly to the California Department of Tax and Fee Administration by using its electronic registration system

(California Department of Tax and Fee Administration, 2019a:4).

The same tax rates are applicable for both sales tax and the use tax, depending on the city and county. The rates used effectively from 1 January 2019 vary from 7,25% to 10,25%. The rate of the use tax needs to be applied to the total purchase price (including handling charges) when items are purchased for personal use. A number of items are exempt from sales tax. And the same items are also exempt from the use tax. Purchases that are exempt under the use tax include

- food for human consumption, for example, peanut butter and chocolate,
- prescription medicine that includes medical cannabis, and
- electronically downloaded software, music and games

(California Department of Tax and Fee Administration, 2019b:5).

3.4.1.4 Cannabis business tax

Cities and counties are allowed to impose their own business taxes in addition to the sales or use tax. This 'local' business tax is added to the invoiced amount that is used to determine the sales or use tax. It is imposed on licensed operators for the privilege of cultivating, manufacturing, producing, processing, preparing, storing, providing, donating, selling or distributing cannabis or cannabis products (Adult Use Marijuana Act, 2016).

3.4.1.5 Tax on medicinal cannabis sales

The 15% excise tax is also imposed on purchasers of medicinal cannabis. Certain medicinal cannabis sales are, however, exempt from the sales and use tax under Proposition 64 that came into effect on 9 November 2016 (California Department of Tax and Fee Administration, 2019a:18).

California implemented the medical marijuana identification card system for a cardholder to avoid the retail sales tax on his medicinal cannabis purchases. Without it, the purchaser of the medical cannabis pays 15% on all cannabis products. Approximately 1.5 million people have applied for it and are able to buy, grow and consume cannabis products legally (Mmjrecs, 2018).

3.4.1.6 Tax on cannabis accessories

Items including

- pipes,
- rolling machines,
- vape pens (without content),
- rolling papers,
- hats,
- shirts, and
- books,

that is, most additional items that do not contain cannabis, but that relate to cannabis are subject to sales tax, but not the 15% excise tax. If the product contains cannabis, for example, a vape pen pre-assembled, then only the cost of the cannabis component is subject to the excise tax (California Department of Tax and Fee Administration, 2019a:19).

3.4.1.7 Tax on hemp products

Non-cannabis cannabidiol products including those that contain traces of tetrahydrocannabinol are not subject to cannabis excise tax. They are, however, subject to both the sales tax and the use tax. They are derived from industrial hemp plants. The industrial hemp industry is regulated by the California Department of Food and Agriculture (California Department of Tax and Fee Administration, 2019a:43).

3.4.1.8 Partial exemption for farm equipment and machinery

Farm equipment and machinery are subject to both the sales tax and the use tax. Certain sales and purchases of these items are, however, partially exempt from these taxes. Cultivators of cannabis also qualify for a partial exemption.

The following items meet the definition of 'farm equipment':

- Single-purpose buildings to house plants.
- Solar power facility.
- Diesel fuel used in farming activities.
- Liquefied petroleum gas if used in commercial crop production or harvesting.

An exemption certificate is required from the supplier to enjoy the exemption (California Department of Tax and Fee Administration, 2019a:28-29).

3.4.2 Where is cannabis tax used?

Funds collected through cannabis taxes are intended to be used for

- drug abuse prevention,
- public safety, and
- protecting the environment.

This intention has, however, not been achieved. On estimation, only one third of the cities and counties in California allowed legal cannabis business. To collect the estimated \$1 billion tax revenue, sales would have to be approximately \$7 billion, but California recorded only \$2,5 billion in sales (Krieger, 2019).

These new tax revenues raised were not used as promised, but were deposited into the general fund, to be spent on everyday needs. Some of the cities or counties, for example, Oakland, whose tax yielded \$13,7 million for the general fund, used \$3,4 million towards providing technical assistance to the revolving no-interest loan program for low-income cannabis applicants, known as the 'equity applicants' (Krieger, 2019).

California's first year of commercial legalisation (2018) resulted in the collection of \$300 million in taxes. These funds are earmarked for

- state cannabis regulators,
- funds for police,
- public health, and
- the social justice system.

This amount was immaterial to state budgets (\$300 million out of \$209 billion), but gives an indication that it could finance either the payment of

- average annual salaries for 4 166 extra teachers, or
- 3 542 additional police officers

(Downs, 2019).

3.4.3 Normal tax

California has three kinds of business income taxes, for example,

- a corporate tax. It is raised on a corporation or a limited liability company at a rate of approximately 9% of its net taxable income,
- a franchise tax. It applies to a S Corporation which is a limited liability corporation at a rate of 6,65%, based on federal guidelines, and
- an alternative minimum tax.

A corporation may not be required to pay a franchise tax, but is obliged to pay the alternative minimum tax at a rate of 6,5%. Personal income tax is based on a so-called progressive basis system of taxation (California Upcouncil, 2020).

3.4.4 Conclusion – California

Theofanis (2018:158-163) maintains that flexibility is important to cannabis tax. Legislation is a forever-changing concept due to the unpredictability of a fluctuating market. A good tax system is required to

- minimise the risks, and
- facilitate growth and gain rewards

in the recreational market. A tax system that strives to generate immediate income is more acceptable to an unstable market and is not sustainable.

According to Theofanis (Theofanis, 2018:158-163)

‘California has the oldest medical cannabis industry in the country and this presents a unique challenge for regulators. The system will not be successful in optimizing cannabis taxes if Governments opt for a short rate of return rather than a long term gain. Once California implements the suitable mechanisms, for example, scheduling future tax rate

increases and exploiting untapped tax bases, it could be the golden standard in the cannabis industry when they minimise risks and facilitate market growth.’

3.5 America – Colorado and Washington

Although both Colorado and Washington have their own tax structures, both legalised recreational cannabis in 2012. Commercial cannabis dispensaries commenced operating in January 2014. Differences between various states make it difficult to predict revenue projections (Bishop-Henchman, 2014:3).

America had its first taxable sale of recreational cannabis in Colorado in January 2014. A number of other states followed shortly after that (Davis *et al.*, 2019:2).

3.5.1 Taxing cannabis in Colorado

In Colorado medical cannabis was legalised in 2000. The first cannabis model used was based on the alcohol model.

