

ARTICLE

The Political Economy of Cannabis Legalisation in East Africa

Josphine Jerobon

¹Department of Economics, University of Nairobi, Kenya Email:

jerobonjosphine92@gmail.com

Abstract

This paper explores the political economy of cannabis legalisation in East Africa, a region with favourable agroecological conditions and significant untapped potential in the global cannabis market. While global attitudes shift toward regulation and legalisation, East Africa's cannabis industry remains poorly understood, constrained by outdated laws, stigma, and fragmented enforcement. The study critically analyses the historical and legal evolution of cannabis regulation, the sociocultural role of cannabis among indigenous communities, and the region's response to international reform trends. Drawing on secondary data—including crime statistics, policy documents, and media reports—the paper interrogates how political and economic interests shape national drug policies and influence the emerging legalisation discourse. It highlights how prohibition policies have sustained informal economies, hindered revenue generation, and exacerbated rural underdevelopment. Conversely, the transition to a legal, regulated cannabis economy could offer substantial public goods through job creation, healthcare integration, industrial diversification, and increased fiscal revenues. By positioning cannabis reform within broader structural challenges—such as state capacity, trade policy, and external influence—the paper argues that legalisation is not merely a health or moral issue, but a strategic economic imperative. Ultimately, the study calls for evidence-based, locally grounded legal frameworks to guide East Africa's cannabis future.

KEYWORDS:

Cannabis; Cannabinoids; CBD; THC; Legalization; East Africa.

1 | INTRODUCTION

Cannabis is the world's most often grown, trafficked, and misused illegal substance which has experienced global criminalisation since the early 1800s. According to the World Drug Report (2021) about 275 million people (5.5% of global population) used drugs worldwide in 2020, up by 22% from 2010. Out of this number, roughly 200 million used cannabis in 2019 representing 4% of the global population, which increased significantly during the Covid pandemic (see United Nations, 2012). Many countries around the world have been amending their regulations around cannabis, a once prohibited and somewhat niche industry. The legal cannabis market is expected to reach \$272 billion by 2028 (European Consumer Staples Report, 2018). While the legal global market is still relatively small compared to other industries, such as tobacco and alcoholic drinks, its potential to grow is far greater. Worldwide, the pace of cannabis legalisation is such that, within a decade, cannabis will be impacting an increasing eco-friendly goods ranging from consumer products, beauty, and personal care, to beverages, building materials, paper production, eco-bricks, plastics, food and consumer health, utilising every component of the plant.

Cannabis production is pervasive in Africa among indigenous people for shamanic journeys and for sacraments. Over the past century, several communities have developed very sophisticated local cannabis industries that has survived and outlasted the draconian prohibition laws. Africa's comparative advantage is not difficult to establish. The plant can grow outdoors, especially in tropical regions where sunlight is in abundant supply. It can grow multiple times per year. The United Nations estimates that over 38,000 tons of cannabis are produced across Africa each year. Studies by Prohibition Partners in the African Cannabis Report estimates that by 2023, the value of Africa's legal cannabis market could be at least \$7.1 billion and could rise to \$102 billion by 2026 across key African countries if they legalize its recreational and medical use. Our conservative estimate of the illegal market is about 15 times larger than the legal market. Paradoxically, many African states that persecuted citizens for cannabis-related offenses for years are now promoting legal cannabis production for medicinal and industrial purposes, a welcome return to what the ancients knew all along. Over the past decade, many countries have passed laws to legalize production for medical and scientific purposes. These include Lesotho, Zimbabwe, South Africa, Uganda, Malawi, Zambia, Ghana, Eswatini, Rwanda, and Morocco. However, cannabis use is still criminalized in some African countries. Most of these countries restrict cultivation to varieties with THC levels of 0.3% or less, while others restrict its production for exports exclusively like Uganda and Rwanda (Lubogo, 2022b).

Different studies on cannabis in Africa show that this plant is commonly cultivated and locally used by the inhabitants in countries such as Nigeria, Ethiopia, Morocco, Angola, Cameroon, South Africa, Kenya, the Democratic Republic of the Congo, Algeria, and Egypt (Duvall & Chris, 2019; Kitchen et al., 2022a; Moshi & Mhame, 2013). Cannabis is consumed by 7.7% of the adult population in various African countries, amounting to approximately 38,200,000 African adults. Apart from this consumption, there are many individuals that use cannabis for other purposes, such as medicine and religious practices. The Rastafarian community regard cannabis as 'wisdom weed' or 'holy herb'. Rastafarians use cannabis to foster a sense of belonging and to elicit meditative, spiritual visions, and a deeper connection with mother nature. The data on Rastafarianism in East Africa is not available. However, according to a BBC overview, there are one million people who are subscribed to the 'Jah' community worldwide. Bearing in mind that in most African nation's adulthood starts at 18 years of age, the use of cannabis among teenagers is also becoming common and a serious problem. A study by Kamenderi et al., (2019) on the status of drug and substance abuse among secondary school students revealed that 23.4% commonly abuse alcohol, 17% miraa/khat, 16.1% prescription drugs, 14.5% tobacco, 7.5% cannabis, 2.3% inhalants, 1.2% heroin, and 1.1% cocaine. All these and other forms raise the number of African adults using cannabis beyond 7.7% suggesting that cannabis is widely used in Africa for both individual consumption and in some cases, for business.

Cannabis usage for medicinal and recreational purposes has been decriminalized in numerous nations throughout the world, and East Africa is following this expanding trend. Businesses are already profiting from the cultivation, distribution, and exportation of medical cannabis, which has a multi-billion-dollar market size. As a result, governments all over the continent are hopeful that decriminalizing the plant will help them in their efforts to diversify their economies and increase their foreign exchange earnings with the hope of closing budget loopholes left by profligate spending. Even though there are few rules governing the use of cannabis for medical purposes, Africa is reportedly the world's greatest producer and consumer of the herb. For instance, as reported by the New Frontier Data UK, Tanzanians consume more cannabis than any other country in East Africa, with up to 3.6 million Tanzanians taking the herb in various forms in 2018. With 3.3 million users, Kenya comes in second, while Uganda comes third with 2.6 million users. Given the rising number of users and the unrecorded cases, East African countries might start producing medical cannabis in large quantities for export to rapidly expanding global markets.

Traditionally, many African nations depend on the revenue from the export of cash commodities like cocoa, coffee, cotton, and minerals. However, these are unstable sources of income due to the continuously fluctuating global market prices. Legalising cannabis would therefore open a new source of cash flow for these nations and contribute to the creation of jobs, as the plant can be used to make everything from cannabis oil to textiles (Rev. et.al, 2013). While there is some growing literature on cannabis legalisation, they largely focus on the adverse effects of the plant (Calabria et al., 2010; Hall & Solowij, 1998; Kalant, 2004). A few studies like Quarshie and Alagidede (2020) have focussed on specific country scenarios and examined the utilitarian cost-benefit analysis of legalisation and the public policy effects of regulation versus prohibition. The legalisation of cannabis has thus been the subject of numerous studies, but no empirical research has been carried out in East Africa, a geographical space with arguably some of the best growing conditions, and a large export potential. For a region going through structural reform, and whose development is beset with rising public debt and youth unemployment, a clear appreciation of the role of cannabis in alleviating some of the constraints to economic growth is of significant academic and policy interest. Similarly, given the low state of formal research into the science and economics of cannabis, there is little understanding of the multiplier effects it engenders in the economic development process.

This study contributes to filling the gaps, and a beginning of a trail of discussions that will lead to a clearer understanding of liberalisation and regulation on one hand, and prohibition and repression on the other hand. The goal is to enlarge the debate on one of the most repressed plants on the planet. Standard economic analysis shows that legalisation with regulation as opposed to prohibition produces a stable equilibrium and generates better resource allocation drive for economies in transition. We aim in this exploratory article to critically analyse the economic effects of cannabis legalisation in the East African sub-region and the implications arising from such shifts on local economic development and regional and global policy on cannabis. More succinctly, our contributions are four-fold: Firstly, we explore the prevalence and patterns of cannabis use in East Africa, building on information from historical studies and data to enable us to gauge the evolution of the laws and legal procedures that culminated in the current situation. This helps chart policy on the optimal path of cannabis masterplan for economic transformation in East African countries and countries in similar circumstances and maturity for a liberalised cannabis industry. Secondly, we explore the socio-religious roles of cannabis, as well as livelihoods point of view. Such knowledge helps inform the East African drive to better reap the rewards that the emerging cannabis industry offers. Thirdly, we investigate and show how governments can approach the global wave of legalisation of cannabis in East Africa, and in turn how the East African experience can help expand the global trend of clamping down on the artificial barriers that has kept cannabis in the underground economy, thereby depriving public sector of vital revenue while limiting its benefits to a select few. Fourthly, we examine the economic benefits of cannabis legalisation, paying a particular attention to how cannabis can help liberate the economy from its over-dependence on a narrow set of raw materials. These contributions set the tone for a thorough analysis of public sector policies for handling the plant responsibly.

