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New highs: Growing acceptance of medical and recreational marijuana fuels industry expansion

IBISWorld Industry Report OD4141

Medical & Recreational Marijuana Growing in the US

April 2015 Dmitry Diment

About this Industry

Industry Definition

This industry's establishments grow marijuana for medical and recreational use. Most operators are nonprofit collectives that provide medical marijuana to other collective members. Transactions are typically conducted on a donation basis because the sale and distribution of marijuana is illegal in most states that permit medical marijuana. The industry also includes operators in Colorado and Washington, who grow medical and recreational marijuana on a for-profit basis.

Main Activities

The primary activities of this industry are

Growing marijuana for medical use

Growing marijuana for legal recreational use

The major products and services in this industry are

Indica marijuana products

Sativa marijuana products

Similar Industries

11191 Tobacco Growing in the US
Farms in this industry grow tobacco leaf.

31214 Distilleries in the US
Distilleries produce spirits and other alcoholic beverages.

31222 Cigarette & Tobacco Manufacturing in the US
Cigarette and tobacco manufacturers produce cigarettes, cigars, smoking and chewing tobacco and reconstituted tobacco.

32541a Brand Name Pharmaceutical Manufacturing in the US
Pharmaceutical manufacturers produce medication that treat various diseases and illnesses.

Additional Resources

For additional information on this industry

www.cmcr.ucsd.edu
Center for Medicinal Cannabis Research

www.mpp.org
Marijuana Policy Project

www.thecannabisindustry.org
National Cannabis Industry Association

Industry at a Glance

Medical & Recreational Marijuana Growing in 2015

Key Statistics Snapshot

Revenue	Annual Growth 10-15	Annual Growth 15-20
$1.9bn	30.2%	31.4%
Profit	**Wages**	**Businesses**
$118.2m	$486.8m	100,742

Market Share

There are no Major Players in this industry

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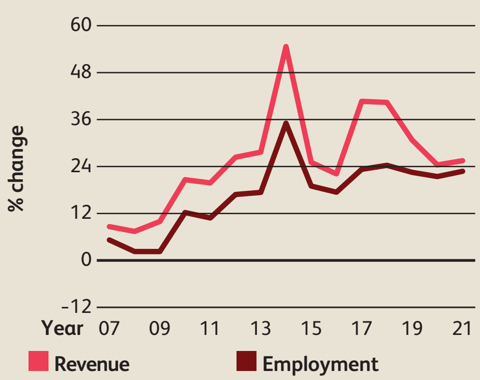
Key External Drivers

- Regulation
- Per capita disposable income
- Number of adults aged 50 and older
- External competition

p. 4

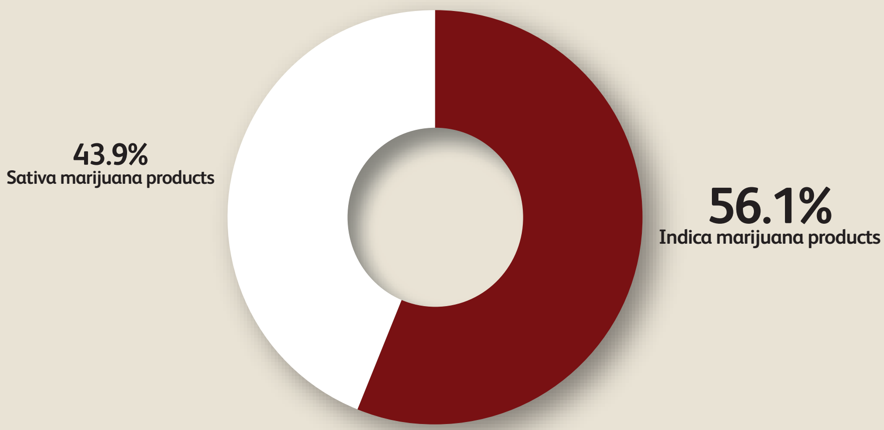
Revenue vs. employment growth



Per capita disposable income

SOURCE: WWW.IBISWORLD.COM

Products and services segmentation (2015)



SOURCE: WWW.IBISWORLD.COM

Industry Structure

Life Cycle Stage	Growth	Regulation Level	Heavy
Revenue Volatility	High	Technology Change	Low
Capital Intensity	Medium	Barriers to Entry	Medium
Industry Assistance	High	Industry Globalization	Low
Concentration Level	Low	Competition Level	High

FOR ADDITIONAL STATISTICS AND TIME SERIES SEE THE APPENDIX ON PAGE 31

Industry Performance

Executive Summary | Key External Drivers | Current Performance
Industry Outlook | Life Cycle Stage

Executive Summary

The Medical and Recreational Marijuana Growing industry, which includes establishments that grow marijuana for medical and recreational use, has flourished over the five years to 2015. For decades, all marijuana transactions in the United States were conducted under implicit or explicit prohibition. However, states have increasingly moved to legalize nonprofit marijuana for medical purposes, as well as to implement regulations for organizations that sell cannabis. The growing acceptance of medical marijuana is providing growers and investors with unprecedented opportunities. There has been no shortage of demand in recent years, as the industry has benefited from the increased acceptance and legitimacy of medical marijuana products.

Operators have benefited from increased acceptance of medical marijuana products

More recently, the legalization of recreational marijuana in Colorado and Washington has spurred demand for the industry. In 2014, the licensing of commercial recreational marijuana growers in these states contributed to industry revenue growth of 54.7%. In addition to the favorable regulatory environment in these states, medical marijuana growers have continued to benefit the steadily aging population. Chronic illnesses have become more prevalent as the population continues to age, driving demand for medical marijuana. Overall, the industry is expected to experience annualized revenue growth of 30.2% to $1.9 billion in the five years to 2015, including growth of 25.1% during the current year.

Industry revenue is estimated to increase at an annualized rate of 31.4% to $7.4 billion over the five years to 2020. The industry will remain at risk, however, until the federal government definitively changes its position on the legality of marijuana. Until then, a growing number of medical marijuana patients, as well as a burgeoning recreational cannabis legalization movement will spur demand for the industry. Rising demand is also forecast to widen profit margins, as is the success of the for-profit recreational marijuana business in Colorado and Washington. In particular, the next five years are expected to see the growth of large commercial cultivators, who will benefit from strong recreational demand across a number of states including Alaska, Oregon and the District of Columbia.

Key External Drivers

Regulation

The Medical and Recreational Marijuana Growing industry has been significantly restricted by an increasing amount of attempts to impose additional regulations on the industry. In particular, medical marijuana remains a Schedule I controlled substance under federal law, despite legalization at the state level for many states. While the level of regulation is expected to remain flat in 2015, it still poses a potential threat to the industry.

Per capita disposable income

The level of household income determines consumers' ability to purchase medical marijuana products. While prescription products can be essential for health and therefore less susceptible to changes in consumer expenditure, the unconventional nature of the industry's products make it subject to changes in disposable income. As a result, an increase in disposable income will boost demand for medical marijuana growers. Per capita

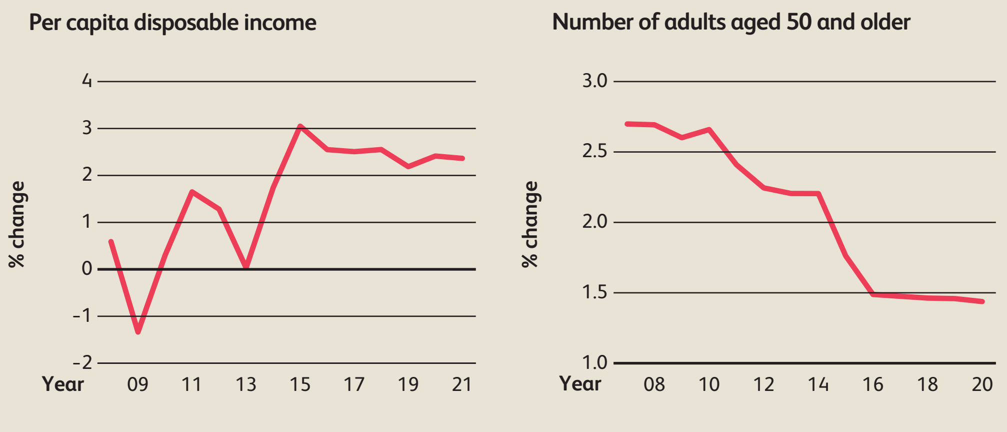
Industry Performance

Key External Drivers continued

disposable income is expected to increase over 2015, presenting an opportunity for the industry.

Number of adults aged 50 and older
Individuals aged 50 and older are more likely to require medical marijuana products that this industry provides since a number of health conditions that medical marijuana is prescribed for (e.g. Alzheimer's disease) are prevalent among members of this age group. As the population ages, demand for industry services will grow, resulting in revenue growth. The number of adults aged 50 and older is expected to increase during 2015.

