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Green Market Report

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The Economics of **International Cannabis** Companies

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INTERNATIONAL CANNABIS: OVERVIEW

Cannabis is one of the most popular recreational drugs on the planet, and its potentially wide-ranging medical uses show promise. Given its low rates of addiction and lack of adverse health outcomes, cannabis has the potential to replace common pharmaceutical treatments for chronic pain, seizures, insomnia and other conditions that afflict hundreds of millions of people worldwide. Likewise, cannabis also has the potential to disrupt the alcohol industry by serving as a substitute for beverages such as wine, beer and spirits.

Along with the United States and Canada, several countries have followed suit in relaxing their cannabis laws and allowing for the use of medical cannabis; which in turn paves the way for a fully regulated and legal recreational market. Several potentially large international cannabis markets include Germany, Spain, Australia, Israel, and Colombia.

It is difficult to estimate global cannabis prices because cannabis sales usually occur in the illicit market. Typically, cannabis prices vary depending upon location. Germany has some of the lowest cannabis prices in the world. Other countries, such as Israel, are starting to see higher prices as cannabis begins to move into regulated pharmacies.

Due to complex regulations and various international laws, international cannabis supply chains are fragmented, with only a handful of companies operating internationally. The largest of these global companies is Canopy Growth Corp., which has a presence in seven countries along with the United States and Canada.

BEYOND POPULATION

Cannabis is the most widely used recreational drug in the world. According to the [United Nations' 2018 World Drug Report](#), worldwide cannabis use increased by 16% over the course of a decade; rising from approximately 165 million in 2006 to 192 million in 2016.

the number of past-month cannabis users rose by 61%, increasing from 15 million to 24 million and the number of daily users jumped 41% from roughly 6.75 million to 10 million. With so many people worldwide turning to cannabis, there is a significant opportunity for the cannabis industry to gain a share of other markets, including pharmaceuticals and the alcohol industry.

Currently, many developed nations are struggling to contain outbreaks of opioid-related addiction. According to the United Nations Office on Drugs and Crime, the United States leads the world in non-prescription opioid use and is second in prescription-based opioid use. Similarly, the United States is one of the largest consumers of cannabis, second only to Israel, which has legalized cannabis for medical and research purposes.

Cannabis is increasingly being used to help treat chronic and intractable pain, with 19 U.S. states allowing the substance to be used to treat pain. With [significantly lower toxicity rates and relative risk coefficient](#), cannabis could be used to replace opioids as the leading treatment for pain; which in turn could reduce the overall rate of opioid-related deaths and addiction.

Table: Relative risk coefficient

	Treatment Index	IDU Index	Toxicity Index	Deaths Index	Relative Risk Coefficient
Opiates	100	100	100	100	100
Cocaine	85.3	47.8	88	18.5	59.9
Amphetam	20.1	59.5	32	6.8	29.6
Ecstasy	3.8	6.1	20.7	1	7.9
Cannabis	9	0	1.5	0.6	2.8

There is a growing body of scientific research which supports this assumption. According to a recent study published in the [Journal of the American Medical Association, Internal Medicine](#) states with medical cannabis dispensaries saw a 14.4% reduction in the use of prescription opioids and a 7% reduction in filled opiate prescriptions.

A 2014 study published in [JAMA Internal Medicine](#) also found that states with medical cannabis laws had a 24.8% lower annual opioid overdose mortality rate after the laws were enacted.

Used in a recreational capacity, cannabis may also help reduce the amount of alcohol consumed by Americans. According to a report published by the Cannabiz Consumer Group (C2G), alcohol companies could stand to lose more than \$2 billion in retail sales, with approximately 27% of beer drinkers stating that they either have or would be willing to substitute [cannabis for beer](#).

Given these numbers; it is unsurprising that alcohol companies have started making investments in the cannabis industry. Most notably Constellation Brands, the distributor for Corona Beer, has invested more than C\$5 billion through two separate investments into Canada-based Canopy Growth Corporation, which is currently one of the largest cannabis companies in the world.