2 | A CONTEXTUAL ANALYSIS OF CANNABIS IN EAST AFRICA

Apart from Uganda where a burgeoning legalised export market is taking shape, Kenya and Tanzania are yet to wake up to the call for a second look at the cannabis question. From the very outset, collecting data on cannabis is fraught with problems. The data on cannabis is limited to what is reported by the police departments in the countries under study and many other regions. This limits the quality and quantity of data that can be utilised for sound empirical research. The large number of traders in the underground market, as well as operators in the down and upstream cannabis sectors cuts off a significant chunk of rich indicators that can be used for analysis. The stigma attached to the possession, use, distribution, and cultivation of cannabis serves as another barrier to academic and practitioner research. Overcoming these challenges is part and parcel of a beginning work that should set the tone for further studies on better and stronger indicators for analysis. Despite these limitations, the study collected a broad range of data from secondary sources such as the Annual Crime Reports by National Police Service (Kenya), Annual Crime Statistics reported by Tanzania Police Force, and Annual Crime Report by the Ugandan Police. In addition, information published on diverse national media outlets and magazines on cannabis, policy briefs, reports and articles were also utilized.

Data collection from the annual crime reports for the 3 countries and other articles started in August 2022 to June 2023. The data available ranges from the year 2014 to 2020. However, Uganda suffers from data gaps attributed to change in way of reporting following legalisation of cannabis cultivation in 2015 for medicinal purposes.

3 | PREVALENCE AND PATTERNS OF CANNABIS USE IN EAST AFRICA

Substance abuse has been on a rising trend in East Africa and especially among the youth. Kenya is the biggest contributor to the rising cases. Current study by the National Protocol for Treatment of Substance Used Disorder in Kenya indicated that half of the drug users are aged between 10 and 19 years. The most abused drugs in the country are nicotine, alcohol and cannabis (Chesang, 2013). According to the Annual Crime Reports by the National Police Service in Kenya, the number of narcotic related cases reported has been rising since 2014. The highest number of cases were recorded in 2018 (8,021 cases) and 2019 (8,011 cases). The year 2020 recorded reduced number of cases (4,477 case) since the country was in lockdown following the COVID-19 pandemic. About 81% of all narcotic cases reported relates to cannabis. The number of people found cultivating cannabis in the country has also gone up. In 2019 alone, a total of 155 people were found cultivating cannabis despite stringent government enforcement on illegal cannabis. In addition, the seizure report has been on a rising trend since 2016 where 382kgs of cannabis was seized compared to 14,805kgs in 2019 and 10,893kgs in 2020. This upsurge is attributed to the strategic location of Kenya in the East African region and Nairobi city being the region's economic hub (Lochu & Jonyo, 2020). Tanzania on the other hand has had a decline in the narcotic reported cases. According to the Crime and Incident Statistics by Tanzanian Police

Force, narcotic reported cases has declined from 2016 where a total of 11,054 cases were reported compared to 2019 where a total of 7,921 cases were reported and 7,363 cases reported in 2020. Cannabis reported cases in 2019 and 2020 were 6,483 and 5,903 translating to 82% and 80% of narcotic cases reported respectively. The number of people found in possession of cannabis farms has also gone down with 27 cases reported in 2020 compared to 102 cases in 2016. This is attributed to harsh penalties imposed on its cultivation, handling, distribution, and consumption. In Tanzania, an individual caught in possession of even as small as 50grams of cannabis runs the risk of receiving a 500,000 Tanzanian shilling fine, a three-year prison sentence, or both. To apprehend the criminals, the police have gone above and beyond the classical way. For instance, undercover police officers act as cannabis dealers to catch the offenders (Christina, 2021). Even if perpetrators manage to avoid jail time, they still have to pay a bribe of up to \$300 to these officers when caught. In addition, the authorities launched a massive eradication effort in 2018 to stop the illegal cannabis trade, wiping out 14 hectares of the crop in Arusha, a major cannabis-growing region in Tanzania.

Uganda on the other hand has had fairly stable reported cases of narcotics with 2,854 cases in 2017, 2,890 cases in 2018, and 2,750 cases in 2019. However, the police department has not been able to breakdown the statistic to various drugs abused in the country. The response to drug use in Uganda is weak. The fact that it has been legalized for medicinal use further dampens the effort by officials to address its handling, consumption, and distribution (Bureau of counterterrorism, 2020). The Ugandan Police run a vigilant search of narcotics only at the airports with limited vigilance along the borders. This is attributed to the unit's underfunded, limited manpower and infrastructure (Barry et al., 2020).

According to the national population statistics and the East Africa magazine dated 17th October 2020, 6.28% of Kenyans, 6.03% of Tanzanians, and 5.68% of Ugandans consume cannabis. However, their consumption patterns have significantly changed compared to the traditional way of smoking, especially among the youth. In Kenya, new consumption patterns have emerged thus posing detection challenges to the law enforcers. The new patterns that have emerged include using cannabis as an ingredient in cakes, cookies, and other pastries, boiling and blending it into juices, using cannabis as tea leaves, and using it as additives in other alcoholic beverages. Unlike the ancient time when consumption of alcohol was limited to specific times such as in the morning and evenings, restricted to occasions such as weddings, parties, and burials, and locations such as home, in the bush, or in special huts, the current consumers do not have such limits. They consume cannabis anywhere, anytime. The dynamics in consumption patterns makes it hard for law enforcers to detect such crimes (Kaithuru et al., 2020). The change in consumption patterns is attributed to technological change and the need to hide from authorities who are currently not well-equipped to detect these cases. Consumption patterns in Tanzania have also changed. Report on traffic and crime statistic in Dar es Salaam confirms that the current generation has devised new ways of masking cannabis making it hard for the enforcement bodies to detect them. According to Tanzanian Anti-Drug Unit Report (2005), a new way of injecting cannabis among the youth called "flush blood" has emerged. This is a technique where one person injects cannabis, heroin, or any other narcotic, draws blood into a syringe, and then passes the syringe to another person to inject. The variety of disguises that have emerged when public authorities ignore the signs of urgent legalization can make the current rules obsolete in relation to cannabis.

The cannabis plant can be used in several positive ways. However, current public sector policy in East Africa and many other societies on the plant have favoured prohibition out of the fear that it would be abused. This has amplified the negative use of cannabis much to the detriment of society. In attempt to repress through fear, far greater energy and interest is released especially among the youth regarding what exactly the authorities are trying to hide. The illegal status of cannabis creates fear and feeds the fear consciousness among the users. Making cannabis illegal in the name of the 'war on drugs' has worsened the fight against cannabis and contributed to moral degradation and social malaise around the role of indigenous plants among users and law enforcers. The clandestine way in which cannabis and many recreational drugs are marketed encourages deceitful, and dishonest behavior among drug users and law enforcers. It is not surprising to see police officers and other law enforcers who are long time drug peddlers and users arresting other citizens for committing the same crimes. In such an atmosphere, drug users and law enforcers become secretive and suspicious and live a double life which is inimical to social cohesion and human evolution (see Louise, 2004).