Theofanis, 2018:169 stated that tax on cannabis consists of the following categories, namely,

- a retail cannabis sales tax of 15% (includes sales and use tax). It is imposed on retail cannabis and retail cannabis-infused products, and
- a cannabis excise tax. It is imposed on the first sale or transfer from a retail cannabis cultivation facility to a retail cannabis store or a cannabis-product manufacturer. But it excludes medicinal cannabis, and
- an excise tax. It is levied on producers at 15% of the average market rate of all retail cannabis. It is a weight-based tax to avoid fraud. The cannabis components are subjected to tax at different rates with the flowers being subjected to tax at a higher rate than the trim.

In addition, another tax imposed by the State is the 2,9% state tax on both recreational and medicinal cannabis sales. It is collected when consumers purchase cannabis. It is the only tax levied on medicinal cannabis sales. The state tax together with local taxes imposed by certain cities could be between 2,9% and 11,2% (Theofanis, 2018:169).

The Department of Agriculture is responsible for the calibration of the scales used to determine the correct weight for tax purposes. Once the tax is paid, the state is notified before shipment takes place. A shipping manifest is required to accompany the shipment. And cannabis is limited to one pound bags.

The State Department of Revenue showed that excise taxes (excluding local sales taxes) of \$63,4 million were collected in the first year of legalisation (2014) on retail and medical cannabis. This represented about 0,5% of the total revenue collection in the state (Phillips, 2015:7).

Colorado discontinued vertical integration that was previously implemented for all businesses, when a single business handles cannabis from the farm to the market. Vertical integration was abused by labelling sales as intra-company transactions resulting in tax evasion (Theofanis, 2018:169-170).

Table 3–3 below indicates the medical and retail cannabis tax and fee collection totals by calendar year commencing in 2014. The Department of Revenue commenced to report tax collection data only in February of 2014, after retail cannabis sales had commenced.

Table 3-3: Cannabis taxes, licences and fee revenue since February 2014

Calendar Year	Revenue by Calendar Year	Total Revenue
2014 (February to December)	\$67 594 323	\$67 597 323
2015	\$130 411 173	\$198 005 496
2016	\$193 604 810	\$391 610 306
2017	\$247 368 473	\$638 978 779
2018	\$266 529 637	\$905 508 416
2019 (January to September)	\$223 333 734	\$1 128 872 150

Source: Colorado Department of Revenue, 2019a.

Some sales and transfers are exempt from the tax resulting in the following situations when excise tax is not levied:

- A sale or transfer of unprocessed cannabis between the cultivation facility and medical cannabis centre.
- A transfer of cannabis to a testing facility for testing purposes provided it is destroyed during, or after, testing.
- A sale of 'industrial hemp', as defined by law.
- A transfer of cannabis from a retail cannabis cultivation facility to another retail cannabis cultivation facility for retail cannabis stores or manufacturing facilities.

(Colorado Department of Revenue, 2019b).

Normal tax

The normal tax rate in Colorado is a flat rate of 4,63% on the federal taxable incomes of all tax entities (individuals and businesses) regardless of the income level (Tax Foundation).

3.5.2 Taxing cannabis in Washington

Medical cannabis was legalised in 1998 in Washington. It commenced with the same model as Colorado. Cannabis is subject to tax at a percentage of its price.

The different taxes imposed on cannabis are:

- excise tax, and
- state level sales tax (Theofanis, 2018:172 – 173).

Excise tax

Theofanis explains the first excise tax method used in 2014, levied three 25% excise taxes at three different stages of production. This led to higher prices and slower growth.

The three stages at which the 25% excise taxes was levied resulted in businesses moving to vertically integrate to avoid paying tax at the different stages. Legislators passed a Bill to reconcile the recreational and medical markets. Currently a 37% *ad valorem* excise tax is levied on the recreational market and the medical dispensaries at the point of sale (Theofanis, 2018:172 – 173).

State level sales tax

Additional state level general sales tax is also levied at local level at a rate of 6,5%. This eliminated the federal tax issue under section 280E (not allowing advertising expenditure as a deduction in the determination of taxable income and also limiting deductions in the determination of taxable income to only certain direct expenses).

Unfair competition arose between the recreational market and the medical dispensaries that provided cheaper products due to lower tax rates. Medical cannabis has an advantage over recreational cannabis since it is exempt from the 6,5% state sales tax. The State implemented a track and trace system (seed to sale) to prevent tax evasion and leakage to other states (Theofanis, 2018:172 – 173).

The Washington State Liquor and Control Board regulate and issue each cannabis retailer with a license. Fees involved are

- application fees,

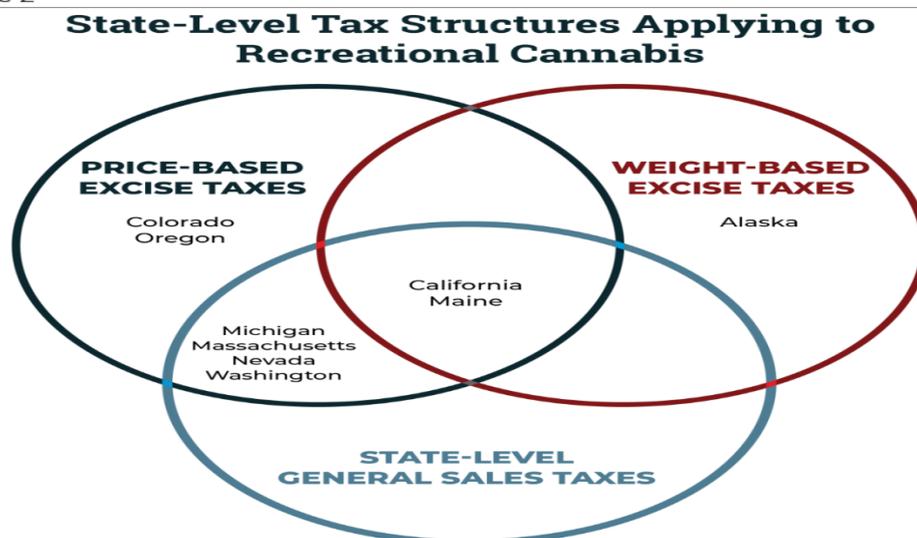
- annual renewal fees, and
- license amendment fees.

Licenses issued since legalisation exceeded 556 licenses and increase on a regular basis (Bishop-Henchman & Scarboro, 2016:9).

According to the Revised Code of Washington, RCW 69.50.101, industrial hemp is the only part of cannabis that qualifies for exemption from tax or deductions in the determination of taxable income. It covers the production, processing and sale of industrial hemp, but only if the tetrahydrocannabinol concentration is 0,3% or less on a dry weight basis. It is not defined as 'cannabis'.