External competition
Medical marijuana products struggle to compete against conventional healthcare services and products due to the alternative and unconventional nature of their treatment. External competition from traditional drugs and healthcare providers is expected to grow in 2015.



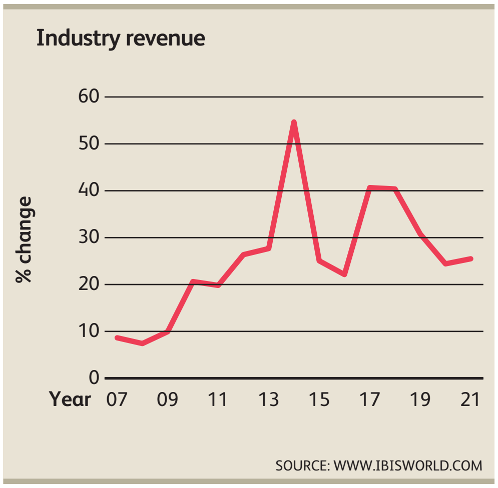
SOURCE: WWW.IBISWORLD.COM

Industry Performance

Current Performance

The Medical and Recreational Marijuana Growing industry has flourished over the five years to 2015, bolstered by increasing consumer acceptance of alternative treatment via marijuana products, as well as legalization of marijuana across nearly half of the United States. This industry's establishments grow marijuana for medical and recreational use. Most operators are nonprofit collectives that provide medical marijuana to other collective members. Transactions are typically conducted on a donation basis because the sale and distribution of marijuana is illegal in most states that permit medical marijuana. The industry also includes operators in Colorado, who grow medical and recreational marijuana on a for-profit basis, and Washington, who grow recreation marijuana on a for-profit basis.

Marijuana, which is a dry, shredded mix of flowers, seeds, stems and leaves of either the Cannabis sativa or Cannabis indica plant, can be used as a medical treatment. Since 1996, proponents of cannabis have pushed for individual states to recognize marijuana as a treatment or pain-reliever for a range of illnesses. New medical research and changing public opinion have advanced these efforts and have contributed to the growth of the industry during the past five years. More recently, the industry has benefited from the push to legalize recreational marijuana in the United States. In 2012, Colorado and Washington became the first two states to legalize recreational marijuana, with enabling the growth of licensed, for-profit cultivators. As a result, industry revenue is expected to grow an estimated 30.2% to nearly $1.9 billion during the five years to 2015, including growth of 25.1% during the current year.



Medical marijuana spurs growth

Medical marijuana has led the industry's growth for much of the last decade. According to the US Government Accountability Office, under State Medical Marijuana Laws, symptoms and conditions that can be treated by cannabis include Alzheimer's disease, anorexia, AIDS, HIV, glaucoma, cancer, arthritis, epilepsy, nausea, pain, cachexia, Crohn's disease, migraines, multiple sclerosis, spasticity and wasting syndrome. Although for many decades all domestic marijuana transactions were conducted under implicit or explicit prohibition, states have recently moved to legalize marijuana for medical purposes.

In general, the use of medical marijuana is increasing, particularly among people with chronic illnesses and pain. At the same time, significant concerns continue to persist, questioning the legitimacy and efficiency of medical marijuana-based treatment. Organizations such as the National Cannabis Industry Association have worked toward increasing the legitimacy of medical marijuana use by working on creating industry standards. These efforts, in turn, have helped spur demand.

Industry Performance

Medical marijuana spurs growth continued

Proponents of medical marijuana have pushed individual states to recognize marijuana as a treatment for a range of diseases. Currently, 23 states and the District of Columbia have laws permitting the use of medical marijuana, although eight states where medicinal cannabis is legal do not have any dispensaries, while eight have five or fewer dispensaries. These laws have been adopted by public referendums as well as legislation. In late 2009, the US Justice Department instructed federal prosecutors in states with medical marijuana laws not to prioritize prosecuting individuals and businesses complying with state laws. In 2014, President Obama signed into law historic provisions for medical marijuana, prohibiting the Department of Justice from using federal funding to limit states from implementing their own laws that authorize the use, distribution, possession, or cultivation of medical marijuana. Consequently, these conditions have facilitated industry performance.

Demographic boost for medical cannabis

Demographic factors have played a significant role in driving demand for medical marijuana. Currently, the median age of a medical marijuana patient is 41.5. However, older individuals are typically more likely to develop the chronic illnesses that require medical marijuana treatment. As a result, an aging population in recent years has driven demand for industry products. Over the five years to 2015, the number of adults aged 50 and older is expected to increase at an average annual rate of 2.2% to 110.9 million people.

The aging population is also associated with an increased number of physician visits. In the five years to 2015, the number of physician visits is anticipated to increase at an annualized rate of 3.3% to 1.2 billion. Although doctors cannot prescribe marijuana to patients, they can assign a right to visit a company or cooperative that provides medical marijuana.

Recreational marijuana facilitates boom

The legalization of recreational marijuana has spurred the industry's more recent astronomical growth. Recreational marijuana users typically smoke to obtain a "high," which affects the part of the brain that influences pleasure, memory, thinking, concentration, sensory and time perception, and coordinated movement. At the outset of 2014, legal recreational marijuana use became a reality in Colorado, stimulating demand for industry products as hundreds of retail stores opened throughout the year. While Washington lagged in its implementation of the voter-approved law legalizing recreational cannabis consumption, recreational marijuana sales began in July 2014. Quickly, Colorado and Washington have expanded into the second and third-largest markets for the industry.

> Recreational marijuana use became legal in Colorado, stimulating industry demand

To meet consumer demand for marijuana, both Colorado and Washington have issued licenses for the cultivation of recreational marijuana. In Colorado, recreational cultivation licenses

Industry Performance

Recreational marijuana facilitates boom continued

vary on the size of growing facilities: type one operators, the smallest level, can grow up to 3,600 plants combined in their cultivation facilities; type two operators can grow 6,000 plants; and type three operators can grow up to 10,200 plants. However, the number of licenses has thus far been relatively limited with just 178 issued at the outset of 2014 and precious few granted since. In Washington, licensure has been even more limited, resulting insignificant supply shortages. Nonetheless, the legalization of recreational marijuana cultivation contributed to the boom during the year, as revenue rose an astounding 54.7%.

Changing attitudes and rising incomes spur new products and new entrants

The development of edible cannabis products (edibles) have also spurred greater consumer acceptance of medical and recreational marijuana, generating demand for marijuana cultivation. Edibles can take the form of food, extracts and oils, and range from marijuana-infused mints and candies to baked goods and beverages, among many other products. Edibles provide a more convenient and familiar product to consumers, thereby stimulating consumer demand for marijuana products.

The nature of medical marijuana treatment is rather unconventional. Although expenditure on products essential for health are less susceptible to fluctuations in consumer expenditure, medical marijuana's unique nature makes it subject to changes in disposable income. The same is largely true for recreational marijuana. Because industry revenue is paid out of pocket by consumers, growth in per capita disposable income boosts demand for industry products. Per capita disposable income is expected to grow 1.5% per year on average over the five years to 2015, as the economy recovers from the recession. Rising income levels have likely bolstered spending on medical and recreational marijuana over the period.

Greater consumer acceptance of the industry's products and strong demand growth has caused more companies to enter this industry. In the five years to 2015, the number of operators is anticipated to increase at an average of 17.7% per year to 100,742, while the number of employees active in the cultivation of marijuana is also expected to increase an average of 19.6% per year to 405,498 individuals.

Regulation weighs on the industry, although profit margins expand

Regulation from governments at all levels presents the greatest challenge to medical and recreational marijuana dispensaries, especially because state and federal governments have conflicting regulations at times. The Controlled Substances Act (CSA), passed as a part of the Comprehensive Drug Abuse Prevention and Control Act of 1970, classifies marijuana as a Schedule I controlled substance. Schedule I substances are deemed by the federal government to have a high potential for abuse; furthermore, prescriptions of them are illegal. Despite the adoption of laws permitting some form of marijuana consumption or distribution for medical and recreational use over the past two decades, the possession and distribution of marijuana remains illegal under

> Although marijuana regulation has loosened, it remains a threat to industry operators

Industry Performance

Regulation weighs on the industry, although profit margins expand continued

federal law. Consequently, many businesses operate with the risk of being shut down or experiencing a property seizure without notice. In addition, industry operators cannot make standard deductions for business expenses and have difficulty securing standard banking and financial services.

Currently, Colorado is the only state that allows for-profit medical marijuana as a business. In 2012, the state (along with Washington) further loosened marijuana restrictions by passing Amendment 64, which legalized marijuana for recreational use.

Colorado's ability to generate profit has made it the fastest-growing producer of marijuana. In 2014, Colorado generated nearly $60.0 million in marijuana taxes, licenses and fees. Therefore, continued success in Colorado may provide an incentive for other states to legalize for-profit marijuana. The legalization of for-profit recreational marijuana in Colorado and Washington has already had a positive effect on industry profit margins. As a result of the growing number of large-scale cultivators, industry profitability is expected to rise to 6.3% of revenue in 2015.