4 | LEGAL AND ILLEGAL CANNABIS MARKETS IN EAST AFRICA

Possession, consumption, and cultivation of cannabis in Kenya and Tanzania is illegal. Uganda on the other hand legalized medicinal production of cannabis exclusively for export. By 2028, it is anticipated that the cannabis market will generate revenues of approximately \$36.4 billion. The rise in demand is attributed to several factors. To begin with, the rising health consciousness and an increase in the number of people with chronic illnesses including Cancer, Alzheimer's, Parkinson's, and other

neurological disorders fuels the rise of the cannabis business. With more than 400 active compounds, Cannabidiol (CBD) and Tetrahydrocannabinol (THC) are the two most researched and known compounds. THC is responsible for the intoxication that people associate with cannabis while CBD is non-intoxicating, which appears in the form of gummies, drinks, and oil products used for medicinal purposes. CBD has become quite popular due to its medicinal benefits as it is known to lower blood pressure, reduce inflammation and neuropathic pain, can prevent relapse in drugs and alcohol addiction by suppressing anxiety and cravings, prevents and treats Gastrointestinal (GI) disorders, prevents seizure, treats epilepsy, fights cancer by alleviating the effects of chemotherapy, prevents cell growth and induce cells death among others (Kilmer, 2019).

The rising revenue needs by the governments in the recent past has played a central role in the debates to push the agenda for cannabis legalisation. The situation worsened during the Covid-19 pandemic. This hitherto restricted market is likely to open as governments look for new revenue sources, though this may not be available for smallholder farmers or domestic consumption, as shown in Uganda's hemp cultivation.

Uganda in 2015 legalised the cultivation, production, and exportation of cannabis for medicinal use. However, the license to cultivate and export cannabis is backed by stringent requirements. For instance, one must have a minimum capital of \$5 million and a bank guarantee of \$ 1 million and must be cleared by the Uganda Revenue Authority. An applicant must present the list of employees with their job description, valid trading license, audited accounts, and evidence of value addition to cannabis. With such a tight qualification criterion, Uganda has effectively legally eliminated small and medium scale operators. At the time of writing this article, Industrial Hemp Uganda Ltd is the only company that has met such stringent requirements to grow and process cannabis for medicinal use (Lubogo, 2022a). The first export of cannabis harvested from Uganda was exported to the South African National Analytical Forensic service in Pretoria. The export was unrefined cannabis bud/flowers valued at \$10,000. The second consignment was to Israel in June 2019. The Israeli firm harvested cannabis inflorescence and planted 10 dunams on the same day. However, the then state minister for investment Everly Anite highlighted that the license was halted citing a lack of detailed research done before the license was issued. This is an indicator that responsible government departments were not properly engaged in the process, which is a problem faced by many African countries now attempting to legalise cannabis. When the frog in front falls in a ditch, the rest at the back takes caution. The Ugandan example of legal monopoly should serve as a lesson for many countries attempting to reduce the barriers of entry when the prohibition laws finally phase out. Despite the initial hurdles, the role of the cannabis as an industrial giant is not in doubt.

Cannabis for industrial use has evolved as a significant agricultural product. Consequently, the demand for its products has continuously grown in the twenty-first century. It is a valuable crop that supports a sustainable growing system. It is also environmentally friendly. Cannabis cultivation can boost regional economies and open employment opportunities, especially in regions dependent on agriculture. Cultivated industrial hemp can be used as a substitute raw material in the paper industry, thus minimizing the environmental hazards of deforestation. Hemp paper has proven to be stronger, firmer, and fine as opposed to traditional wood paper. Hemp matures faster thus more production of paper within a short period and limited space as compared to trees is required. Hemp is used in bioplastic which is biodegradable to replace plastics. Hemp's polysaccharide can be extracted and utilized to make cellophane, rayon, celluloid, and other materials, reducing the need for petrochemical-based plastics (Nath, 2022). Hemp can also be used to produce biofuel to replace the utilization of traditional coal or fossil fuels. Hemp fibre is durable and more versatile compared to cotton hence, a viable raw material substitute in the textile industry. Hemp oil has therapeutic effects which can act as alternative to petroleum-based cosmetics and other skincare products (Crini et al., 2020).

In Kenya, rising membership of the Rastafarian Society and their vocal nature has widened the acceptance of cannabis by the youth. The chairman of the Rastafarian Society of Kenya, Ras Lorjoron, in 2021 petitioned the Kenyan high court to decriminalize the use of cannabis claiming that smoking cannabis is part of their religious practice. "We Rastafari, who have been stigmatized and misunderstood, we have come here to say in agreement with the United Nations that the use of cannabis for cultural, spiritual, and medicinal purposes should be allowed for people who (have) been using it for many years," Ras Lorjoron told the journalists outside the court. The Rastafarians do not view Cannabis as a harmful drug but rather, regards it as 'wisdom herb', or 'holy herb'. The "holy herb," they maintain, heightens their feeling of community and helps them reach a spiritual realm hence efficiently communicating with their God, 'Jah'.

In Kenya, the Coastal region leads in incidences of cannabis crimes, followed by Nairobi and then the Central Province. Shimoni and Mombasa towns are the major towns where incidences are prevalent. The problem with cannabis as a religious and sacramental plant is that nearly all the original versions of the plant have been modified. When the plant first appeared on earth, it had the purpose of uplifting human consciousness through its high vibration into the fifth dimension and beyond. In modern times, and especially following the prohibition laws, many mutations have occurred, and the original species are no longer available except in very rare cases, so what the religious adherents are consuming are the altered version of the plant

which may be more detrimental to spiritual evolution and enlightenment. As argued by Adama in his conversations with Aurelia Louise Jones (see Louise, 2004), inhaling cannabis through the lungs poisons the body and steps down the vibrations of the human energy field which invites lower vibrational entities to spiritually enslave the users if possible. While the medical use is sound, the religious and recreational use of habit forming and mind-altering substances over a long period of time lowers the body's vibration on the astral plane. Many years of cannabis use as a way of life to avoid the lessons and responsibilities of this incarnation can create long term consequences, especially for the uninitiated.

The most radical and sensible way out of the cannabis question in East Africa is total honesty and openness on the part of users and law makers and enforcers. Despite the restrictions, the black market for cannabis in East Africa is thriving now than ever before. The legal weed market in Uganda is struggling to compete with non-taxed illicit businesses with better deals and prices from the neighboring countries of Kenya and Tanzania where cannabis cultivation is illegal. According to the United Nations Office on Drugs and Crime, seizures reported between 1995 and 2006 are not significant to draw conclusions about trafficking patterns or potential drug misuse. The lack of officially reported seizures does not, however, indicate a lack of activity. Instead, it's a sign of lax border security, a lack of knowledge of the drug trade, and a deficient criminal justice system (UNODC, 2023). Since the drug traffickers first began using East African nations as their transit hubs in the middle of the 1980s, there has been tremendous growth in illegal drug trafficking in the region (Syvertsen et al., 2016). Initially, Nigerian criminal gangs coordinated and ran the drug trade in East Africa. However, Kenyan and Tanzanian gang groups have also started to take on important roles in recent years. Initially, the illegal drug trade was for cannabis and brown sugar heroin which was later replaced by white crest heroin due to its potency, injectability, and ease of use.

There are three major causes of the rising black-market in East Africa as cited by the United Nations Office on Drugs and Crime (UNODA). To begin with, the rising demand for Cannabis both locally and internationally has led to the expansion of the cannabis black market. Initially, the demand for cannabis came from Western countries. However, in the recent past, East African countries have established themselves as significant consumers of cannabis. For example, 7% of the populace in the Island of Zanzibar in Tanzania are addicted to illicit drugs (Kessels, 2016). Secondly, the rise in international flight frequency in major East African airports such as Jomo Kenyatta International Airport, Julius Nyerere International Airport, and Entebbe International Airport. The U.S. Federal Aviation Authority granted JKIA category one status in 2017, enabling direct flights to and from Nairobi without needing to change planes in Amsterdam or Heathrow (Muendo, 2018). Due to this change in status, Kenya became a significant transfer hub, particularly for flights from nearby East African nations like Uganda, Tanzania, Ethiopia, and Rwanda. Consequently, Kenya became the major entry and exit gateway for cannabis and cannabis-related products, as shown by a police department seizure report (Duvall & Chris S., 2019).

Most cannabis seizure in Kenya occurs at the Jomo Kenyatta International Airport, in Tanzania most seizure occurs at Julius Nyerere International Airport while in Uganda, Entebbe International Airport. The key transport route for drugs in Kenya is the Nairobi-Mombasa highway and also the Lunga Lunga border. The amounts of Cannabis trafficked show the quantities are mostly less than 5kgs. This, however, is different from heroin where reported cases exceed 50kgs (Duvall & Chris S., 2019).