Excise taxes collected in Washington during the first year of legalisation (2014) amounted to \$16 million in state level excise taxes on sales of \$49 million, excluding state and local sales taxes and the business and occupation tax. The time taken to implement this regulatory system led to shortages of legally-grown cannabis at dispensaries. This resulted in lower tax collections than estimated (Phillips, 2015:7). During 2016, excise tax collections on cannabis sales of \$1 billion increased to \$255 million (Theofanis, 2018:173-174).

Figure 2



Source: ITEP analysis of information reported by state revenue offices. Note that legal sales have yet to begin in Maine and Michigan. Note also that while Colorado and Nevada's excise taxes are based mostly on price, the administration of these taxes involves a weight-based component since the weight being sold is multiplied by a statewide average price to calculate the base against which the tax is applied.

Figure 3-1: State-level tax structure applying to recreational cannabis

Source: (Davis *et al.*, 2019)

The above table shows the various tax structures used for recreational cannabis. It indicates the following:

- California is the only state that uses all three bases, namely, price-based excise taxes, weight-based excise taxes and state-level general sales tax.
- Colorado uses only a price-based excise tax structure.
- Washington uses a price-based excise tax and a state level general sales tax.
- Alaska uses only the weight based excise tax method (Davis *et al.*, 2019). It imposes a flat rate of \$50 per ounce on cannabis growers for flowers and buds. It is not linked to the inflation rate when cannabis is sold to dispensaries or retailers. Also there is no sales tax to an end-user when he purchases the product. Alaska also offers a lower rate of \$25 an ounce on immature or abnormal flowers (Cammenga, 2019).
- One ounce is equal to 28,3495 grams, resulting in 35,2739619 ounces in a kilogram. A tax of \$50 an ounce in Alaska is the equivalent of R875 an ounce in South Africa (at a conversion rate of \$1 being equal to R17,50). Hence, the tax that could be levied in South Africa on one kilogram is R30 864,72 ($35,2739619 \times R875$).

Normal tax

Washington does not impose normal tax on a personal or corporate taxpayer. Yet an entity that engages in business in Washington is subject to other taxes, namely,

- a business and occupation tax, and
- a public utility tax.

Business and occupation tax

A business and occupation tax is levied on the *gross income* from activities. It follows that deductions in the determination of taxable income are not allowed for labour, materials, rates or other costs of doing business. The rate varies by classification, with certain credits that are used to lower this tax.

Public utility tax

A public utility tax is levied on public service businesses. There are five different rates involved, depending on the type of service rendered (Department of Revenue, Washington State).

3.5.3 Taxing medicinal cannabis – Colorado and Washington

Using cannabis for both the recreational and medicinal purposes complicates the relevant tax treatment to be used. Approximately 53% of cannabis users indicated that they exclusively use it for medicinal purposes. Medical cannabis is classified as a non-prescription drug. Nearly every state in the country exempts prescription drugs from the general sales tax. Only a few states exempt non-prescription drugs, due to the lack of approval by the Food and Drug Administration, hence it is subjected to the general sales tax (Phillips, 2015:5).

A possibility exists for a state to subject medical cannabis to tax differently from that of recreational cannabis. Colorado, however, experienced the negative effect of this policy since the difference in tax methods led to significant tax base erosions. The lower taxes on medical cannabis led to consumers abusing the system. Cannabis was purchased at discounted prices from doctors who recommend its use. This resulted in a decrease in regular cannabis market sales (Phillips, 2015:5).

An indication of the global market for medical cannabis is estimated at \$8,28 billion. It is expected to reach \$27 billion by 2024 (Richardson, 2019:2).

3.5.4 Effects of home-grown cannabis

Some states allow an individual to grow his own cannabis for non-medical purposes on a small scale. Growth is restricted to between four to six plants per household, with a maximum of three plants flowering at any stage. This has impacted the size of the retail cannabis market.

Colorado permits home growing. Washington allows it only for medical patients. It is unclear what the effects of home-growing cannabis will be on the retail market, since it is difficult to obtain reliable statistics on the home-growing industry. This could also result in a 'grey market', should home growers sell their cannabis onto the market. This could be significant. This will then have a negative impact on the amount of revenue collected since it is not subject to tax (Phillips, 2015:11).

Colorado's unregulated home-growing market accounts for an estimated 9% of the market. Heavy cannabis users (daily users) are the largest portion of the market, amounting to about 60%. They form the home-growers market. Home growing will certainly have an effect on the tax base and should be investigated more closely by the legislature before it becomes a problem (Theofanis, 2018:195).

3.5.5 Conclusion – Colorado and Washington

Cannabis and alcohol are subjected to tax in similar ways in these two states. Tax revenue generated for 2018 indicate the following:

- California – cannabis \$288 million versus alcohol \$382 million (first year)
- Colorado – cannabis \$252 million versus alcohol \$47 million (fourth year)
- Washington – cannabis \$283,4 million versus alcohol \$90 million (fourth year)

(Marijuana News, 2019).

The cannabis tax differences between Colorado and Washington are as follows:

- Colorado imposes an excise tax of 15% on the average market rate of all retail cannabis, 15% sales tax on cannabis retail sales to customers and a state tax of 2,9%, while
- Washington imposes an excise tax of 37% and a state level general sales tax of 6,5%

This confirms that Colorado subjects cannabis to tax on a lower combined rate than Washington.

Two problems that could be addressed under federal law to help generate more tax revenue are the

- banking or cash issues, and
- Section 280E provision.

Cannabis businesses have limited access to banking services. This causes a problem, not only for the businesses, but also for tax-collecting agencies. Huge amounts of cash are being handled between these entities and the tax-collecting agencies. This in turn, could lead to possible robberies and violent crime. Section 280E prohibits only businesses in the cannabis industry from deducting certain expenses in the determination of their taxable incomes. These businesses may deduct only expenses relating to only the cost of goods sold and the amount paid to purchase, produce or manufacture cannabis or cannabis products. Expenses not deductible in the determination of their taxable income would include

- employee costs,
- rentals,

- electricity,
- advertising, and
- overheads that are not directly linked to the production or purchases of cannabis

(Theofanis, 2018:162–163).

Since 2014, when the commercial cannabis dispensaries became operational, the number of fatal motor vehicle crashes increased in Colorado and Washington. As more states legalise recreational cannabis, policy strategies to lower these fatal motor vehicle crashes need to be addressed. Enough data has been collected over the past five years and is available to provide necessary evidence to address this need in policy change (Aydelotte, Mardock, Mancheski, Quamar, Teixeira, Brown and Brown, 2019).

3.6 Conclusion

To design the perfect or ideal tax structure for cannabis is a challenge. This chapter explained various tax methods used in certain countries and American states.