Industry Outlook

The outlook for the Medical and Recreational Marijuana Growing industry is largely positive, with the industry expected to achieve new highs over the five years to 2020. Although the industry will continue to benefit from increasingly favorable attitudes toward medical marijuana-based treatments, building on a trend from the past five years, the industry will be led by the growth in demand for recreational marijuana. In addition to Colorado and Washington, the only two states where recreational marijuana cultivation is currently legal, cultivation is expected to explode in Alaska, Oregon and Washington, D.C., which legalized recreational marijuana during the 2014 elections. As a result of these trends, combined with a steadily aging population and rising disposable incomes, IBISWorld forecasts that revenue will skyrocket at an annualized rate of 31.4% to nearly $7.4 billion in the five years to 2020. In 2016, industry revenue is projected to increase 22.1%.

An increase in per capita disposable income is projected to drive demand for industry products. Although prescription products are essential for health and therefore are less susceptible to fluctuations in consumer expenditure, the unconventional characteristics of the industry's products still make them subject to changes in disposable income. Nevertheless, because industry revenue is paid out of pocket by consumers, growth in disposable income will help boost demand.

Recreational marijuana fuels industry expansion

The Medical and Recreational Marijuana industry is subject to heavy regulation from governments at all levels, with state and federal governments having conflicting regulations at times. The Department of Justice (DOJ), through the Drug Enforcement Agency (DEA), raids and prosecutes marijuana dispensaries and growers in the United States. In 2014, President Obama signed

> An increase in per capita disposable income is projected to drive demand for industry products

into law historic provisions for medical marijuana, prohibiting the Department

Industry Performance

Recreational marijuana fuels industry expansion continued

of Justice from using federal funding to limit states from implementing their own laws that authorize the use, distribution, possession, or cultivation of medical marijuana. Although the industry has largely flourished under the Obama administration, its future remains hazy.

Nevertheless, the liberalization of regulation regarding recreational marijuana is expected to fuel the industry's growth. In addition to strong growth in recreational marijuana cultivation in Colorado and Washington, the industry is expected to benefit from the expected cultivation of recreational marijuana in Alaska, Oregon and Washington, D.C., which passed legislation during the 2014 elections. Alaska's measure is similar to Colorado's, and Oregon's is modeled on Washington state's. Similar to the previous five years, rising demand will cause more operators to enter the industry. In the five years to 2020, the number of operators is projected grow at an annualized rate of 12.2% to 178,918, while industry employment is forecast to increase at an average annual rate of 21.8% to nearly 1.1 million people.

The relative success of Colorado's marijuana legalization initiative (already totaling about $60.0 million in taxes, licenses and fees revenue in 2014) will potentially spur more states to legalize for-profit marijuana. Already, Nevada has secured a state recreational marijuana legalization ballot measure for the 2016 election, making it the first state to do so. In addition to Nevada, ballot measures are expected in Arizona, California, Maine and Massachusetts in 2016, and in Delaware, Hawaii, Maryland, New Hampshire, Rhode Island and Vermont, among others, during the next five years. With the sale of for-profit, recreational marijuana is expected to comprise a larger share of industry revenue during the five years to 2020. Moreover, industry-wide profitability is projected to rise steadily.

Older population boosts demand for medical cannabis

A growing number of doctors and patients will turn to the unconventional treatment offered by medical marijuana for conditions such as arthritis, migraines and Alzheimer's disease. In particular, the rising number of US adults aged 50 and older is expected to bolster demand for medical marijuana products. In the five years to 2020, IBISWorld anticipates that this demographic will grow at an annualized rate of 1.5% to 119.2 million. In comparison, the total US population is forecast to grow at an average annual rate of 0.7% over the same period. This trend suggests that people aged 50 and older will constitute an increasingly significant proportion of the population. As the population ages, more healthcare services and products will be required. This trend will lead to a growing number of people with health conditions that can be treated

> As the number of physician visits increases, demand for medical marijuana will grow accordingly

with marijuana (e.g. cancer and glaucoma), which increase in incidence with age. Additionally, given that the median age of medical marijuana patient is currently 41.5, demand will likely increase as patients in their 40s enter their 50s.

The number of physician visits in the United States is expected to rise in line with the senior population, increasing at an average annual rate of 1.9% to 1.3 billion. Chronic health ailments, such as obesity and diabetes, will augment

Industry Performance

Older population boosts demand for medical cannabis continued

healthcare use, as these patients will increasingly require checkups. The rising prevalence of these chronic diseases is also expected to boost demand for medical marijuana. Although doctors cannot legally prescribe marijuana to patients because the plant remains a Schedule I substance, they can assign a right to visit a company or a cooperative that provides medical marijuana to patients. Therefore, while medical marijuana treatment is not covered by insurance, as the number of physician visits increases, demand for medical marijuana will grow accordingly.

Industry Performance

Life Cycle Stage

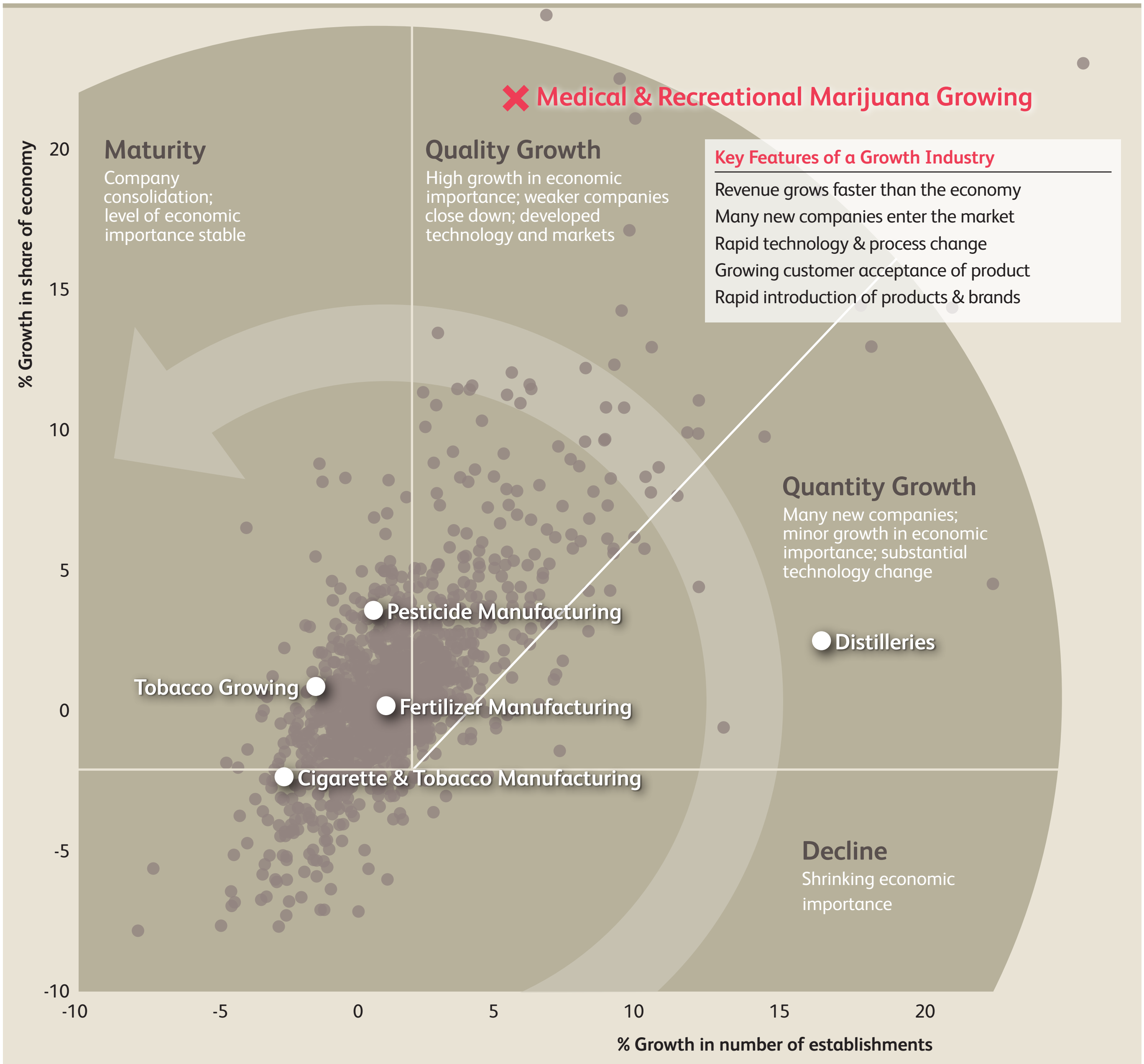
The industry is growing at a faster rate than the US economy

The industry has stepped up efforts to increase its legitimacy

Customer acceptance of industry products is increasing

The legalization of recreational marijuana has spurred demand

The number of industry establishments is expanding robustly



SOURCE: WWW.IBISWORLD.COM

Industry Performance

Industry Life Cycle

This industry is Growing

The Medical and Recreational Marijuana Growing industry is in a growing life cycle stage. Over the 10 years to 2020, its industry value added, which measures the industry's contribution to the economy, is expected to grow at an annualized rate of 29.4%. This rate is faster than the 2.5% projected growth for US GDP, indicating the industry will make up a larger share of the economy in the years ahead. The industry is growing due to widening acceptance of its safety and legitimacy, which is causing more people to use its products. Although an increasing percentage of Americans have been using medical marijuana products to alleviate pain and to treat other health conditions during the past five years, a large share of the population still does not use them. This factor suggests that there is significant room for growth in the industry in the years ahead.