In addition, approximately 90% of cannabis cultivation in the three countries is on small scale with less than a 1-acre piece of land. Cannabis from East Africa has its Destination in Zambia, United Kingdom, Germany, Canada, Israel, Dubai and China. Research titled Analyzing of drug trafficking in East Africa using media approach (2018) indicated that most crimes were conducted individually (351) as opposed to one conducted by groups of three or more people (137 cases). High cases of individual perpetration show how difficult it is to get hold of the entire network since drug trafficking from cultivation to possession, consumption and transporting cannot be executed by an individual. Resident group trafficking for cannabis were common compared to foreign and mixed for other drugs such as heroin and cocaine.

Finally, East African countries have lax border security and weak criminal justice system which have made it easier for actors in the drug trade to enter and exit the area. The illicit drug business is very lucrative and affects corruption levels in governments. Due to weak institutions, East African countries are more vulnerable to such corrupt dealings. Additionally, the absence of guidelines for drug-related crimes in criminal justice systems is problematic and weakens the country's willingness to deal with such crimes (CRS Report for Congress, 2010). Nationals commonly involved in trafficking in East Africa are Kenyans, Ugandans, Tanzanians and Nigerians. Up to 60% of the cases analyzed by Aucoin (2018) provided suspects names or names of cartels like the Nigerian Oruche Organization and Kenyan Akasha Cartel. Police officers, politicians and some units of police were not spared in the involvement with drug barons. For example, a case in Kampala in 2012 implicating the Narcotic department and Police Professional Standard units colluding with the drug barons. Aucoin (2018) also noted that 65% of the cases were reported by special investigation and normal policing, 22% were reported by custom agents, 11% reported by unspecified agents, and 5% reported by other government officials including navy and maritime forces.

5 | GOVERNMENT RESPONSE TO DRUGS TRADE

The three countries have laws that have been enacted to combat drug trafficking in the region. In Kenya, the Narcotic Drugs and Psychotic Substances has been in force since 1994. In order to acquire access to positions of power, most notably in politics, drug trafficking organizations with Kenyan affiliates forged relationships with judges and law enforcement officials. The complex nature of the narcotic business forced the government of Kenya to amend the 1994 legislation in 2021 with intent to tighten punishments for law enforcement officials who assist or engage in the illegal trade and possession of drugs, as well as to define the judicial bounds of the penalties for the trafficking of illicit narcotics. Kenya has upgraded its maritime security agencies, particularly the Kenya Coast Guard Service (KCGS), to better prevent and control the importation and exportation of narcotics (Syvertsen et al., 2016). In order to strengthen capacity and contribute to the protection of Kenyan seas from illicit drug trafficking, the KCGS collaborated with the Global Maritime Crime Programme (GMCP) of the United Nations Office on Drugs and Crime (UNODC) in 2020 (UNODC, 2020).

Tanzania's parliament in 2017 amended the Drug Control and Enforcement Act (DCEA) which led to the establishment of Drug Control and Enforcement Authority. This authority was tasked with the responsibility of coordinating anti-drug use and trafficking arrest efforts (Aucoin, 2018). Heads of law enforcement agencies from around Africa and Europe attended two significant meetings that the Drug Control and Enforcement Authority co-hosted with the EU-ACT Project. Participants had extensive discussion on how to improve and exchange maritime intelligence. In accordance with UNODC recommendations, DCEA also supports the JODARI program, which combats illegal fishing and drug trafficking along Tanzania's coasts. In 2021, it was acknowledged for its strong training programs and numerous drug seizures, earning it a title as the top institution against the trafficking of narcotics globally (Kapama & Faustine, 2021).

Uganda on the other hand in 2016, passed the new Narcotic drugs and psychotropic substances Act 2016 which adopted a punitive approach with regard to drug trafficking. For instance, trafficking, which is defined to include even minor amounts of smuggling, can result to a life sentence while non-disclosure of prescriptions for narcotics can result to a 5-year jail term (Mbwambo et al., 2012).

6 | ECONOMIC ARGUMENTS FOR AND AGAINST CANNABIS

Different activists have attempted to argue that the benefits of cannabis are more than the harm it causes hence, the need to legalize it. Some of the economic benefits are highlighted below.

Cannabis as a source of energy supply. Cannabis is an alternative source of biofuel. The cannabis biofuel is eco-friendly, producing little to no pollution. With the increased debates and awareness of the effects of environmental pollution and global warming, it is argued that cannabis is a green source of energy that the East African economies should explore. Cannabis as a source of biofuel has been tapped by other countries such as Pakistan which has saved Pakistan a fortune from importation of energy while ensuring clean and sustainable energy. An acre of hemp can produce 1800 gallons of biofuel which is equivalent to two barrels of oil. Given that hemp can be harvested after every three months, an acre can yield eight barrels of biofuel annually. This is an opportunity to be tapped by nations that legalize hemp production (Quarshie et al., 2020).

Cannabis is an alternative source of raw material. Ken Okoth, the Kenyan activist for cannabis legalization cited that cannabis is a source of raw material in industries such as paper, textile, oil, and the automotive industry. Cannabis has been found to be the most efficient raw material with the highest quality in the paper industry. One acre of cannabis produces as much raw material as 3 acres of normal paper-producing trees. Paper from cannabis will last for approximately 150 years before crumbling compared to 50 years for normal paper. Luginbuhl and M (2001) postulated that the quality of cannabis paper is so high that if it wets, all one needs to do is just keep the pieces the way they should be and let it dry.

Cannabis is a source of income and employment. Okoth pointed out that cannabis is a huge income earner to a country if legalized. When farmers are allowed to cultivate, they can sell the product and earn a living from it thus improving their living standards. The East African community is currently struggling with high unemployment and poverty levels. Legalisation of cannabis can create employment opportunities for millions of people currently unemployed. Employment ranges from labor requirements in the farm and labor required in the processing firms. Industrial Hemp Uganda limited has employed approximately 460 workers and the number is set to increase due to the company's prospects to expand its production following rising demand in the global market.

Cannabis cultivation will act as a supplementary source of revenue for the government. Cannabis legalization will increase the government's tax base and crop basket thus enabling it to provide goods and services to its citizen. Cannabis activists argue that cannabis should be taxed like alcohol and tobacco, e.g. in Kenya, the rate of 18% should apply as opposed to other consumables taxed at 16%. The annual demand for cannabis in Kenya is approximately 610 tonnes. A gram of pot is retailing at sh. 1,000. This is equal to sh.610 billion annually. If legalized, it is bound to grow significantly thus, can increase tax collected by 10% (Smucker & Wisner, 2008). Uganda on the other hand noted that they have an annual capacity to produce 30 tons of cannabis. A kilogram of medicinal cannabis is valued at \$5,005. This translates to \$150 million. Its legalization will increase government revenue thus enhancing economic growth.

Legalising cannabis leads to industrialization. According to the cannabis Control Bill 2018, Kenya was to ensure value addition of cannabis in order to tap on its full potential. This meant that the government or the cultivating firm had to finance and establish cannabis processing plant thus enabling it to achieve its objective of exporting finished product as opposed to the current norm of exporting raw agricultural produce (value addition). In Uganda for example, as part of the pre-requisition to cultivate cannabis, one must prove that they have the capacity to add value to raw cannabis. This led to licensing of only one company, the Industrial Hemp Uganda Ltd, which is valued at Ush. 11.1 Trillion (Lubogo, 2022a).

Due to its medicinal value, cannabis will provide health benefits and enhance cost reduction. East African countries spend more in seeking medication outside the region for terminal illness such as cancer. They fly to Indian and other countries to seek medical attention because of the ease of access to cannabis related treatments in these countries. India allows use of cannabis extensively compared to East African countries where most health insurance firms do not reimburse for use of cannabis and cannabis related treatments. If legalized, the patients will be able to obtain the required treatments thus saving on costs and increase convenience. The ministry of Health estimates that Kenyans spend approximately \$15 million on medical expenses abroad (Currie et al., 2005). In 2019 before the pandemic, more than 400 patients were cleared by the Ministry of Health and Kenya Medical Practitioners and Dentist Council to travel abroad for treatment (Maestri, 2021). Activists have also argued that cannabis, among others, has therapeutic and anti-inflammatory properties. It is antioxidant, and anti-bacterial, and it produces lipids and offers UV protection as such, the use of cannabis-based products can help in cell regeneration, heal skin conditions, treat acne, and regulate oil production by the sebaceous gland.