The vast differences in these tax methods need to be considered to draft a suitable tax model for South Africa. It could be a combination from various parts of the legislation used in these countries and American states. The second secondary objective discussed in Chapter 1 has therefore been met (the various tax systems that have been used since legalisation was introduced and the different taxing methods that have been applied).

A comparison between South Africa and countries and the various American states considered above should provide more insight into a possible tax model that could be implemented in South Africa. Canada, California, Colorado and Washington are enormous countries or American states that are divided into smaller parts, for example, into counties, cities or localities. Each of these smaller parts also has the ability to levy a local tax in addition to the other taxes mentioned.

South Africa operates as a single unit, and although it has nine different provinces, each with their own local municipalities, it has only one tax system for the country as a whole.

Establishing the taxation of a new product, like cannabis, will take time and effort. It will require rigorous planning, since the right balance is required,

- not too high to overtax it, which could lead to an increase of sales in the illegal market and possibly tax evasion, but

- high enough to offset the social costs.

(Phillips, 2015:2.)

In this regard, Phillips stated that

‘a decrease in cannabis prices could be a boon to cannabis tax revenues, if the excise tax rate is increased in such a way that cannabis prices essentially stay the same and the government collects the difference’ (Phillips, 2015: 9)

Care must be taken on the method of taxation used, since falling cannabis prices could have a decreased effect in the tax revenues once consumption stabilises (Davis *et al.*, 2019:4). Neighbouring states could also influence this tax by offering a lower-sales price. This could result in cannabis users travelling across borders if the price differences are significant (Phillips, 2015:9-10).

The legalisation of cannabis could bring about many positives, including the

- labour-intensive stance of cultivation, and
- manufacturing of products.

This could benefit South Africa in the long run, due to its extremely high unemployment rate.

Due to federal law banning cannabis in America, the tax implications of cannabis-related income has been complicated. Section 280E denies cannabis businesses to deduct certain expenses, resulted in them being subjected to an effectively higher than normal income tax rate, sometimes as high as 75%. A proposal to exempt state-sanctioned cannabis businesses from section 280E has been tabled, but not yet approved (Phillips, 2015:13).

As more countries and American states legalise cannabis, the tax structures discussed above can guide them in drafting a suitable tax system. It will be up to each country or American state to determine how, and at what point in the supply chain, it will levy a cannabis tax (Carnevale *et al.*, 2017).

Carnevale has stated that

‘simplicity and convenience are the key words to keep in mind when structuring a suitable tax system after legalising cannabis, while complexity can create undue burdens’.

The legalisation of the cannabis industry brought about advantages other than an increased excise and other relevant taxes. In America alone, the cannabis-industry employment increased to more than 211 000 full-time employment positions with a total of 296 000 direct or indirect and induced cannabis employment positions during 2018 (Barcott & Whitney, 2019:2).

Employment positions created in the sample states used above amounted in

- California to 66 951 employment positions,
- Colorado to 44 081 employment positions, and
- Washington to 47 028 employment positions.

This made cannabis unofficially the greatest employment-creation machine in America. Increased employment also adds to the tax base since employee taxes are collected, and extra spending on other products due to increased salaries earned result in extra expenditure tax, for example, value-added tax (Barcott & Whitney, 2019:appendixes 2 and 12).

Following the Federal Law not approving of legalising cannabis, the federal agency, Bureau of Labour Statistics, considers cannabis employment positions as being illegal (Barcott & Whitney, 2019:4). Since the Judiciary Committee approved the Bill that removes cannabis from Schedule 1 of the Controlled Substances Act, and that legalised it on the federal level in November 2019 (Lovelace, 2019), it still has to be seen whether the Bureau of Labour Statistics considers employment positions as illegal.

Davis *et al.*, (2019:9) suggests that legal cannabis's tax treatment should be similar to that of tobacco and alcohol, for personal, recreational or commercial use, but excluding medicinal use, both of which face excise tax at the federal, state and sometimes, local levels.

A relevant tax structure is needed for South Africa since it is unique in the sense that it has one tax system for all its provinces. Implementation of a tax system should therefore be less effort and less costly.

Chapter 4 considers the possible tax model that could be considered by the South African legislature, should cannabis be legalised in South Africa. The deadline for this structure, and for other departments that will need to submit their planning structures, is September 2020 (Anglim *et al.*, 2019a).

CHAPTER 4: CONCLUSION AND RECOMMENDATIONS

4.1 Introduction

Corbett JA in *CIR v Nemojim (Pty) Ltd* (1983 (4) SA 935, 45 SATC 241 at 267) stated that

'[i]t has been said that "there is no equity about a tax". While this may in many instances be a relevant guiding principle in the interpretation of fiscal legislation, there is nevertheless a measure of satisfaction to be gained from a result which seems equitable, both from the point of view of the taxpayer and from the point of view of the fiscus. And it may be fairly inferred that such result is in conformity with the intention of the legislature.'

He made the above remark after having approved an apportionment of dual-purpose expense. He may also have confirmed that to subject a trader in illegal commodities to normal tax on his gross income would be appropriate, since although inequitable to the taxpayer, it is justifiable for the fiscus. This could be a situation when

'there [should be] no equity about a tax',

especially when it is frequently reported in the media that illegal traders earn a considerable wealth, for example, from the buying and selling of illegal drugs (Williams, 2015:500-502).

The purpose of a tax is to raise revenue for the *fiscus*. A tax is the payment for general purposes of the Government, which decides on the allocation of the funds. A tax system must be fair, just and equitable. The equity and fairness of taxation is based on two theories, namely:

- benefits received, is where the citizens pays tax in proportion to the benefits they receive, which is difficult to measure benefits received from Government, and
- ability to pay, individuals should be asked to pay tax according to their ability to pay, rich pay more.

Taking the above into account, it is better to levy taxes on various bases instead of a single base. It would be more advantageous to the economy if the tax system raises moderate amounts from several bases, rather than larger amounts from one or two. The tax system needs to be simple and not cumbersome for the normal taxpayer to prepare and pay his taxes in an easy manner (Guru, 2020).

The main objective of this research dissertation is to consider, and propose, a suitable model to be used in South Africa for subjecting legalising cannabis to tax (Section 1.4.1). The decision on a tax model for the recreational market poses certain challenges since it deals with unknown and unpredictable variables (Theofanis, 2018:158).