Organizations such as the National Cannabis Industry Association have worked toward increasing the legitimacy of medical marijuana use by working on creating industry standards. This, in turn, has helped spur demand. Over the five years to 2015, the number of industry operators has increased as a result of rising demand and favorable legislation. Additionally, a rising number of physician visits have also created opportunity for potential market entrants. These factors will likely contribute to further industry growth in the five years to 2020, when the number of operators is forecast to rise an average 12.2% annually to 1.1 million.

Moreover, the industry's growth has been spurred by the growing legalization of recreational marijuana. Beginning in 2014, recreational marijuana cultivators began opening in Colorado and Washington, making them the fastest growing markets in the United States. Moreover, the legalization of recreational marijuana in Alaska, Oregon and Washington, D.C. during the 2014 election is expected to generate substantial growth for the industry during the next five years as new operators set up shop in these states.

The aging US population will also promote demand for products offered by this industry. Chronic illnesses and disabilities are more frequent among the elderly, and medical marijuana products are increasingly being used to treat these ailments. As such, this demographic group's expansion is forecast to boost demand. Still, a preference for conventional care offered with Medicare and other insurance providers could dampen this growth.

Products & Markets

Supply Chain | Products & Services | Demand Determinants
Major Markets | International Trade | Business Locations

Supply Chain

KEY BUYING INDUSTRIES

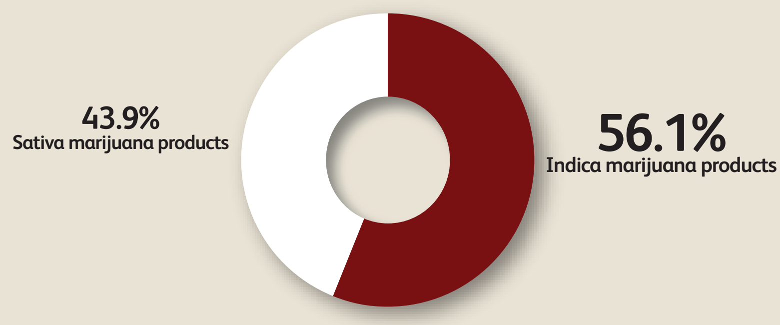
99	**Consumers in the US** Consumers are members of medical marijuana collectives and the primary market for medical marijuana.

KEY SELLING INDUSTRIES

32531	**Fertilizer Manufacturing in the US** Some medical marijuana growers use fertilizers to improve soil nutrient.
32532	**Pesticide Manufacturing in the US** Some medical marijuana growers use pesticides during the growing process.
33511	**Lighting & Bulb Manufacturing in the US** Indoor medical marijuana growing is heavily dependent on artificial lighting.

Products & Services

Products and services segmentation (2015)



Total $1.9bn

SOURCE: WWW.IBISWORLD.COM

Products and Services are segmented by the two strains of marijuana that are primarily used in the United States.

Cannabis indica

Indica marijuana can be used to treat anxiety, chronic pain, insomnia and muscle spasms. In general, indica provides more physical relaxation in comparison to the second strain, sativa. Common indica strains include White Berry, Blueberry and Northern Lights. Some patients also use indica as a sleep aid because it can cause sleepiness. Over the past five years, demand for indica was relatively stable because it treats a wide range of illnesses. In 2015, indica is expected to generate 56.1% of industry revenue.

Cannabis sativa

Sativa marijuana is used as a stimulant to improve appetite, relieve depression, migraines, pain and nausea. This is especially beneficial for patients suffering from eating disorders, cancers and other debilitating diseases that cause a loss of appetite. Sativa is also more popular for patients during the day because it can increase alertness.

Products & Markets

Products & Services continued

Popular strains include Haze and Trainwreck. Again, demand for sativa was relatively stable over the past five years because it treats a wide range of illnesses. In 2015, sativa is expected to generate 43.9% of industry revenue.

Demand Determinants

Government regulation

Demand for industry products is primarily determined by government regulation. The federal government regulates cannabis as a Schedule I controlled substance and considers all marijuana cultivation, sale and consumption illegal. In states that lack laws legalizing the medical or recreational use of cannabis, marijuana use is explicitly prohibited.

However, a total of 23 states across the United States and the District of Columbia have some level of legalization of medical marijuana. In addition, 2012 saw the legalization of recreational marijuana use in the states of Colorado and Washington. At the outset of 2014, legal recreational marijuana use became a reality in Colorado, stimulating demand for marijuana cultivation. While Washington lagged in its implementation of the voter-approved law legalizing recreational cannabis consumption, recreational marijuana growing began later in the year. Moreover, the 2014 elections saw Alaska, Oregon and Washington, D.C. pass legislation legalizing recreational marijuana. Nonetheless, federal policy continues to limit some consumer demand in states where medical marijuana is legal because of pervasive fears of violating federal law. President Obama's December 2014 passage of an omnibus spending bill included a directive preventing the Department of Justice from using federal funding to impeded states from implementing their own state laws that authorize the use, distribution, possession, or cultivation of medical marijuana. The next five years are likely to see the legalization of medical and recreational marijuana in a score of other states.

Income and demographics

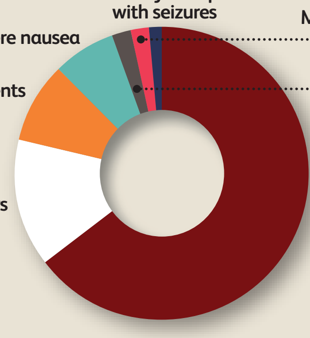
Household income is a primary determinant of consumers' ability to acquire cannabis products. The legalization of medical marijuana, as well as recreational marijuana in some states, has created a market for high-quality cannabis, which can be expensive. Furthermore, because medical marijuana is typically not covered under health insurance plans, demand is largely dependent on patients' income levels.

Population demographics, particularly age, also dictate demand trends for medical marijuana. Although adults aged 50 and older are more likely to develop health conditions such as cancer, Alzheimer's, chronic pain, glaucoma and other diseases that can be treated with medical marijuana, obtaining a medical marijuana card is not difficult in many states. As a result, the average age of a medical marijuana patient is 41.5 years of age. Changing societal norms have made marijuana use much more acceptable today. According to a poll conducted by Gallup, 36.0% of Americans between the ages of 18 to 29 have tried marijuana in 2013, compared with just 8.0% in 1969.

Products & Markets

Major Markets

Major market segmentation (2015)



Total $1.9bn

SOURCE: WWW.IBISWORLD.COM

The market for medical and recreational marijuana is heavily dependent on state regulation of cannabis. Currently, 23 states and the District of Columbia have some regulation that allowed for the use of medical marijuana. Medical marijuana is used to treat many ailments, but it is most commonly used to relieve pain. IBISWorld estimates that medical marijuana patients account for an estimated 85.9% of all industry revenue in 2015. By contrast, the sale of recreational cannabis is currently limited to Colorado and Washington. Although the sale of recreational marijuana in these states only began in 2014, it has grown to command 14.1% of the customer market for legal marijuana.

The industry's customer markets can be segmented across a variety of factors, including sex, age and ailments for which medical marijuana is prescribed. The median age of a medical marijuana customer is 41.5 years of age. 24.0% of customers are between the ages of 18-30; 26.0% of customers are between the ages of 31-40; 23.0% of customers are between the ages of 41-50; and 27.0% of customers are more than 50 years old. The customer market is heavily skewed toward males, who account for 66.0% of all medical marijuana sales, while females account for the remaining 44.0% of industry revenue.

Medical marijuana customers

Severe pain is the most commonly cited reason for medical marijuana use. Severe pain can result from a variety of chronic diseases and injuries. Medical marijuana can help alleviate severe pain and help patients relax and rest. IBISWorld estimates that in 2015, 64.6% of customers used medical marijuana because of severe pain. Over the past five years, this market has remained relatively stable, as many health problems can cause severe pain.