However, Cannabis has been proven to have detrimental effects hence the sharp opposition by most countries to legalize its production and consumption. Cannabis negatively affects attention, memory, and learning, even after the drug's short-term effects have worn off (Ganzer et al., 2016). Indeed, New Zealand research found that cannabis use is associated with increase school drop out, eventual unemployment, high social dependency, and a general sense of worse life satisfaction when compared to non-cannabis user (Cleaver & Unell, 2011). Furthermore, the National Institute on Drug Abuse in the United States has cited several studies linking employee cannabis use to increased absences, tardiness, accidents, workers' compensation claims, and job turnover, which in turn affects firm profitability due to their low productivity. Researchers discovered that individuals who tested positive for cannabis usage on a pre-employment urine test had 55% more industrial accidents, 85% more injuries, and a 75% increase in absenteeism compared to those who tested negative for cannabis usage (Normand et al., 1990).

Researchers from all across the globe have highlighted that cannabis usage has a strong link to neurological abnormalities, including impaired motor coordination and response time, and may increase the likelihood of road accidents among impaired drivers. Cannabis is still the second most often mentioned substance in vehicle accidents after alcohol. Crancer and Crancer, (2010) discovered that 126 deaths in single-car collisions involved cannabis-consuming drivers, with three-quarters of them having blood alcohol concentration (BAC) levels below the legal limit of 0.08. More than a quarter of all drivers tested positive for cannabis in a study of badly wounded drivers admitted to a Level 1 shock trauma centre. Cannabis usage and car accidents are also highly connected according to research performed at the University of Auckland in New Zealand. The study found that regular cannabis users were 9.5 times more likely to be involved in an accident, with 5.6% of those who had crashed having used the substance, compared to 0.5% of the control group (Pearlson et al., 2021)

Moreover, cannabis users often have troubled interpersonal interactions. Young individuals exhibited a dose-dependent connection between relationship and life satisfaction and cannabis usage in longitudinal research after correcting for confounding factors. Higher levels of cannabis usage were connected with decreased life satisfaction (satisfaction with job, family, and leisure activities). Additionally, cannabis usage during pregnancy is harmful to the unborn child. The effects of carbon monoxide on the developing foetus are most likely to blame for the reduced birthweight common with cannabis users during pregnancy. In addition, children exposed to cannabis in utero have developmental impairments in the visual system and tremors immediately after birth. However, these differences tend to diminish within a month. Some deficiencies exist in the higher cognitive functions of older children, such as perceptual organization and planning (Roncero et al., 2020).

Over the last few years, the medical, recreational, and industrial cannabis industries have expanded dramatically. Around 50% of cannabis consumers have increased their intake since the pandemic. According to the Cannabis Industry Statistics report for 2022, global cannabis sales reached \$31 billion in 2021 and are anticipated to climb at a CAGR of 25.5% from 2022 to 2030. However, the negative effects of non-medical cannabis use and medicinal overdosing may also have a negative influence on healthcare expenditures and lost productivity due to smoking-related diseases and conditions. Cannabis marketing, which consists of advertising and promotion, has been found to play a vital role in the process of recruiting young, new users by exposing young people to large quantities of images associating good attributes with cannabis smoking (Trangenstein et al., 2021).

Research has established the effectiveness of such images in reducing the sense of danger and motivating behaviour, especially among adolescents. According to Rotermann (2021), cannabis-related product advertising has shifted to product placement. These deceptive tactics include sweet and fruit-flavoured products, celebrity endorsements, false health claims, advertisements in prominent periodicals, and commercial placement on television and in popular magazines. Cannabis is the largest avoidable cause of mortality. Numerous studies have revealed that exposure to cigarette advertising may encourage individuals to begin smoking. Smokers tend to favourably react to such advertisements (Krauss et al., 2017). In a recent survey, two-thirds of smokers who saw a television advertisement for Blu cigarettes expressed interest in trying the brand (Eastman, 2015). Also, research indicates that seeing characters who smoke in films increases the likelihood that a person will start smoking. Growing numbers of public health specialists are calling attention to the role of marketing (advertising and other promotional tactics) in making tobacco and other drugs use appealing to children and teens and encouraging them to use them. Advocates for public health assert that adolescents have a heightened sensitivity to image advertising and promotion themes at a period when they are attempting to discover their identities (Walsh et al., 2017).

The declared objective of cannabis prohibition is to reduce the negative health effects of the drug on smokers, their communities, and the nation as a whole. The implementation of cannabis regulations, according to proponents of cannabis prohibition, disturbs the cannabis market. This disruption is intended to raise the price of cannabis, decrease its availability, and dissuade new users. Therefore, prohibitionists argue, the implementation of cannabis laws decreases the potential damage connected with cannabis use. However, cannabis prohibition has failed to accomplish its intended purpose of lowering usage and causes significant damage to public health and society for the following reasons:

First, the prohibition of cannabis leads to a surprisingly high number of arrests, which has contributed to the overcrowding of courtrooms, jails, and prisons with non-violent drug offenders. For example, a person convicted of cannabis possession or distribution might be denied government help for the poor, student loans, and public housing. This individual may also face employment loss, emotional, financial, or bodily injury, loss of driver's license, deportation, and/or loss of parental rights. As a consequence of their claimed breach of cannabis legislation, this penalty has a negative impact on their financial, emotional, and familial well-being, hence worsening the issue.

Secondly, enforcing cannabis regulations requires substantial financial and organizational resources, starting with police enforcement. As previously indicated, cannabis arrests account for the great bulk of the recent surge in drug arrests worldwide, particularly in nations with strict prohibitions. As cannabis arrests increase, so are the domestic law enforcement portion of the government budget for drug control. According to the Office of National Drug Control Policy, government anti-drug spending in the United States surged 600% between 1981 and 2002, from \$1.5 billion to nearly \$18 billion. During this time, however, the strength of cannabis surged by 145%, while its price plummeted by an astounding 58%. In fact, analysts estimate that roughly, 3% of the nation's total law enforcement budget, or around \$2.1 billion, was spent on cannabis law enforcement in 2001 alone. Approximately \$1.7 billion of the \$2.1 billion was spent on enforcing the ban on cannabis possession. As the number of cannabis arrests continues to climb, it is probable that federal funds devoted to cannabis law enforcement will continue to increase in order to achieve its stated purpose (Mejía et al., 2008). Also, according to Nacada Report (2020), 2,386 individuals were arrested across Kenya for possession of cannabis during the first six months of 2019. This means more resources were used to track, arrest, court trial, provision of social, emotional and health support while in jail.

Thirdly, cannabis prohibition has contributed to the expansion of the illegal market. According to Sarvet et al. (2018), the proportion of high school seniors stating that cannabis was readily available did not decline during the 2000s. Government-funded research have found that young Americans continue to have practically unrestricted access to cannabis despite increased enforcement costs over the past three decades. According to research conducted in Kenya by Ajada (2021) 69.8% of cannabis consumers are young men and women, 19.6% are old men and women, 6.2% are warriors while 4.4% were classified as others. When a victim is arrested for cannabis-related charges, the victim's family or guardian is subjected to astronomical expenditures, including attorney's fees, fines, and other court costs, as well as social and psychological trauma. In the African set up, the family members are often stigmatised.

7 | EAST AFRICAN APPROACH TO GLOBAL WAVE OF LEGALIZATION

The issue around the legalisation of cannabis in East Africa and around the world has hit the news headlines as different activists ranging from researchers, celebrities, and politician advocates for its legalisation. Even though cannabis is outlawed in the majority of African nations, recent statistics indicate widespread use of the herb. According to the cannabis use perception index, between 2010 and 2016, cannabis usage rose. Asia and Africa had the greatest rise, followed by nations in America and Europe (UNODC, 2018). While countries that have legalized cannabis have reservations about its health and social effects, other countries considering legalisation continue to hold a variety of negative perceptions about it (Wagner et al., 2021), making it a key issue that presents both pro- and anti-legalisation arguments. In Kenya for example, the latest activist for cannabis legalisation is the 2022 presidential candidate Prof. George Wajackoya who in his manifesto, promised Kenyans of legalising Cannabis in Kenya if elected. He also went ahead to explain the health benefits of cannabis, economic and industrial benefits. Also, the late Hon. Ken Okoth the then Kibera Member of Parliament was at the helm of the activists pushing for legalisation of cannabis. He introduced the Cannabis Control Bill 2018 in the national assembly for debate (Ndanyi, n.d.). However, he died of cancer before the bill was passed in Parliament. The Kenyan stance has softened regarding cannabis after it was legalised in Rwanda, and with the recent move in West African countries such as Ghana, the call for East Africa to let down the draconian laws will amplify.