WHICH COUNTRIES ARE FOLLOWING CANADA'S LEAD?

Earlier this year, Canada became only the second country in the world to legalize cannabis for recreational purposes at a national level. As the largest cannabis producer in the world, Canada has become an industry leader; but that may change over the next several years as other countries follow suit.

Depending on how one categorizes legality, there are approximately 30 countries which allow cannabis for medical purposes and dozens more which have stopped enforcing their laws that ban the substance.

Of those nations, several countries seem the most likely to follow Canada's example in fully legalizing cannabis. Excluding the United States, the nations which seem the most likely to pursue a path of legalization are Germany, Spain, Australia, Israel, and Colombia.

GERMANY

As the largest economy in Europe, Germany has already established itself as a global leader across multiple industries; including the medical cannabis industry. First legalized in 2017, Germany's medical cannabis market is estimated to be worth €19.1 million, although BMO Capital Markets [estimates](#) that the country's long-term market opportunity could reach as high as €10 billion.

Currently, German laws do not allow for domestic cannabis production, and all products are imported. This presents a significant opportunity for licensed cannabis producers in countries that allow for cannabis exports, such as Canada.

Starting in 20XX, Germany has adopted increasingly lenient penalties for recreational cannabis use. At present, cannabis is still illegal, although law enforcement officials are not required to arrest individuals for possessing or using small amounts of cannabis.

According to The [European Cannabis Report](#), nationwide decriminalization of cannabis in Germany is likely to occur over the next several years, but a nationally regulated cannabis industry will most likely not happen until after 2022.

SPAIN

The cannabis industry in Spain currently operates in a legally grey area. Although cannabis laws vary by region, cannabis consumption and cultivation for both recreational and medical purposes are generally decriminalized, so long as it is used privately and for personal use. Sales, imports, and public cannabis consumption remain illegal.

Nevertheless, there is a culture of cannabis clubs in the country which remains prevalent. In these clubs, recreational and medical users can both use and obtain cannabis. In addition to purchasing cannabis, club members often have to pay a membership fee, which usually costs around €40.

Spain's medical cannabis industry is estimated to have a market value of approximately €2.2 million. Although it is difficult to estimate the value of Spain's recreational cannabis market, a recent partnership between Canopy Growth and the Spanish morphine producer Alcaliber, which is valued at €200 million, signals that there is growing domestic and international interest in Spain's cannabis industry.

AUSTRALIA

First legalized in 2016, Australia was one of the first developed nations to embrace medical cannabis fully. Earlier this year, Australia also became one of the first developed nations to allow the export of medical cannabis. However, strict licensing requirements and high financial barriers have slowed the rollout of the country's medical cannabis program.

Although recreational cannabis remains banned in the country, the substance is decriminalized in three regions of the country; the Northern Territory, South Australia, and the Australian Capital Territory.

Currently, Australia's legal cannabis industry is estimated to be valued at \$52 million, and experts predict that by 2027 it could grow to worth \$1.2 billion; which would make it the fifth largest cannabis market in the world.

ISRAEL

Israel is the first country in the world to isolate the THC molecule. Medical cannabis has been legal in the country since the early 1990s and is widely considered to be the unofficial global capital of cannabis research. Based on population, Israel has the world's highest rate of cannabis consumption, with approximately 27% of adults between the ages of 18 and 65 having used cannabis in the last year.

Israel has roughly 30,000 patients enrolled in its medical cannabis program, and the nation's illicit cannabis market is reportedly worth €6 billion. Earlier this year Israel was poised to allow medical cannabis exports, but Prime Minister Benjamin Netanyahu quickly halted that decision. However, should Israel ever reverse that decision, exports of medical cannabis could be [worth between \\$275 million and \\$1 billion](#).

COLOMBIA

Medical cannabis is legal in Colombia, is the second largest federally regulated medical cannabis program in the world with approximately 400,000 patients, and one of the few nations which allows for the export of medical cannabis. Should Colombia ever legalize recreational cannabis and allow it to be exported, the South American nation could become a powerhouse in the cannabis industry.