The first of the secondary objectives is discussed in Chapter 2. It clarified the various uses of the cannabis plant that is required to establish the type of tax to implement per different use. The product variety of recreational cannabis makes it difficult to levy a specific excise tax. To subject recreational cannabis to excise tax in the same way as tobacco and alcohol needs to be explored. Hemp, being a worldwide sought after fibre crop can also not be ignored. Medicinal cannabis is one of the most researched agricultural products for many years. Subjecting both hemp and medicinal cannabis to tax should not be complex. These are straight forward products that would be subjected to value-added tax and sale thereof included in normal tax in terms of the gross income definition. This allows the researcher to form a tax model under the first objective.

The second of the secondary objectives are discussed in Chapter 3. This chapter explained various tax methods used in certain countries and American states. The vast variety of taxes and methods used by Uruguay, Canada and certain American states should give an indication of a possible method to use in South Africa. South Africa operates as a single unit, hence one tax system for all the different provinces, unlike the American states that are divided into counties and territories, each with an added tax per county or territory. This chapter further adds valuable information that will be used by the researcher to form a tax model under the first objective.

The taxation of cannabis has changed since it was first implemented in 2014 in Washington. Many countries joined the cannabis industry since 2014 mainly due to the magnitude of tax revenues that could be collected. Countries that legalised cannabis have explored and regulated how to subject it to tax to suit their own needs. Not legalising cannabis and subjecting it to tax could be costly since it is a growing market that increases annually.

As far as South Africa is concerned, the following two statements are relevant:

'South Africa is a signatory to the United Nations Single Convention on Narcotic Drugs (1961) (Single Convention), which aims to combat drug abuse and trafficking through coordinated international cooperation directed at limiting the possession, use, trade, distribution, import, export, manufacture and production of narcotic drugs (including cannabis) exclusively for medical and scientific purposes

'Being a signatory to the Single Convention, South Africa undertakes to comply with its obligations to minimise the risk of diversion of cannabis and to reserve the use for medical and scientific purposes only.'

(South Africa, 2019).

4.2 Possible goals to achieve with legalising cannabis

The three main goals with the possible transition from an illegal or so-called 'black-market' to a legal market for cannabis in South Africa, is to

- generate more government revenue,
- reduce the size of the 'black market', and
- limit the consumption of it.

4.2.1 Generate significant government income

The estimation of the revenue potential of cannabis is not just the result of consumption, multiplying it with the price of cannabis and then multiplying it by the tax rate (Caulkins, Hawken, and Kilmer, 2012 cited by McGowan, 2017).

Many factors need to be considered, for example, for

- the population size and the age of the users (an estimate of 31% of the population
- will use cannabis between the ages of 15 years to 24 years, and an estimate of 20%
- of the population will use cannabis from the age of 25 years and older),
- people who are 'experimenters' (less than 12 days of use in a year) it is estimated
- that 40% of them will use cannabis,
- 'recreational' users (use on a weekly basis) it is estimated that 30% of them will use
- cannabis, and
- 'regular' users (used more than 70 times a year) it is estimated that 30% of them will
- use cannabis (Caulkins *et al*, cited by McGowan, 2017).

Other factors that could have an impact on the price of cannabis are:

- the availability of cannabis (black-market vs legal market),
- quality of cannabis, a person who purchase high-quality cannabis tend to buy smaller quantities and vice versa (the higher the quality, the higher the price would be),
- the area where it is supplied (price differential between low- and high-quality cannabis in South Africa is much larger than the price differential in America),
- age of the user (younger users are more price sensitive) and
- medicinal cannabis tends to be more price inelastic than recreational cannabis.

Legalising cannabis would have a significant impact on both the demand and supply of cannabis. By legalising cannabis, the market would be more controlled that could lead to a decrease in price (Cited by Riley, Vellious and Van Walbeek, 2019).

4.2.2 Current markets

The only markets currently in South Africa are the illegal market, the ‘black market’ and so-called home growers (legal to a certain extent).

- **Illegal market**

In 2003 Interpol rated South Africa as the fourth–largest cannabis producer in the world. It made South Africa one of the leaders in the trading and exporting of illegal high-quality cannabis for many years, mainly to the United Kingdom. High quality ‘skunk’ cannabis sold for £3 500 a kilogram in Britain, while in South Africa it reached £20 a kilogram or less, depending on the quantity sold (Thompson, 2003).

The growing of cannabis was prohibited until recent legislation changed to decriminalise it solely for private use (as mentioned in Chapter 1). With no current competition in South Africa, the ‘black market’ has had the monopoly of being able to sell cannabis and was able to charge virtually any price for it. It is also vastly impossible to control the flow of cannabis across South Africa’s borders, due to a lack of border control manpower and the fact that border control concentrates more on imports than exports. The two main export areas are Johannesburg International Airport and Durban Harbour. Various officials interviewed at Durban Harbour had no recollection of any cannabis being seized. During 2004 two large Durban shipments of cannabis were seized in Rotterdam’s harbour. Most of the cannabis gets smuggled through land border posts or across unmonitored border lines and then shipped from neighbouring states (Steinberg, 2005:2). It could be advantageous to legalise cannabis sales since a portion of the extra tax revenues collected could then be used to address illegal trades and exports.

- **Home growers**

September 2018 earmarked an important date for cannabis in South Africa since home growers were allowed to grow, use and possess their own cannabis on a small scale, restricted to only private spaces (South Africa, 2018). It is a challenge to control home growers and this could have a significant impact on the recreational market. Various countries or states allow home growers to grow a certain amount of plants at any given time, with a further restriction on the amount of flowering plants, often with only three allowed to flower at the same time. Colorado allows an individual to grow up to six cannabis plants for non-medicinal purposes, while Washington prohibits home growing for non-medicinal purposes (Philips, 2015).

South Africa is moving towards finalising the Cannabis for Private Purposes Bill of 2020. According to a Government statement released on 06 August 2020, the submission to Parliament was approved by the Minister of Justice and Correctional Services and noted in the Government Gazette no 43595, vol. 662 on 07 August 2020. The Bill gives effect to a Constitutional Court judgement that declared previous laws unconstitutional.

It includes sections for

- prescribed quantities for personal use by an adult person,
- cultivation offences,
- cannabis offences,
- consumption offences,
- offences involving a child,
- penalties,
- expungement of criminal records of persons convicted of possession or use of cannabis,
- regulations and
- repeal or amendment of laws

4.2.3 Deterring consumption

Lakcević (2015:41) submits that the inexperienced nature of a youth causes him to be more price sensitive than an adult of the cost of using drugs and alcohol. To subject cannabis to tax, and to control its selling price, may be an additional effective measure that may discourage marginal and under-age users from using it in a regulated market.