Muscle spasms can be caused by multiple sclerosis, Lou Gehrig's disease, cerebral palsy, quadriplegia, cranial and spinal nerve injuries and Tourette's syndrome, among others. Because medical marijuana is purported to help patients relax and sleep better, it is estimated that 8.9% of industry customers used medical marijuana because of muscle spasms in 2015. The wide variety of diseases that cause muscle spasms has kept demand stable from this market over the past five years.

A variety of diseases can cause nausea and migraines, including digestive disorders. Medical marijuana can

Products & Markets

Major Markets continued

provide relief and muscle relaxation, which helps alleviate nausea. IBISWorld estimates that in 2015, 6.9% of industry customers used medical marijuana because of severe nausea. This market has not significantly changed over the past five years.

Medical marijuana is used to help provide pain relief in a variety of more specific diseases and conditions, such as patients suffering from cancer and seizures. Cancer treatment can be painful, and medical marijuana can help patients relax and rest to accelerate the recovery process. Over the past five years, demand from other patients has remained stable, as the incidence of these diseases has not significantly changed.

Recreational marijuana customers

Recreational marijuana customers have quickly grown to account for 14.1% of the market for marijuana sales. Recreational marijuana users typically smoke in hand-rolled cigarettes (joints) or in pipes or water pipes (bongs). They also smoke marijuana in blunts, which are cigars that have been emptied of tobacco and refilled with a mixture of marijuana and tobacco. Recreational marijuana users typically smoke to obtain a "high," which affects the part of the brain that influences pleasure, memory, thinking, concentration, sensory and time perception, and coordinated movement. Currently, recreational marijuana users are limited to the states of Colorado and Washington. However, their share of the market is set to expand rapidly during the next five years as Alaska, Oregon and Washington, D.C. allow the purchase of cannabis for recreational use and other states pass legislation authorizing its sale.

International Trade

The Medical & Recreational Marijuana Growing industry does not participate in international trade. Marijuana cannot be imported or exported because it is a controlled substance at the federal level. Additionally, medical and recreational marijuana is only legal and regulated by participating states and cannot be transported across state lines at a wholesale level. Some states, however, such as Arizona, allow patients from other states to bring medical marijuana across state lines.

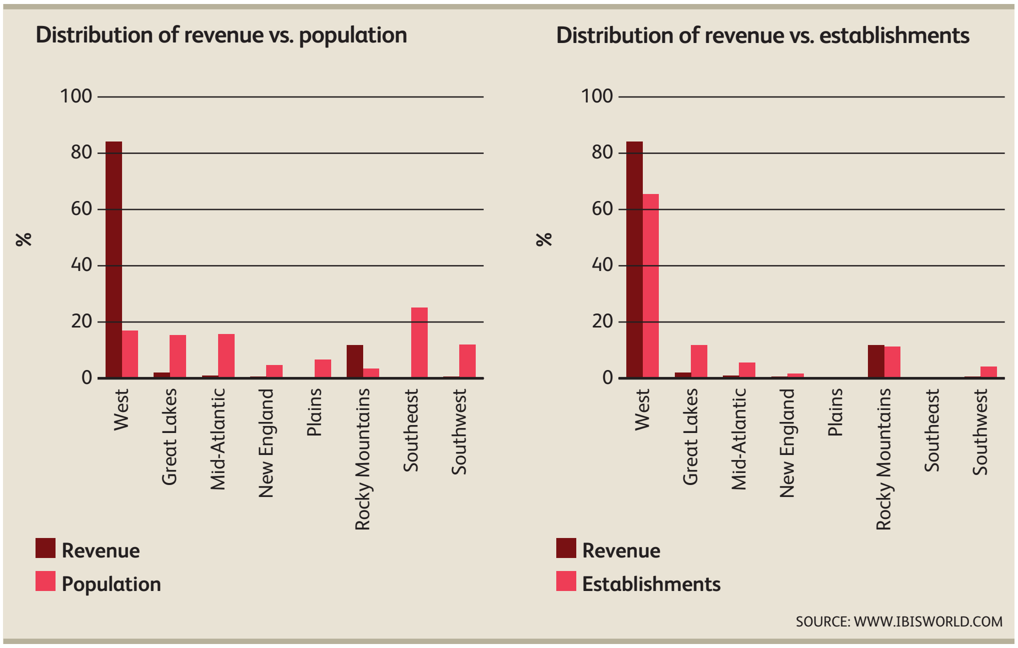
Products & Markets

Business Locations 2015

Products & Markets

Business Locations

Only 23 states and the District of Columbia have laws permitting the use of medical marijuana. The vast majority of industry establishments are concentrated in the West and Rocky Mountains, where there has been extensive marijuana legislation over the past decade. Together, California and Colorado alone are home to an estimated 64.3% of industry establishments and the majority of industry revenue. Colorado is the only state where for-profit medical marijuana businesses are legalized, which has provided an incentive for individuals to open businesses there. More recently, both Colorado and Washington state have seen a rise in establishments with the legalization of for-profit recreational marijuana. However, the growth of industry establishments has been tempered by the need to obtain licensure, which has been restricted by both states. California, meanwhile, only allows nonprofit collectives to provide marijuana for its members, but the state's high population and long history of legalization has contributed to a high concentration of industry establishments.



Competitive Landscape

Market Share Concentration | Key Success Factors | Cost Structure Benchmarks
Basis of Competition | Barriers to Entry | Industry Globalization

Market Share Concentration

Level
Concentration in this industry is **Low**

The Medical and Recreational Marijuana Growing industry has a very low level of market share concentration. In 2015, the four largest firms are expected to account for less than 10.0% of revenue. By law, in the majority of states where medical marijuana is legal, industry operators must be a part of nonprofit marijuana collectives (also known as dispensaries) to grow marijuana. Industry operators are known as vendors and must also possess medical marijuana cards for the state where they operate. Additionally, because the sale of marijuana is still prohibited everywhere except Colorado and Washington, vendors in all other states only provide marijuana to the collective in exchange for donations. All vendors are independent and privately operated. All vendors hold marijuana ID cards, and most grow their allocated plant quota according to state law. In some states, however, patients may designate a grower to provide medical marijuana for them, resulting in some larger farms.

Key Success Factors

IBISWorld identifies 250 Key Success Factors for a business. The most important for this industry are:

Ability to attract community support
Medical and recreational marijuana growers that lack community support may attract federal raids due to complaints from neighbors.

Fast adjustments to changing regulations
Regulations are constantly changing. Growers must comply with the latest legislation or face fines and arrest, and they must be able to adjust to changing regulation quickly and smoothly.

Development of effective marijuana strains
Growers that can develop the most potent and effective strains can potentially attract greater demand for their products.

Understanding government policies and their implications
Marijuana legislation is complicated at all levels of the government. Successful operators must be able to navigate the federal and state level regulatory landscape.

Cost Structure Benchmarks

Profit
Profit, measured as earnings before interest and taxes, varies greatly across the industry because of the myriad of laws governing medical and recreational marijuana from state to state. With the exception of Colorado, in the states where medical marijuana is legal, industry operators are required to be a part of nonprofit marijuana collectives (also known as dispensaries) to grow cannabis. Additionally, because the sale of marijuana is still prohibited, vendors typically provide marijuana to the collective in exchange for donations.

More recently, industry-wide margins have grown on account of the legalization of recreational marijuana in Colorado and Washington. Beginning in 2014, both legal cultivation and sale of for-profit recreational marijuana. In Colorado, for example, operators are able to apply for licenses to cultivate and sell cannabis wholesale to dispensaries. Consequently, industry profit margins are expected to total 6.3% of revenue in 2015, up substantially from 2010.

Wages
Wages are estimated to represent 26.0% of industry revenue in 2015. The high wage cost for this industry reflects the unique, largely nonprofit nature of this industry, where the majority of industry

Competitive Landscape

Cost Structure Benchmarks continued

revenue is distributed in the form of wages to cover labor costs. Not all industry operators participate in growing cannabis on a full-time basis, thus bringing down the annual average wage. Furthermore, the cultivation of medical marijuana is largely donation based, meaning growers do not get paid for the cannabis that they grow. Wages as a share of revenue have slightly declined over the five years to 2015, aided by the increasing scale of some marijuana cultivation units. This trend is expected to continue as the scale of for-profit cultivators in Colorado and Washington, and later Alaska, Oregon and Washington, D.C., increases.