It is forbidden to cultivate, sell, or consume cannabis in Tanzania though it is the most abused substance in the country. Cannabis has long been used in Tanzanian cuisine and traditional medicine. Illegal cultivation of cannabis in Tanzania is common and easy due to its dense forests. The US Department of States classifies Tanzania as a major transit country for drugs. This is attributed to 854 miles of coastline which makes it easy for cannabis and other drugs to be smuggled via the sea (Kalula, 2011). However, the wave of legalization of cannabis hasn't left Tanzania behind. The political activist for cannabis, Jumanne Kisimba (Kahame urban MP) tabled a debate for cannabis legalisation in May 2019. Kahama pointed out the medicinal and industrial benefits of cannabis that countries like Lesotho, Rwanda, and Uganda are reaping. Despite the efforts by researchers and political activists on the benefits associated with cannabis, the Tanzania government is adamant and has put in place stringent measures to combat cannabis cultivation, consumption, and sale (Marlan, 2019). In 2018, the Tanzanian government set ablaze a whopping 6-hectare cannabis farm at Engalaoni village on the slopes of Mt. Meru. The crackdown on illegal drugs in Tanzania has intensified which has seen a decline in illegal drug cases by 33% from 11,054 cases in 2016 to 7,363 cases in 2020 and a decline of 34% in cannabis and cannabis-related cases from 8,910 cases in 2016 to 5,903 cases in 2020 (Tanzanian Crime and Traffic incidence statistic reports 2016: Tanzanian Crime and Traffic incidence statistic reports 2020).

8 | PUBLIC SECTOR POLICIES FOR HANDLING CANNABIS RESPONSIBLY

There are several optimal policy paths that East African countries can adopt. To begin with, governments should have a true medical cannabis system. Because of what it can do and how strictly it is regulated, medicine enjoys status, trust, and privilege in society. Advocates of medicinal cannabis have tried to acquire a similar position, trust, and privilege without the corresponding obligations of being strictly regulated. A great deal of 'medical' cannabis has been sold with little to no medical oversight, and doctors' only real engagement has been to refer people.

Cannabis is neither prescribed by doctors nor made available by them. Thus, medical cannabis patients must submit the doctor's letter of referral to a different dispensary, 'budtenders' who rarely have medical expertise (Shover & Humphreys, 2019). These 'budtenders' offer any medical advice they deem fit, including suggestions that are almost certainly damaging to health. Without strict regulations in place, medicinal cannabis may not see the light of day. Currently, certain states such as Maine and Oregon have separate medicinal and recreational cannabis markets, while others such as Washington and California have mixed the two. Having the two systems together helps simplify regulation and boosts tax benefits to the state. The drawback is that sick people will be required to pay taxes on medicinal items. Whichever way the East African community decides to go, having clear stringent regulations and regulatory bodies to oversee its production and consumption is of essence (Cambron et al., 2017; Gabrielson et al., 2020).

There is a need to protect the cannabis industry from external and political influence. Many people imagine a world where cannabis is sold by tiny businesses run by anti-corporate activists. The contrary is true. The cannabis business is controlled by multi-billionaires who hold high ranks in government offices, making it almost impossible to have optimal policies that favour the interests of the public. Research into the cannabis world has been limited due to exposure risks associated with it. Even if funded, all scientists are aware of the possibility for industry players to sway research results through funding and lobbying

efforts to advance their commercial interests (Humphreys, 2011). Protecting science and public health can occur in several folds. Humphreys et al. (2018) highlights that researchers and publications should be required to disclose all conflicts of interest relating to the cannabis sector. Reliable non-corporate funding for cannabis research is also crucial, similar to California's Tobacco-Related Diseases Research Program, which now supports cannabis and tobacco-related studies. Cannabis-related public health education programs are required.

Moreover, limiting the potency of cannabis and cannabis products is paramount. Cannabis potency has evolved over time in the same manner tobacco and alcohol did. In the 1970s, smoking illegal cannabis by campus students contained 3-5% THC, but today's legal cannabis supplied in some places has an average THC content of 20%. Higher potency is troubling due to the increased risk of negative psychological effects, the propensity to convert occasional users into addicts, and the elevated risk of cannabis use disorders (Hostiuc et al., 2018). Capping potency can be done by limiting THC content per package, limiting the potency of inhaled products, and having regulatory bodies of scientists set per-package limits for oils and other smokeless cannabis products. Also, governments may consider raising taxes on products with high THC levels regardless of the THC cap level that is in place (Van Laar et al., 2016).

Additionally, East African governments can use prices to regulate cannabis consumption. Concerns about health that resulted in taxes on tobacco, oil, and sweetened beverages, provide the way for a fully legalised cannabis industry to be regulated through consumption-related taxes. Although these are largely blunt instruments, they have the potential to cut back on abuse. Cannabis minimum unit pricing (minimum price below which an item cannot be sold) is another important issue to consider. This policy was adopted in British Columbia and was also recently implemented in Scotland and has yielded positive results such as reduced emergency room admissions, alcohol-related arrests and injuries, and deaths (Shover & Humphreys, 2019). The approach of keeping cannabis prices high can help reduce its abuse. The states can achieve this by monopolising its production and sale. State monopolisation will minimize underground markets. Research shows that alcohol monopolies and monopolies in general help keep the prices high through the reduction or elimination of competition. This further reduces access to cannabis by youth and unintended groups. When a responsible government is the sole producer, distributor, and retailer of cannabis, it is easy to pursue violators who pretend to be legitimate distributors or retailers since they can be easily identified as non-government employees (Zeigler, 2009).

The governments can also explore the Private Public Partnership approach (PPP) where the state finances the production and sale of cannabis while the expert private entity provides efficient expertise in its production. The states can also consider licensing a selected limited number of companies to cultivate and export cannabis. The government can license and give property rights to selected players in the cannabis supply chain all the way from farmers to producers and sellers. In the Kenya Cannabis Control Bill 2018, Okoth and his team suggested an enactment of the Cannabis Control Council whose role ranges from registering and licensing cannabis growers, producers, manufacturers, and users, to creating awareness programs on the growth and use of cannabis, advising national and county government on matters relating to cannabis among others.

Finally, the government can facilitate rigorous research. Intensive research on cannabis is required to demystify the plant. Most opponents talk about the plant from an ignorance point of view or from a point of jealousy and desire to kill competition by manufacturers and pharmaceuticals. Governments should invest heavily in scientific research so that policies are made based on hard evidence.

9 | CONCLUSIONS

With rising cases of cancer, HIV/AIDs, and other terminal illnesses, high unemployment rates as well as the limited supply of raw materials in the paper, textile, and garment industries, East African prospects can significantly improve by legalising cannabis. From the above analysis, the benefits of legalising cannabis outweigh the costs, taking the plant away from the drug barons and hardheaded crooks who currently control the supply and make it generally available to all. We favour a legalised cannabis sector for medical, conscious and industrial use for the benefit of the economy.

Cannabis generally is an exceptionally sustainable plant. One-third of all carbon emissions worldwide are caused by the manufacturing, building industry, and related businesses, which is a serious concern and curtails strides to achieve Sustainable Development Goals. Research shows that the amount of plastic pollution in the world has gone from 300 million tons to roughly 360 million tons, and if the trend continues, the situation will worsen by 2050 (Kumar et al., 2021). Countries must either reduce their reliance on plastic for daily use or convert to biodegradable plastics derived from plants like cannabis. This depicts a strong comeback by this most mystified plant.

However, complex regulatory structures and myths associated with cannabis are likely to obstruct market growth in East Africa. The success in the cultivation of cannabis depends on the legislative structure. Therefore, nations ought to acknowledge the value of this incredible plant and come up with marketing and expansion strategies that are beneficial for the environment and for the economies. Ultimately, the debate on cannabis legalisation hinges on raising the consciousness of human beings so that they can engage with other members of the planet, especially the plant people.