4.3 Subjecting cannabis to tax in South Africa

It is important for the South African government to control the cannabis price at the right level to outperform the 'black market'. The selection of the appropriate tax method and rate is as important as controlling the cannabis price. Two other factors to consider in setting the correct price for cannabis are to

- consider the price of cannabis in neighbouring countries since this might have an impact
- on local sales if their prices are lower than the South African price, and
- decide at what stage in the value chain and when the tax should be levied.

The table below demonstrates the comparison between South Africa's, American states' and Canada's percentage of alcohol, tobacco and cannabis users to their populations:

- Canada is the leader with 17,62%, nearly one fifth of its population, using cannabis in
- 2019. It also has the highest average cost per gram of cannabis
- South Africa has the highest percentage of tobacco users at 20,3%
- America has the highest alcohol consumption

(Anglim et al., 2019a & 2019b).

Table 4-1: Comparison of cannabis statistics

Comparison of Cannabis Statistics						
<i>Country</i>	<i>Population 2019 (million)</i>	<i>Alcohol consumption (litres per capita per year)</i>	<i>Prevalence of tobacco users</i>	<i>Estimated number of cannabis users (million)</i>	<i>Average cost per gram of cannabis (\$)</i>	<i>Cannabis users to population</i>
South Africa	56,7	9,3	20,3%	1,4	8,5	2,47%
United States of America	328,3	9,8	14%	55	11,5	16,75%
Canada	36,9	8,2	16%	6,5	28	17,62%

Source: (Anglim et al., 2019a:45), (Anglim et al., 2019b:60), (Anglim et al., 2019b:84).

Table 4-2: Summary of cannabis tax rates

Summary of Cannabis Tax Rates							
Country or state of America	State excise tax	Cultivators tax		Local levy	Cannabis revenue used in other states or countries that could be used for in South Africa	Other factors	License fees (new and annually renewed)
		\$ an ounce on flowers	\$ an ounce on leaves				
California	15% (in table 3.2)	9,25 (in table 3.2)	2,75 (in table 3.2)	Yes	For admin costs associated with cannabis legalisation and excess funds are used for programs related to drug use.	People who has a medical marijuana id card (MMJ) will avoid paying the sales tax of 15% (in § 3.4.1.5)	Yes – various categories
Colorado	15% (in § 3.5.1)	15% cannabis tax / sales tax on contract price		2.9% State tax (recreational and medical) (in § 3.5.1)	Education programs	Medical cannabis products only has 2.9% sales tax on it (in § 3.5.1)	Yes – various categories
Washington	37%	NA	NA	6,5% State sales tax (recreational only)	Health care programs	Medical cannabis is exempt from 6,5% sales tax (in § 3.5.2)	Yes – various categories
Canada	Highest of two options – flat rate \$ per gram basis and <i>ad valorem</i> rate of 10% (in § 3.3.1.1)	NA	NA	Yes	Not mentioned	Tax credits of up to 15% for medical cannabis patients	Yes – various categories

Source: Author’s own compilation from Chapter 3 information of the above table.

The above table summarises taxes, what the revenue is used for, how the medical cannabis is treated for tax purposes and if countries raised licence fees in this industry (Refer to Chapter 3 Canada, California, Colorado and Washington where this information is described in more detail.) Cannabis can be divided into three categories, namely, recreational, medicinal and industrial uses (Refer to Chapter 2 for more detailed descriptions). These three categories could be differently subjected to tax.

Based on the above findings, several options could be used to subject the sales of legal cannabis to tax. It could be levied as follows:

- Excise tax, there are several options to choose from, for example, Washington uses a flat rate method, levies @ 37% (section 3.5.2), this would be the easiest to implement, or Canada levies a combination of a flat rate and an *ad valorem* rate (section 3.3.1.1) or California levies an extra tax at 15% in addition to the standard sales tax on the average

market price of retail sales payable (section 3.4.1.1) or Colorado levies a cannabis excise tax that is imposed on the first sale or transfer from a retail cannabis cultivation facility and an excise tax of 15% on the average market rate of all retail cannabis (section 3.5.1).

- Value-added tax at a standard rate, for example, at 15%.
- Cultivation tax as implemented in California (section 3.4.1.2) (this tax has not been used in South Africa and it might be costly and time consuming to implement it into South Africa's system of taxation).
- Additional municipal levies (local levies in America). It may be a problem in South Africa since South Africa does not have a separate tax system for the different provinces, due to having only one tax structure applicable to all the provinces.
- Normal income tax is a tax raised on profit made from trading in commodities (both legal and illegal) and has two components to it. First, sales, and secondly, expenditure incurred in producing these sales. Nowhere in the definition of 'gross income' is there a requirement that the taxpayer's activities be legal (South Africa, 1962). As a result, the receipts and accrual from both a legal and an illegal cannabis business that is being carried on are already subject to normal tax.

4.3.1 Excise tax for South Africa

An excise tax is levied mainly on high-volume daily-consumable products, for example, tobacco, alcohol and petrol (South African Revenue Service, 2019b). Recreational cannabis is similar to tobacco, and should therefore also be classified as a high-volume daily-consumable product and should be subjected to tax accordingly. (Refer to table 4-2)

Methods that could be considered by South Africa are as follows:

- A weight-based excise tax that is levied on the quantity sold rather than the selling price. The Marijuana Policy Project in America recommended that the excise tax on cannabis should vary based on the part of the plant sold, together with an annual inflation adjustment. Different rates for flowers, leaves and immature plants are recommended. The advantage of this method is that revenue raised should be relatively stable compared to other price-based methods that fluctuate when prices differ. The disadvantages of this method are that it does not account for the potency of the cannabis and it is vulnerable to inflation (Davis et al., 2019:9-14). This method is used in California under cultivation tax. Refer to par 3.4.1.2 and table 3-2 on page 47.

- Price-based excise tax is levied on its price at either the retail or wholesale level. The excise tax collected will be a fixed percentage and it will fluctuate with the price. The advantage of this method is that it will result in higher tax collections on the more expensive cannabis sold. A significant disadvantage of this price-based cannabis excise tax is that its yield is likely to be severely restricted when the price of cannabis falls (Davis et al., 2019:9-14).
- Potency-based excise tax on the amount of tetrahydrocannabinol being sold rather than simply the weight or price of cannabis. Current technology does exist to test the tetrahydrocannabinol in a plant. No jurisdiction subjects tobacco to tax on its nicotine content (Davis et al., 2019:9-14). But for subjecting cannabis to tax in South Africa it could be an interesting possibility, if the South African Revenue Services has the knowledge and manpower to implement such a system.
- Or any method used as discussed in section 4.3 above.