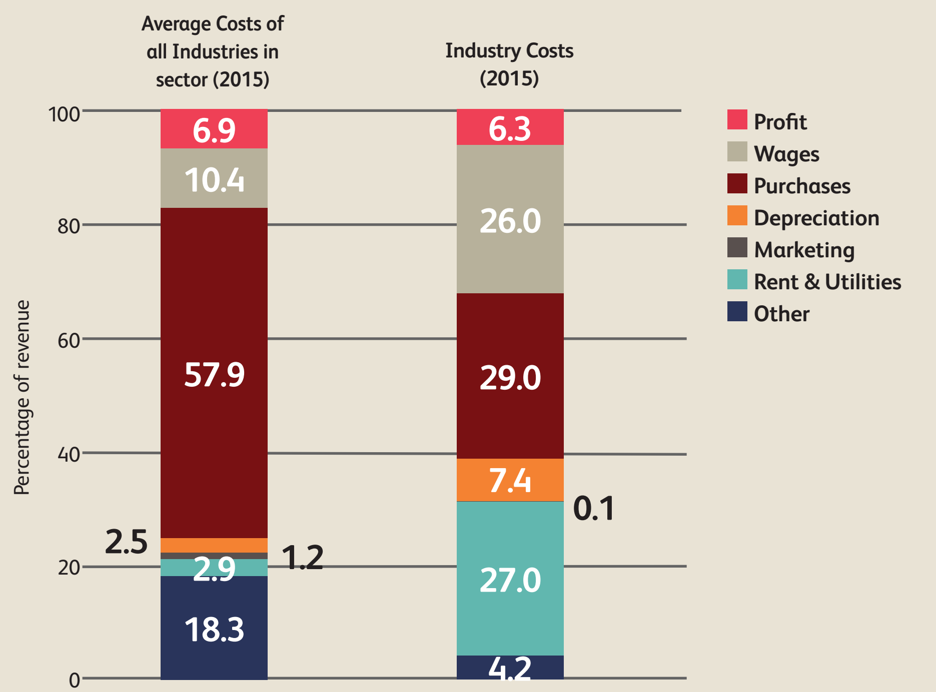
Purchases

Purchases make up a significant expense for medical marijuana growers, representing an estimated 29.0% of total industry revenue in 2015. The primary goods purchased by this industry include soil, fertilizer and seeds. Purchases have increased as a share of revenue in the five years to 2015, due to increases in the prices of the raw materials necessary to grow medical and recreational marijuana.

Rent and utilities, depreciation

Depreciation, rent and utilities represent a large and essential costs for marijuana growing. In 2015, rent and utilities are expected to account for 27.0% of industry revenue, while depreciation is projected to account for an additional 7.4% of industry revenue. These costs are associated with investment into hydroponic techniques, temperature, lights, humidity controls and other facilities necessary to grow marijuana. The cultivation of medical and recreational marijuana in indoors, in particular, requires significant spending on facilities and electricity to power grow lights.

Sector vs. Industry Costs



SOURCE: WWW.IBISWORLD.COM

Competitive Landscape

Cost Structure Benchmarks continued

Other costs

Other costs include liability insurance and legal costs and are expected to reach a total 4.2% of industry revenue. Marketing costs are low because major advertisers are still hesitant to carry marijuana ads.

Basis of Competition

Level & Trend
Competition in this industry is **High** and the trend is **Increasing**

Due to the relatively small number of plants each individual is allowed to grow (which can range from four to 24, depending on the state), there is a large number of operators providing similar products in this industry. As a result, industry competition is very high. In Colorado and Washington state, however, the legalization of recreational marijuana sales in 2014 has led the licensing of larger recreational marijuana cultivators.

Internal competition

Industry vendors compete on product price and quality. Marijuana can have diverse properties and qualities, and only vendors that can consistently cultivate high-quality marijuana will attract demand from dispensaries. In addition, vendors must be able to provide competitive prices or donation requirements. Dispensaries can source marijuana from all members of their collective, making it easy to only acquire products from the lowest-priced vendors. Over the past five years, favorable state legislation paved the way for a large number of new entrants to this industry.

External competition

Industry operators face competition from pharmaceutical companies that manufacture drugs to treat chronic pain, cancer, HIV and other illnesses that medical marijuana helps relieve. Medical marijuana users, for example, typically only turn to marijuana after other treatment has failed, though, resulting in limited external competition from drug manufacturers.

Barriers to Entry

Level & Trend
Barriers to Entry in this industry are **Medium** and **Increasing**

Medical marijuana growers

Prospective medical marijuana growers face minimal barriers to entry in terms of capital costs. However, the classification of marijuana as a Schedule I controlled substance and the possibility of federal prosecution contribute to medium barriers to entry. Over the past five years, a large number of firms entered this industry due to favorable policy stances from the Obama administration. However, in 2011, the Drug Enforcement Agency (DEA) stepped up raids on marijuana dispensaries, which made prospective operators more hesitant to enter this industry. More recently, the industry has benefited from favorable regulatory decisions at the federal level. In response to changing public sentiment, the United States House of Representatives voted in 2014 to restrict the DEA from using funds to target medical marijuana growers and dispensaries. Although this amendment to the DEA appropriations bill would need to be passed by the Senate to become binding, its confirmation would materially alter the outlook for industry operators. The omnibus-spending bill signed by President Obama in December of 2014 included the historic provisions for medical marijuana discussed above. The bill includes a rider to de-fund the DOJ's war on medical marijuana,

Competitive Landscape

Barriers to Entry continued

preventing the agency from using funding to "prevent [medical marijuana states] from implementing their own State laws that authorize the use, distribution, possession, or cultivation of medical marijuana."

State regulations have mixed effects. In general, increased state regulation has benefited industry operators by legalizing medical marijuana or providing more concrete regulation on marijuana growing. Over the past five years, barriers to entry have decreased because eight states and the District of Columbia passed legislation legalizing some level of medical marijuana growing. While states provide a legal avenue for growers to enter this industry, regulations are extensive and costly for prospective growers. For example, Colorado, the only for-profit medical marijuana market in the country, requires every marijuana plant to be registered with the state. Prospective growers are subject to background checks, deposits and licensing and application fees. Licensing and registration fees can total $500,000 or more. Additionally, all growing facilities are under constant video surveillance by law enforcement personnel from the state's Medical Marijuana Enforcement Division.

Additionally, because of the large number of small medical marijuana growers, competition in this industry is very high. Marijuana vendors must be able to grow high-quality plants while charging competitive prices, which may push away prospective entrants. Over the past five years, competition has increased, making it more difficult to succeed in this industry.

Barriers to Entry checklist	Level
Competition	High
Concentration	Low
Life Cycle Stage	Growth
Capital Intensity	Medium
Technology Change	Low
Regulation & Policy	Heavy
Industry Assistance	High

SOURCE: WWW.IBISWORLD.COM

Recreational marijuana growers

More recently, the legalization of recreational marijuana in Colorado and Washington state has spurred the entry of larger scale, for-profit growers in each state. However, operators are required to obtain licensure from appropriate agencies in each state, competition for which is high. In Colorado, for example, recreational cultivation licenses are expensive and difficult to obtain because of the high number of applicants. Individual licenses vary on the size of growing facilities: type one stores, the smallest level, can grow up to 3,600 plants combined in their cultivation facilities; type two stores can grow 6,000 plants; and type three stores can grow up to 10,200 plants. Moreover, state officials have moved to limit the amount individual operators can grow to prevent marijuana grown in Colorado from entering states that ban the medical and recreational sales and possession of cannabis. In Washington, recreational cultivation licenses have been even more difficult to obtain as state officials have lagged in their implementation of the state's recreational marijuana mandate.

Competitive Landscape

Industry Globalization

Level & Trend
Globalization in this industry is **Low** and the trend is **Steady**

Marijuana is not traded internationally, resulting in a very low level of globalization. In addition to the United States, Canada has legislation allowing for medical marijuana consumption. Other countries, such as Argentina and Chile, allow patients to use medical marijuana, though it is not formally regulated.

Major Companies

There are no Major Players in this industry | Other Companies

Other Companies

This industry has no major players. Medical marijuana dispensaries are organized as nonprofit collectives where members can obtain marijuana in exchange for a donation. Industry vendors are members of marijuana collectives and individual vendors grow and supply marijuana to dispensaries. The majority of industry operators are independent, self-employed marijuana growers, resulting in a very low market share concentration. Depending on state law, however, industry operators may obtain the right to grow additional plants for other patients, resulting in larger marijuana farms.

The legalization of recreational marijuana in Colorado and Washington state in 2014 is expected to create opportunities for larger operators in these states. In Colorado, for example, recreational cultivation licenses are expensive and difficult to obtain because of the high number of applicants. Individual licenses vary on the size of growing facilities: type one stores, the smallest level, can grow up to 3,600 plants combined in their cultivation facilities; type two stores can grow 6,000 plants; and type three stores can grow up to 10,200 plants.

High Hopes Farm

Estimate market share: Less than 1.0%

High Hopes Farm is a cooperative medical marijuana grower in Oregon. The farm supplies medical marijuana to about 100 patients, growing marijuana according to a per-patient quota set by the Oregon Medical Marijuana Program (OMMP). The farm employs organic growing methods to provide natural medical marijuana products. The farm has 68 workers total, of which 20 are full-time workers, and all workers are medical marijuana patients in the OMMP. Because Oregon legislation only allows medical marijuana growers to recoup utilities and supplies costs from patients to maintain their nonprofit status, the farm only compensates its workers in marijuana products instead of wages. The farm provides about 400 pounds of marijuana to its patients each year.