REFERENCES

1. Ajada Volume 6 December 2021 Issue. (n.d.).
2. Aucoin, C. (2018). Analysing drug trafficking in East Africa A media-monitoring approach.
3. Barry, A., Olsson, S., Minzi, O., Bienvenu, E., Makonnen, E., Kamuhabwa, A., Oluka, M., Guantai, A., Bergman, U., van Puijenbroek, E., Gurumurthy, P., & Aklillu, E. (2020). Comparative Assessment of the National Pharmacovigilance Systems in East Africa: Ethiopia, Kenya, Rwanda and Tanzania. *Drug Safety*, 43(4), 339–350. <https://doi.org/10.1007/S40264-019-00898-Z/FIGURES/2>
4. Calabria, B., Degenhardt, L., Hall, W., & Lynskey, M. (2010). Does cannabis use increase the risk of death? Systematic review of epidemiological evidence on adverse effects of cannabis use. *Drug and Alcohol Review*, 29(3), 318–330. <https://doi.org/10.1111/J.1465-3362.2009.00149.X>
5. Cambron, C., Guttmanova, K., & Fleming, C. B. (2017). State and national contexts in evaluating cannabis laws: A case study of Washington State. *Journal of Drug Issues*, 47(1), 74–90. <https://doi.org/10.1177/0022042616678607>
6. Chesang, R. K. (2013). Drug Abuse Among The Youth In Kenya. *International Journal of Scientific & Technology Research*, 2(6). www.ijstr.org
7. Children's needs - parenting capacity: child abuse, parental mental illness ... - Hedy Cleaver, Ira Unell, Great Britain Department for Education - Google Books. (n.d.). Retrieved July 4, 2023
8. Christina, R. (2021). An appraisal of the contribution of the existing theories and best practices in devising effective drug trafficking control mechanisms in Tanzania. In *International Journal of Legal Developments and Allied Issues* (Vol. 8, Issue 1). <https://thelawbrigade.com/>
9. cocaine production and trafficking what do we know? - Carlos Esteban Posada - Google Books. (n.d.). Retrieved July 4, 2023.
10. Country Reports on Terrorism 2020 Bureau of counterterrorism. (2020).
11. Crancer, A., & Crancer, A. (n.d.). The Involvement of Marijuana in California Fatal Motor Vehicle Crashes 1998-2008.
12. Crini, G., Lichtfouse, E., Chanet, G., Morin-Crini, N., Morin, N., Applications, C., & Gilles Chanet, . (2020). Applications of hemp in textiles, paper industry, insulation and building materials, horticulture, animal nutrition, food and beverages, nutraceuticals, cosmetics and hygiene, medicine, agrochemistry, energy production and environment: a review. *Environmental Chemistry Letters*, 18(1), 1451. <https://doi.org/10.1007/s10311-020-01029-2>
13. CRS Report for Congress. (2010). www.crs.gov
14. Currie, C. S. M., Floyd, K., Williams, B. G., & Dye, C. (2005). Cost, affordability and cost-effectiveness of strategies to control tuberculosis in countries with high HIV prevalence. *BMC Public Health*, 5. <https://doi.org/10.1186/1471-2458-5-130>
15. Duvall, & Chris S. (2019). A brief agricultural history of cannabis in Africa, from prehistory to canna-colony. <http://Journals.Openedition.Org/Echogeo,48>. <https://doi.org/10.4000/ECHOGEO.17599>
16. Eastman, J. (2015). Weed Land: Inside America's Marijuana Epicenter and How Pot Went Legit. [http://Dx.Doi.Org/10.1177/0094306115621526s,45\(1\),50](http://Dx.Doi.Org/10.1177/0094306115621526s,45(1),50). <https://doi.org/10.1177/0094306115621526S>

17. Gabrielson, S. M. B., Carwile, J. L., O'Connor, A. B., & Ahrens, K. A. (2020). Maternal opioid use disorder at delivery hospitalization in a rural state: Maine, 2009–2018. *Public Health*, 181, 171–179. <https://doi.org/10.1016/J.PUHE.2019.12.014>
18. Ganzer, F., Bröning, S., Kraft, S., Sack, P. M., & Thomasius, R. (2016). Weighing the Evidence: A Systematic Review on Long-Term Neurocognitive Effects of Cannabis Use in Abstinent Adolescents and Adults. *Neuropsychology Review* 2016 26:2, 26(2), 186–222. <https://doi.org/10.1007/S11065-016-9316-2>
19. Hall, W., & Solowij, N. (1998). Adverse effects of cannabis. *Lancet*, 352(9140), 1611–1616. [https://doi.org/10.1016/S0140-6736\(98\)05021-1](https://doi.org/10.1016/S0140-6736(98)05021-1)
20. Hostiuc, S., Moldoveanu, A., Negoii, I., & Drima, E. (2018). The association of unfavorable traffic events and cannabis usage: A meta-analysis. *Frontiers in Pharmacology*, 9(FEB), 303595. <https://doi.org/10.3389/FPHAR.2018.00099/BIBTEX>
21. Humphreys, K. (2011). Mis-Imagining Marijuana Inc.... - Google Scholar. (n.d.). Retrieved July 5, 2023, from [https://scholar.google.com/scholar?q=Humphreys,+K.+\(2011\).+Mis-Imagining+Marijuana+Inc.+Washington+monthly.&hl=en&as_sdt=0,5](https://scholar.google.com/scholar?q=Humphreys,+K.+(2011).+Mis-Imagining+Marijuana+Inc.+Washington+monthly.&hl=en&as_sdt=0,5)
22. Humphreys, K., Darke, S., Marsden, J., & West, R. (2018). Extending Addiction's conflict of interest policy to cover the emerging cannabis industry. *Addiction*, 113(2), 205–205. <https://doi.org/10.1111/ADD.14098>
23. Kaithuru, P., Mutisya, S., & Ongerii, J. D. (2020). Effect of Nature Referral to Seek Treatment on the Management of Substance Use Disorders among Recovering Addicts in Mombasa County, Kenya Climate Change Risk Perception and Psychological Health of People Living with HIV View project Psycho-social Pathways to Management of Substance Use Disorders View project. Article in *The International Journal of Indian Psychology*. <https://doi.org/10.25215/0803.019>
24. Kalant, H. (2004). Adverse effects of cannabis on health: an update of the literature since 1996. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 28(5), 849–863. <https://doi.org/10.1016/J.PNPBP.2004.05.027>
25. Kalula, A. T. (2011). Cannabis use among young people in Dar es Salaam, Tanzania: a qualitative study. *African Journal of Drug and Alcohol Studies*, 10(1), 2011. <https://doi.org/10.4314/ajdas.v10i1>
26. Kamenderi, M., Muteti, J., Okioma, V., Nyamongo, I., Kimani, S., Kanana, F., & Kahi, C. (2019). Status of Drugs and Substance Use among Secondary School Students in Kenya. *Health Research Policy and Systems*, 19(1). <https://doi.org/10.1186/S12961-021-00767-1>
27. Kapama, Faustine (2021-07-25). "Tanzania: Tz Drug Authority Wins Global Honour". *allAfrica.com* - Search. (n.d.). Retrieved July 4, 2023.
28. Kessels, E. (2016). Violent Extremism and Instability... - Google Scholar. (n.d.). Retrieved July 4, 2023.
29. Kilmer, B. (2019). How will cannabis legalization affect health, safety, and social equity outcomes? It largely depends on the 14 Ps. In *American Journal of Drug and Alcohol Abuse* (Vol. 45, Issue 6, pp. 664–672). Taylor and Francis Ltd. <https://doi.org/10.1080/00952990.2019.1611841>
30. Kitchen, C., Kabba, J. A., & Fang, Y. (2022). Status and Impacts of Recreational and Medicinal Cannabis Policies in Africa: A Systematic Review and Thematic Analysis of Published and "gray" Literature. *Cannabis and Cannabinoid Research*, 7(3), 239–261. https://doi.org/10.1089/CAN.2021.0110/SUPPL_FILE/SUPPL_FILE_S4.DOCX
31. Krauss, M. J., Sowles, S. J., Sehi, A., Spitznagel, E. L., Berg, C. J., Bierut, L. J., & Cavazos-Rehg, P. A. (2017). Marijuana advertising exposure among current marijuana users in the U.S. *Drug and Alcohol Dependence*, 174, 192–200. <https://doi.org/10.1016/J.DRUGALCDEP.2017.01.017>