4.3.2 Value-added tax (sales tax)

Under the Value-Added Tax Act 89 of 1991, goods and services supplied by a vendor are subject to value-added tax at the standard rate of 15%, unless they qualify for an exemption (under section 12) or the supply is a zero-rated supply (under section 11). Cannabis products (including medicinal and industrial products) would not qualify for an exemption or zero rating.

New medical products are regularly being researched and developed. Most countries exempt prescription drugs from a form of sales tax or state tax as it is called in America. As mentioned in Chapter 1, South Africa levies value-added tax on all medication (prescribed or not), and it also does not qualify for any normal tax concession. The Pharmaceutical Society of South Africa started to address the value-added tax matter in May 2018, by asking the tax legislators to consider prescribed medicine as either zero rated (section 11) or exempt supply (section 12) (Mkhonza, 2018:1).

The only alternative would be for SARS to also include cannabis prescribed medicine as a deduction under additional medical expenses tax credit, together with all the other allowed medical expenses when submitting a person's annual income tax return. South Africa does not have a medical card system in place and it would be too costly and time consuming implementing such a system.

4.3.3 Cultivation tax

A cultivation tax is not a tax used in South Africa on any other products. It is levied at the commencement of the cycle, at the cultivating stage in California (as mentioned in Chapter 3). The earlier a tax is levied, the fewer the entities involved that need to be controlled and regulated. It could also limit tax evasion. The cultivator would be the taxpayer who pays over the tax at the commencement of the cycle, resulting in a government being able to collect its tax at an earlier stage. This is an additional tax to excise tax and takes the taxing of cannabis to a different level. None of the other American states and Canada implemented this type of tax.

SARS should not consider this method at the start of legalising cannabis, as this could result in a too high price if added on top of excise tax. It would also depend on the excise rate levied and method used. Due to time constraints and time it will take to implement a new tax in the system, it is not recommended at this stage. Excise tax on tobacco is levied on the packets of cigarettes, thus on the manufactured product only and not on the harvested / imported raw tobacco (Van Walbeek and World Health Organisation, 2003:4-5). It could be implemented at a later stage, should SARS find it necessary and feasible to implement.

4.3.4 Licence fees

Licence fees might not be a tax in South Africa, but could be raised on new licence applications and on annual licence renewals. This method of taxation is often used in other American states and countries. The South African Health Products Regulatory Authority commenced in issuing licences to companies who qualify for producing medicinal cannabis (South African Health Products Regulatory Authority, 2019). Hemp is also in the process to be legalised. In both sectors there would be an initial licence fee as well as annual renewal licence fee. With an excise tax being raised on the product and the type of product involved, medicinal and recreational, it would be regulated under the South African Health Products Regulatory Authority. Most industries in South Africa are regulated in some way that results in fees being raised for the respective industries.

4.3.5 Tax conclusion

As this is only a mini dissertation only a small number of countries' tax methods were considered and the proposed tax model was focused on the four mentioned (Chapter 3 and table 4-2).

From the study done and research collected in chapters 2 and 3 it is suggested that should a method be chosen from the first three options under section 4.3.1, the weight-based method

should be used in South Africa since it is the most practical alternative. It should provide better results and collections. Overall, taking all the methods into consideration, it would be suggested that the flat rate method used by Washington could be the best option with the least implementation costs and easier to enforce.

Value-added tax will be levied at the standard rate of 15% on all cannabis products (Value-added Tax Act 89 of 1991).

South Africa does not have a cultivation tax system in place and might therefore not implement it yet. The licence fees mentioned would be for the industry upon new registrations and annual renewals (South African Health Products Regulatory Authority, 2019).

Any amounts received or accrued from cannabis sales will be included in gross income with any relevant deductions, should it be allowed by the South African Revenue Services (Income Tax Act 58 of 1962). Certain expenses are disallowed for tobacco and alcohol products (Van Walbeek and World Health Organisation, 2003:4).

4.4 Employment creation opportunities

Cannabis is an agricultural product and has a full production cycle, from its growth to its sale. Most forms of agriculture require manual labour. In Colorado, in 2015, 27 000 occupational licences were issued to those employed in cannabis businesses. This excludes employment opportunities when licenses are not required. 'Cannabis' employees will also be contributing directly to the economy through the payment of employees' tax and further sales taxes when they purchase goods or services (Technavio Blog, 2016). As discussed in Chapter 3, the cannabis industry in America created about 296 000 direct and indirect employment opportunities in the few states where cannabis is legal.

South Africa currently has a population of approximately 56,7 million people (Anglim et al., 2019). Its official unemployment rate is 29%, while its unofficial unemployment rate was 38,5% in 2019 (Webster, 2019). Legalising cannabis could contribute towards additional employment opportunities being created, resulting in a decrease in its citizens that are currently unemployed, since more employers are likely to become involved if producing cannabis was no longer illegal.

The unemployment rate in America in 2019 was 3,6% of a population of 328,3 million people (Anglim et al., 2019b). It follows that it may be beneficial for many South African citizens if South Africa was to legalise cannabis. A South African resident, as opposed to a foreigner, should be the 'preferred' employee to fill an employment opportunity in the cannabis industry to reduce South Africa's current unemployment rate.

Another system that could be implemented in South Africa is for an employer to be levied a licence fee, payable by both the employer and employee, or payable by only the employer (for example, similar to the unemployment insurance fund contributions and the skills development levies determined on a percentage of the employee's salary).

4.5 Tax evasion

It is most unlikely that a country will have a fool-proof system of taxation that cannot be manipulated in some way or another. Manipulation will vary according to the complexity of the system of taxation and enforcement strategies in place. An incentive to evade tax is often another factor (Phillips, 2015:10). More determinants of tax evasion are tax/price differences, corruption and informal distribution networks. The higher the tax rate the greater the chances of tax evasion. The greater the reward, which depends on the profits made (difference from legally sold versus illegally supplied), will increase the probability of an individual to get involved (International Agency for Research on Cancer, 2008:301).

Due to cannabis being a new legal product and with limited information relating to it in South Africa, it is difficult to predict the degree of tax evasion that might occur. With the 'black market' operating in South Africa with little, or no, competition, it is likely that tax evasion would be high, until all relevant control systems are enacted. The high levels of excise-duty tax evasion in the tobacco industry should alert the legislature as to the need to immediately introduce the necessary control steps to avoid excessive excise-tax evasions involving cannabis. The cannabis industry is huge and significant excise losses could result, to the advantage of the unregulated 'black market' since its traders will continue to thrive unless proper controls are implemented (Phillips, 2015:10). A robust enforcement regime, including a strong tax administration, is required to limit opportunities for tax evasion (International Agency for Research on Cancer, 2008:301).