To start, Colombia possess a climate that is well-suited for cannabis production. Unlike other parts of the world, cannabis in Colombia can be grown in open-air greenhouses with 12 hour sun cycles with plentiful natural fresh water resources available. Despite having a large and experienced agricultural workforce, labor costs are still relatively low when compared to the U.S. and Canada.

A perfect climate, low labor costs, and an experienced workforce; when all three of these factors are take into account, Colombia becomes a perfect storm of high-quality, low-cost cannabis that very few places in the rest of the world will be able to compete with.

INTERNATIONAL PRICING

Due to its status as an illicit or semi-legal substance in much of the world, there has yet to be a set international commodity price for cannabis. Even in countries like the U.S., where recreational cannabis is legal in nine states, the price of cannabis can vary significantly by state.

In Oregon, for example, extreme competition among cultivators has driven down cannabis prices to roughly \$1 per gram. However, in California, a newly open recreational market, cannabis prices are between \$11 and \$14 per gram. According to Cannabis Benchmarks, which tracks the wholesale pricing of cannabis, the national average price of a pound of high quality cannabis is approximately \$1,285.

Due to federal legalization, cannabis prices in Canada are slightly more consistent. Most provincial governments are aiming to price cannabis at CAD\$10 per gram. On average, medical cannabis in Canada costs around CAD\$8 per gram. However, as legalization goes into full effect in Canada, prices may fall within the first several years as competition increases in the cannabis space and as large-scale cannabis production is actualized.

For decades, Israel has been known to have some of the lowest medical cannabis prices in the world. Originally, Israeli patients only had to pay 370 shekels (\$105) per month for an unlimited amount of dry cannabis. However, due to government accusations that patients were abusing the program, The Israeli government implemented a program where medical cannabis concentrate is sold through pharmacies. Medical cannabis oil sells in Israel for approximately \$43 for ten grams of concentrate.

In Europe, cannabis prices vary widely depending on the region. In Holland, cannabis sells for between \$12-\$30 per gram, depending on quality and availability. Spanish cannabis sells for about \$10 per gram, plus the price of a cannabis club membership. Germany, on the other hand, has some of the lowest cannabis prices in the world. Before insurance reimbursement, medical cannabis can cost German patients roughly \$25 per gram. After reimbursement, however, medical cannabis cost as low as \$0.50 per gram.

INTERNATIONAL FOOTPRINT

At present most cannabis companies are focused on establishing a regional presence and consequently have not moved into the international market. However, several companies have started to expand beyond the United States and Canada into overseas markets. Canopy Growth, Aphria, and Aurora Cannabis represent the three largest cannabis companies operating internationally.

Aurora Cannabis has a number of import and export agreements with several countries; including Italy, Australia, and Germany. The company is also constructing a production facility in Denmark, with first plantings expected to occur in the first half of 2019. Similarly, Aphria has several supply and import agreements with a number of countries and subsidiaries. Aphria is currently operating in Australia, the Kingdom of Lesotho, Malta, Italy, and Germany.

Canopy Growth has the most significant international footprint of any cannabis company. Through subsidiaries like Tweed or Spectrum Cannabis, Canopy Growth has a presence in over seven countries; including Jamaica, Chile, Brazil, Spain, Denmark, Germany, and Australia.

In short, international cannabis supply chains are nearly non-existent; primarily due to international laws, treaties, and regulations. Although several cannabis companies have secured international supply agreements, importing cannabis is difficult and requires vigorous oversight.

Complex and highly variable international regulations are a barrier to an efficient international supply chain, and international drug policies often shift with the whim of the controlling political party. For example, Israeli Prime Minister Benjamin Netanyahu stopped global cannabis exports in his country not because he was opposed to the policy but rather because he feared to invoke the ire of U.S. President Donald Trump.

At present, the most consistent supply chain for cannabinoid-related products is in the CBD market because CBD is non-psychoactive and can be derived from low-THC hemp that is not as legally restricted as cannabis. Major hemp CBD exporters include China, Eastern Europe, United States, Canada, as well as a small percentage coming from Israel and Australia.

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