32. Kumar, R., Verma, A., Shome, A., Sinha, R., Sinha, S., Jha, P. K., Kumar, R., Kumar, P., Shubham, Das, S., Sharma, P., & Prasad, P. V. V. (2021). Impacts of Plastic Pollution on Ecosystem Services, Sustainable Development Goals, and Need to Focus on Circular Economy and Policy Interventions. *Sustainability* 2021, Vol. 13, Page 9963, 13(17), 9963. <https://doi.org/10.3390/SU13179963>
33. Lochu, P., & Jonyo, F. (2020). Influence of Location Intelligence in Law Enforcement: a Case of National Police Service, Nairobi County; 2010-2019. <http://erepository.uonbi.ac.ke/handle/11295/154235>
34. Lubogo, I. C. (2022a). A Legal Appraisal of “Njaga” Cannabis and Associated Medicinal Herbs in Uganda A Discourse to Decriminalise and Delegalize. www.lubogo.com
35. Lubogo, I. C. (2022b). Cannabis and Associated Medicinal Herbs in Uganda. <https://nru.uncst.go.ug/handle/123456789/4299>
36. Luginbuhl, & M., A. (2001). Industrial hemp (*Cannabis sativa* L): The geography of a controversial plant. <http://dspace.calstate.edu/handle/10211.2/2738>
37. Maestri, E. (2021). Healthcare in Oman Between Past and Present Achievements, Human Security and the COVID–19 Pandemic. *Euras Journal of Social Sciences*, 77. - Search. (n.d.). Retrieved July 4, 2023.
38. Marlan, D. (2019). Beyond Cannabis: Psychedelic Decriminalization and Social Justice. *Lewis & Clark Law Review*, 23. <https://heinonline.org/HOL/Page?handle=hein.journals/lewclr23&id=777&div=25&collection=journals>
39. Mbwapbo, J., McCurdy, S. A., Myers, B., Lambdin, B., Kilonzo, G. P., & Kaduri, P. (2012). Drug trafficking, use, and HIV risk: The need for comprehensive interventions. *Sahara J*, 9(3), 154–159. <https://doi.org/10.1080/17290376.2012.743832>
40. Moshi, M. J., & Mhame, P. P. (2013). Legislation on Medicinal Plants in Africa. *Medicinal Plant Research in Africa: Pharmacology and Chemistry*, 843–858. <https://doi.org/10.1016/B978-0-12-405927-6.00023-0>
41. Muendo, M. (2018). Evolution of the Kenyan Aviation Transport Industry From Colonisation to the Present: Towards Legal Compliance With the International Standards of Aviation Law. *SSRN Electronic Journal*. <https://doi.org/10.2139/SSRN.3247561>
42. nacada report 2020 - Search. (2020). Retrieved July 4, 2023.
43. Nath, M. K. (2022). Benefits of Cultivating Industrial Hemp (*Cannabis sativa* ssp. *sativa*)—A Versatile Plant for a Sustainable Future. 14. <https://doi.org/10.3390/iocag2022-12359>
44. Ndanyi, S. (n.d.). CANNABIS IN KENYA AUTHOR. <https://doi.org/10.18820/24150509/SJCH46.v2.2>
45. Normand, J., Salyards, S. D., & Mahoney, J. J. (1990). An Evaluation of Preemployment Drug Testing. *Journal of Applied Psychology*, 75(6), 629–639. <https://doi.org/10.1037/0021-9010.75.6.629>
46. Pearson, G. D., Stevens, M. C., & D’Souza, D. C. (2021). Cannabis and Driving. *Frontiers in Psychiatry*, 12, 689444. <https://doi.org/10.3389/FPSYT.2021.689444/BIBTEX>
47. Quarshie, E., Alagidede, I.P.(2020). Cannabis legalization in Ghana: implications for value-addition in medical and industrial research and applications. *Journal of Indigenous and Shamanic Studies*, Vol 1. <https://journals.co.za/doi/epdf/10.10520/EJC-208f28482a>
48. Rev., N. K.-Ind. I. & Comp. L., & 2013, undefined. (n.d.). The legalization of industrial hemp and what it could mean for Indiana’s biofuel industry. *HeinOnlineNM KellerInd. Int’l & Comp. L. Rev.*, 2013●HeinOnline. Retrieved July 27, 2023.
49. Roncero, C., Valriberas-Herrero, I., Mezzatesta-Gava, M., Villegas, J. L., Aguilar, L., & Grau-López, L. (2020). Cannabis use during pregnancy and its relationship with fetal developmental outcomes and psychiatric disorders. A systematic review. *Reproductive Health*, 17(1), 1–9. <https://doi.org/10.1186/S12978-020-0880-9/TABLES/1>

50. Rotermann, M. (2021). Looking back from 2020, how cannabis use and related behaviours changed in Canada. *Health Reports*, 32(4), 1–14. <https://doi.org/10.25318/82-003-x202100400001-eng>
51. Sarvet, A. L., Wall, M. M., Fink, D. S., Greene, E., Le, A., Boustead, A. E., Liccardo Pacula, R., Keyes, K. M., Cerdá, M., Galea, S., & Hasin, D. S. (2018). Medical marijuana laws and adolescent marijuana use in the United States: A systematic review and meta-analysis. *Wiley Online Library*, 113(6), 1003–1016. <https://doi.org/10.1111/add.14136>
52. Shover, C. L., & Humphreys, K. (2019). Six policy lessons relevant to cannabis legalization. In *American Journal of Drug and Alcohol Abuse* (Vol. 45, Issue 6, pp. 698–706). Taylor and Francis Ltd. <https://doi.org/10.1080/00952990.2019.1569669>
53. Syvertsen, J. L., Ohaga, S., Agot, K., Dimova, M., Guise, A., Rhodes, T., & Wagner, K. D. (2016). An ethnographic exploration of drug markets in Kisumu, Kenya. *International Journal of Drug Policy*, 30, 82–90. <https://doi.org/10.1016/J.DRUGPO.2016.01.001>
54. Tanzanian anti-drug unit report (2005) - Search. (n.d.). Retrieved July 4, 2023.
55. The African Cannabis Report | Cannabis Markets | Prohibition Partners. (n.d.). Retrieved July 3, 2023.
56. United Nations Office on Drugs and Crime (UNODC). (2018). World Drug Report 2018 Global overview of drug demand and supply. UNODC Research, 1–66. <https://www.bing.com/search?pglt=41Žq=World+Drug+Report+2018Žcvid=164f7f996e284c31bf0205228c9360b3Žaqs=edge..69i57j018.1169j0j1ŽFORM=ANNTA1ŽPC=U531>
57. UNODC, 2020 - Search. (2020). Retrieved July 4, 2023.
58. UNODC, 2023. - Search. (n.d.). Retrieved July 4, 2023.
59. Van Laar, M., Van Der Pol, P., & Niesink, R. (2016). Limitations to the Dutch cannabis toleration policy: Assumptions underlying the reclassification of cannabis above 15% THC. *International Journal of Drug Policy*, 34, 58–64. <https://doi.org/10.1016/J.DRUGPO.2016.02.011>
60. Wagner, A., Polak, P., & Świątkiewicz-Mośny, M. (2021). From community of practice to epistemic community – law, discipline and security in the battle for the legalisation of medical cannabis in Poland. *Sociology of Health & Illness*, 43(2), 316–335. <https://doi.org/10.1111/1467-9566.13217>
61. Walsh, D. C., Rudd, R. E., Moeykens, B. A., & Moloney, T. W. (2017). Social Marketing for Public Health. *Https://Doi.Org/10.1377/Hlthaff.12.2.104*, 12(2), 104–119. <https://doi.org/10.1377/HLTHAFF.12.2.104>
62. Zeigler, D. W. (2009). The alcohol industry and trade agreements: a preliminary assessment. *Addiction*, 104(SUPPL. 1), 13–26. <https://doi.org/10.1111/J.1360-0443.2008.02431.X>

How to cite this article: Jerobon, J. The Political Economy of Cannabis Legalisation in East Africa, *Journal of African Political Economy and Development*, volume 8, 2023.