On the issue of controlling tax evasion, Anglim states that

'[i]t all depends on how much control the government attempts to write into legislation. September 2020 is the deadline for [the legislature] to re-write the offending parts of the drug laws.' (Anglim et al., 2019a).

4.6 Conclusion, limitations and recommendations

Should the legislature not comply with this September 2020 time limit, the necessary legislation for cannabis is unlikely to come into force. Six months after this deadline is March 2021, and should be the relevant date of implementation (Anglim et al., 2019).

Once South Africa legalises cannabis for recreational and medicinal use, its legislature will have to consider the numerous possible approaches that are available for subjecting it to tax.

The South African government is in a favourable position to have access to statistics and tax methods available from other countries and American states that have legalised and regulated cannabis and implemented their tax systems accordingly (refer to Chapter 3). The South African legislature should pay close attention to the commencement stage of regulating and subjecting cannabis to tax in South Africa as evidenced from what occurred in these countries and American states (Phillips, 2015:13).

Some American states, for example, California (refer section 3.4.2) that legalised cannabis had expected vast tax revenues. This did not occur due to lack of confidence from users, not all cities or counties got involved and as a result of a stable and strong competitive 'black market'. Once all these problems were solved, and confidence in the legal system was re-instated, cannabis revenues increased to substantial amounts (Krieger, 2019).

In the long-run when improved farming techniques were implemented, related production costs reduced. Lower costs could result in the cannabis price decreasing and resulting in a corresponding decline in tax collections (Phillips, 2015:10).

Many different 'Government' departments in South Africa will need to be involved once cannabis has been legalised, for example, the departments dealing with

- health care,
- agriculture,
- zoning,
- local enforcement, and
- criminal penalty.

These 'Government' departments in South Africa will have to be properly managed for the legalising of cannabis to be successful (Bishop-Henchman & Scarborough, 2016:1).

In this regard Davis *et al* have stated the following:

'Earmarking cannabis revenues to specific public services should be done sparingly and should be limited to causes with a direct relation to cannabis for example the regulation of the market and the implementation or expansion of substance abuse treatment programs.'
(Davis *et al.*, 2019:4)

Recommendations can be made as to how the tax on cannabis should be implemented. But it is up to the legislature to finalise the legislation. Some of the revenue collected from cannabis sales, should then be used on educating the South African public on the uses of this drug. Allocating some funds to health-care programmes will also be necessary.

The South African Commissioner has stated, and is cited by Naidoo and Monteiro of Fin24 that it is not a

‘one-trick pony, but it’s a multi-dimensional, multifaceted piece of work to turn SARS around’.

This could also be said about the setting up the most beneficial method of subjecting cannabis to tax. Although the above remark was not directed at collecting revenue from the legal sales of cannabis, it is a factor that could help ‘turn SARS around’ in its role as South Africa’s tax collector (Naidoo & Monteiro, 2019).

Until government decides to legalise cannabis (being recreational, medicinal or hemp), it remains illegal to sell it and any of its products.

The South African Police Service is mandated to act against

- businesses or persons selling cannabis, and
- customers who purchase illegal cannabis products

(Staff Writer, 2019).

In this regard Van Kerken has stated that

‘[i]t is time [South Africa] realised that no amount of arrests, no amount of baseless prohibitionist arguments, and no amount of stricter laws will stop drug use in South Africa. Legalisation is the only rational and logical step forward.’ (Van Kerken, 2013).

Canada and California have complex tax systems, with various tax methods being used and charged for several different cannabis products, but they also allows each county or city to levy their own tax in addition.

Colorado and Washington have simpler tax systems. Washington, with a fixed excise tax rate of 37%, may end up collecting more revenue than the other American states due to a more cost-effective and easier system to enforce.

Although excise duty and value-added tax are already incorporated in the South African tax system, further changes may have to be made for recreational cannabis products, depending on the method used, and the final decision made by its legislature. South Africa should follow Washington and use a simple and more effective collection method for a tax imposed on cannabis.

The legalisation of cannabis could hold immense benefits for South Africa, including

- extra revenue collected, and
- employment opportunities that could be created.

Given SARS's current problems relating to tax collections caused by COVID 19, it is recommended that initially it should use its existing tax legislation to subject cannabis to tax:

- Taxes on alcohol and tobacco come first from an excise duty. A similar excise duty should be enacted and levied on the sale of cannabis.
- Under the Value-Added Tax Act 89 of 1991, goods and services supplied by a vendor are subject to value-added tax at a standard rate of 15%, unless they qualify for an exemption (section 12) or the supply is a zero-rated supply (section 11). Cannabis and cannabis products already fall within the definition of 'goods'. Except for medicinal cannabis, sales of cannabis itself, and cannabis products, should not qualify for an exemption or a zero rating.
- Gross profit includes receipts and accruals from both legal and illegal cannabis businesses that are being carried on and are already subject to normal tax. The provisions of s 23(o) to prohibit the deduction in the determination of taxable income of certain expenditure incurred on the payment of, or the offer to make a payment of, an amount that relates to an activity contemplated in Chapter 2 of the Prevention and Combating of Corrupt Activities Act and which constitutes a fine or penalty imposed as a result of unlawful activity in South Africa. Its provisions would therefore apply to an illegal cannabis business that is being carried on. For the 'black market' trader in cannabis an inequitable situation will then result in that the amounts earned by him from the sale of illegal cannabis are included in his gross income and the expenditure incurred by him in producing his sales of cannabis are not deductible in the determination of his taxable income. He is then effectively subject to normal tax on his gross income since his taxable income is equal to his gross income. But for the 'legal' trader in cannabis, he should be subjected to normal tax on his taxable income in the same way as traders in other legal commodities are subjected to normal tax (Income Tax Act 58 of 1962).

A little, or no, new legislation therefore needs to be added. Legislation imposing an excise duty on cannabis would need to be promulgated.

Further research

Due to no specific tax model yet being implemented in South Africa for cannabis trades or products, since trading in cannabis has not yet been legalised, further research could be done on what the effect the proposed tax model in this mini-dissertation or another model would have on the South African taxation base. Additional research areas could include

- potential medical rebates for approved prescribed medicinal cannabis,
- specific deductions for farmers,
- more countries and American states that recently legalised cannabis for recreational and medicinal purposes could be explored, and
- a possible cultivation tax option.

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