Operating Conditions

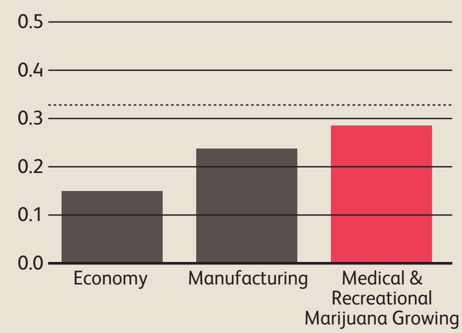
Capital Intensity | Technology & Systems | Revenue Volatility
Regulation & Policy | Industry Assistance

Capital Intensity

Level
The level of capital intensity is **Medium**

The Medical & Recreational Marijuana Growing industry has a medium level of capital intensity. For every $1.00 spent on labor, operators spend an average of $0.28 on capital expenditure, though the level of capital expenditures varies between outdoor and indoor growers. Outdoor growers follow standard cultivation techniques that other farmers use, which require low capital expenditure. By contrast, indoor growers require a slightly higher level of capital expenditures, which are typically spent on hydroponic techniques, lighting and humidity controls. The majority of industry revenue is allocated in the form of wages toward labor costs, as marijuana cultivation requires significant manual labor. Moreover, the nonprofit nature of medical marijuana growing in most states means that earnings are typically collected as wages, rather than profit.

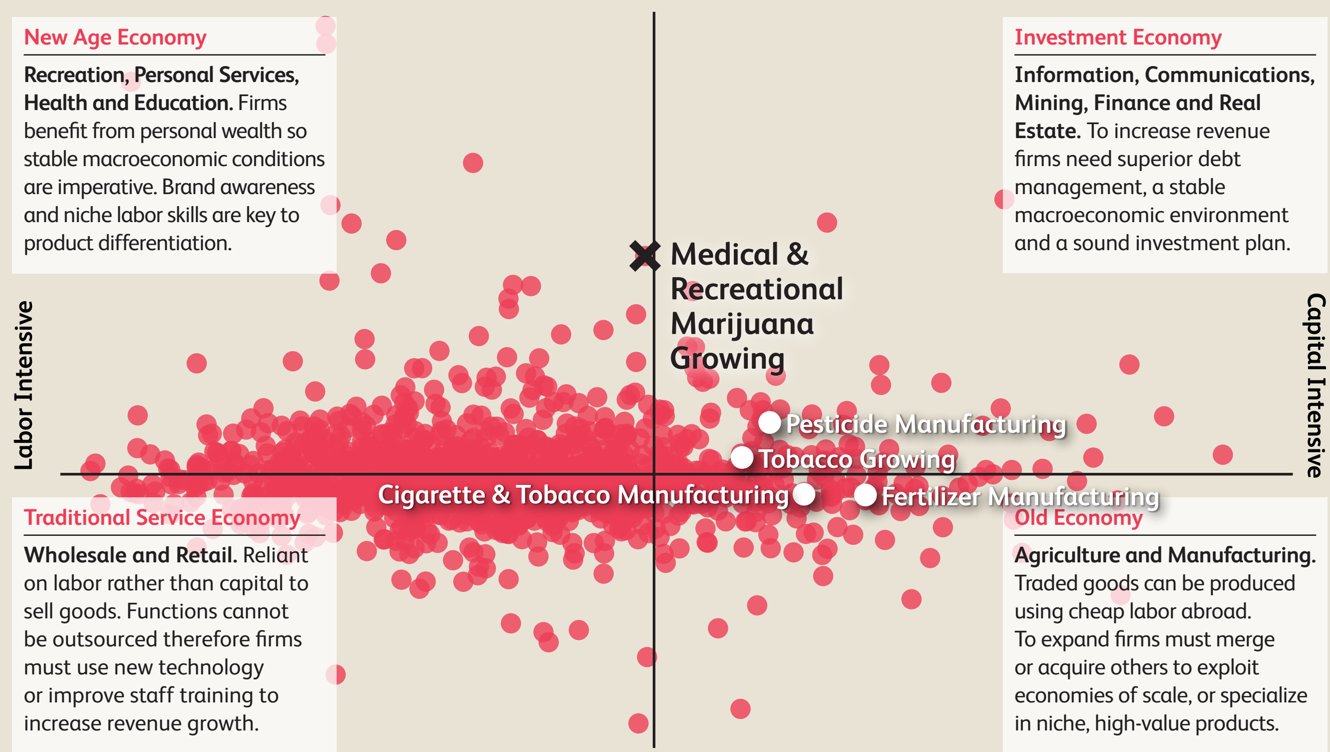
Capital intensity
Capital units per labor unit



Dotted line shows a high level of capital intensity

SOURCE: WWW.IBISWORLD.COM

Tools of the Trade: Growth Strategies for Success



SOURCE: WWW.IBISWORLD.COM

Operating Conditions

Technology & Systems

Level
The level of Technology Change is **Low**

Medical marijuana growing has a low level of technology change. Outdoor growers primary follow standard cultivation techniques used by other outdoor farmers. Indoor cannabis growers require containers, lighting and humidity control. Growers can also utilize hydroponic techniques, which have experienced more technology change over the past five years. Hydroponic techniques involve growing marijuana plants in water. Growers require water filters, pumps, growing trays and humidity control.

Some industry operators also cultivate new marijuana strains. This involves finding plants with desirable characteristics then artificially fertilizing plants. However, techniques used for developing new marijuana strains is similar to general crossing techniques used for flowers and plants. As are result, technology change is relatively low.

Revenue Volatility

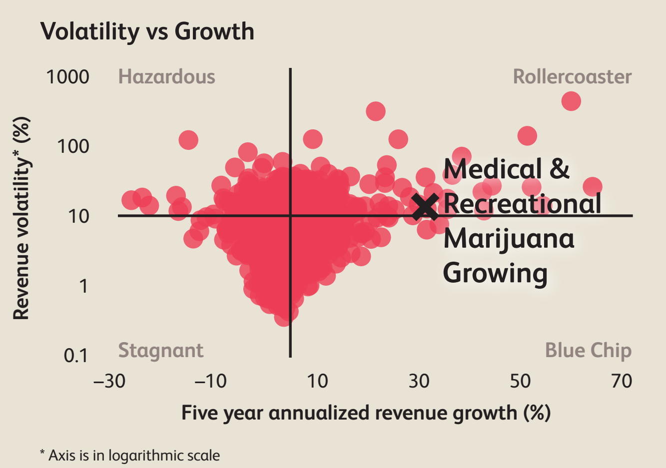
Level
The level of Volatility is **High**

Revenue volatility is medium for the Medical and Recreational Marijuana Growing industry, with an expected peak growth of 54.7% in 2014 and a trough of 19.8% growth in 2011. Regulatory changes in favor or against the industry are the primary determine of revenue fluctuations. In addition to the growing legalization movement for medical cannabis, the current-five year period has seen the legalization recreational cannabis in Colorado and Washington. Consequently, revenue spiked in 2014 as both states began issuing licenses for large-scale recreational growers.

Moreover, demand for medical marijuana growing is rapidly expanding due to the growing acceptance of medical marijuana in treating or alleviating symptoms in a variety of medical conditions, including cancer and the Alzheimer's Disease. Consumers who use medical marijuana do so due to medical needs; as a result, most use industry products regardless of the performance of the economy. In addition, the aging population has led to an increase in demand for a variety of medical services and treatments, because senior citizens consume a disproportionately large amount of pharmaceuticals relative to the rest of the population. The end result is a loyal and increasing customer base for medical marijuana, which leads to steadily increasing revenue.

A higher level of revenue volatility implies greater industry risk. Volatility can negatively affect long-term strategic decisions, such as the time frame for capital investment.

When a firm makes poor investment decisions it may face underutilized capacity if demand suddenly falls, or capacity constraints if it rises quickly.



* Axis is in logarithmic scale

SOURCE: WWW.IBISWORLD.COM

Operating Conditions

Regulation & Policy

Level & Trend
The level of Regulation is **Heavy** and the trend is **Increasing**

The Medical and Recreational Marijuana growing industry is subject to very heavy regulation from governments at all levels. However, there is a great degree of regulatory divergence at the state and federal levels.

Federal level

At the federal level, cannabis is classified as a Schedule I controlled substance under the Controlled Substances Act (CSA), passed as part of the Comprehensive Drug Abuse Prevention and Control Act of 1970. As defined by the CSA, Schedule I substances are those deemed to have a high potential for abuse, no currently accepted medical use in treatment and lack safe usage. Under federal law, Schedule I substances may not be manufactured, distributed or dispensed.

The scheduling of drugs is administered by the Department of Health and Human Services (DHHS). The DHHS operates the National Institute on Drug Abuse (NIDA), which conducts research on the efficacy of marijuana for medical uses. The DHHS has the final say on all drug scheduling.

The Department of Justice (DOJ), through the Drug Enforcement Agency (DEA), raids and prosecutes marijuana dispensaries and growers in the United States. During the past five years, regulation trends were initially promising for industry operators. During the presidential campaign of 2008, then Senator Obama promised to put an end to the practice of raiding dispensaries by the federal government. In 2009, Attorney General Eric Holder announced that the DOJ will comply with the President's statements during the campaign. The "Ogden memo," released by Deputy Attorney General David Ogden later that year, reiterated this position by instructing federal law enforcement organizations to refrain from using federal resources to prosecute cannabis dispensaries and growers that were in compliance with existing state laws providing for the medical use of marijuana.

However, beginning in 2011, the DEA and the DOJ once again ramped up their prosecution of cannabis growers and dispensaries. This introduced greater uncertainty for industry operators, resulting in higher operating costs from legal fees and risk mitigation. In response to changing public sentiment, however, the United States House of Representatives voted in 2014 to restrict the DEA from using funds to target medical marijuana growers and dispensaries. Although this amendment to the DEA appropriations bill would need to be passed by the Senate to become binding, its confirmation would materially alter the outlook for industry operators. The omnibus spending bill signed by President Obama in December of 2014 included the historic provisions for medical marijuana discussed above. The bill includes a rider to de-fund the DOJ's war on medical marijuana, preventing the agency from using funding to "prevent [medical marijuana states] from implementing their own State laws that authorize the use, distribution, possession, or cultivation of medical marijuana."

State regulation

Currently, 23 states and the District of Columbia have some regulation that allowed for the use of medical marijuana. Since 2014, both Colorado and Washington have allowed the legal sale of cannabis for recreational use. However, because federal law supersedes state law, the cultivation, sale and use of medical or recreational marijuana remain illegal in the United States. While Florida voters failed to pass an initiative that would have made the sale of medical marijuana legal in the state, voters in Alaska, Oregon and Washington, D.C. legalized

Operating Conditions

Regulation & Policy continued

the sale of recreational marijuana during the 2014 elections. Alaska's measure is similar to Colorado's, and Oregon's is modeled on Washington state's. Washington, D.C.'s initiative legalizes marijuana possession but does not establish a taxation system because voters are not allowed to directly implement taxes themselves. Alaska, Oregon and Washington, D.C. are expected to see a boom in the legal sale of marijuana for recreational use during the next five years.

California has the oldest and one of the most extensive regulatory frameworks governing medical marijuana. In 1996, the passage of the Compassionate Use Act (Proposition 215) legalized the use of medical marijuana and prohibited physicians from being punished for recommending medical marijuana to patients. California Senate Bill 420, passed in 2003, further clarified the state's position on medical marijuana, legalizing organization of nonprofit marijuana collectives where members can cultivate and provide marijuana to each other.

In addition to California, the state of Colorado has some of the most extensive medical marijuana laws. The use of medical marijuana has been legal since the passage of Amendment 20 in 2000. In 2012, the state further loosened marijuana restrictions by passing Amendment 64, which legalized marijuana for recreational use. With the growth of the edible cannabis products segment, the state has moved to enact new regulations. Several high-profile incidents involving edible cannabis products have spurred new rules, signed into law in May 2014, concerning the packaging of edible marijuana products, including improved information regarding serving sizes.

Industry Assistance

Level & Trend
The level of Industry Assistance is **High** and the trend is **Increasing**

Government Regulations

Across the country, 23 states and the District of Columbia allow for medical marijuana. Over the past five years, Arizona, Illinois, Delaware, Connecticut, the District of Columbia, Maryland, Massachusetts, New Jersey and New Hampshire all passed laws allowing some use of medical marijuana. Oregon has the most lenient laws regarding medical marijuana possession, allowing up to 24 ounces of usable medical marijuana and 24 plants per patient. Washington allows 24 ounces of usable medical marijuana and 15 plants. Other states have allowances that range from 2 ounces to 8 ounces, as well as regulations on the maturity of plants. On average, regulation by states has provided more opportunities for industry operators to grow plants for marijuana collectives, which benefited revenue growth.

Moreover, in Colorado and Washington state, the cultivation of marijuana for recreational use was legalized in 2012. Beginning in 2014, each state began issuing licenses to commercial, for-profit operators. Voter approval of recreational cannabis in Alaska, Oregon and Washington, D.C during the 2014 election are expected to benefit the industry during the next five years.

Industry associations

This industry benefits from relatively widespread support from industry associations. The National Cannabis Industry Association is a trade association representing industry operators. The organization lobbies lawmakers in Washington, DC for more favorable marijuana legislation. These include legislation on banking that allows marijuana businesses to work with

Operating Conditions

Industry Assistance continued

financial institutions. Currently, banks are hesitant to provide services to marijuana businesses due to the illegality of marijuana at the federal level.

The National Organization for the Reform of Marijuana Laws (NORML) works to repeal marijuana prohibition at the federal level. The organization supports the right of adults to use marijuana responsibility, and champions state and federal reforms that are favorable to marijuana users. NORML primarily lobbies Congress and state legislatures to enact marijuana reforms.

Key Statistics

Industry Data

	Revenue ($m)	Industry Value Added ($m)	Establish-ments	Enterprises	Employment	Exports	Imports	Wages ($m)	Domestic Demand	Number of adults aged 50 and older (Millions)
2006	324.2	135.1	35,372	34,263	134,339	--	--	96.3	N/A	89.7
2007	352.2	147.3	37,208	36,164	141,352	--	--	105.3	N/A	92.1
2008	378.3	161.3	38,864	37,774	144,558	--	--	119.2	N/A	94.6
2009	415.9	178.1	41,180	39,847	147,832	--	--	130.2	N/A	97.0
2010	501.7	213.8	46,272	44,549	165,920	--	--	152.0	N/A	99.6
2011	601.1	254.9	51,779	49,580	183,926	--	--	171.3	N/A	102.0
2012	759.6	309.8	59,970	56,441	214,915	--	--	208.9	N/A	104.3
2013	969.8	398.7	69,927	64,765	252,271	--	--	269.6	N/A	106.6
2014	1,500.0	596.1	94,257	86,218	340,742	--	--	394.8	N/A	109.0
2015	**1,875.8**	**743.2**	**111,774**	**100,742**	**405,498**	**--**	**--**	**486.8**	**N/A**	**110.9**
2016	2,290.8	908.5	125,897	112,072	476,210	--	--	589.3	N/A	112.5
2017	3,222.3	1,240.6	142,832	125,377	587,078	--	--	781.2	N/A	114.2
2018	4,523.6	1,703.1	162,878	140,909	729,754	--	--	1,040.3	N/A	115.9
2019	5,915.3	2,227.7	186,026	158,657	894,014	--	--	1,332.3	N/A	117.5
2020	7,359.2	2,819.8	212,766	178,918	1,085,635	--	--	1,662.2	N/A	119.2

Annual Change

	Revenue (%)	Industry Value Added (%)	Establish-ments (%)	Enterprises (%)	Employment (%)	Exports (%)	Imports (%)	Wages (%)	Domestic Demand (%)	No. of adults aged 50 and older (%)
2007	8.6	9.0	5.2	5.5	5.2	N/A	N/A	9.3	N/A	2.7
2008	7.4	9.5	4.5	4.5	2.3	N/A	N/A	13.2	N/A	2.7
2009	9.9	10.4	6.0	5.5	2.3	N/A	N/A	9.2	N/A	2.6
2010	20.6	20.0	12.4	11.8	12.2	N/A	N/A	16.7	N/A	2.7
2011	19.8	19.2	11.9	11.3	10.9	N/A	N/A	12.7	N/A	2.4
2012	26.4	21.5	15.8	13.8	16.8	N/A	N/A	21.9	N/A	2.2
2013	27.7	28.7	16.6	14.7	17.4	N/A	N/A	29.1	N/A	2.2
2014	54.7	49.5	34.8	33.1	35.1	N/A	N/A	46.4	N/A	2.2
2015	**25.1**	**24.7**	**18.6**	**16.8**	**19.0**	**N/A**	**N/A**	**23.3**	**N/A**	**1.8**
2016	22.1	22.2	12.6	11.2	17.4	N/A	N/A	21.1	N/A	1.5
2017	40.7	36.6	13.5	11.9	23.3	N/A	N/A	32.6	N/A	1.5
2018	40.4	37.3	14.0	12.4	24.3	N/A	N/A	33.2	N/A	1.5
2019	30.8	30.8	14.2	12.6	22.5	N/A	N/A	28.1	N/A	1.5
2020	24.4	26.6	14.4	12.8	21.4	N/A	N/A	24.8	N/A	1.4

Key Ratios

	IVA/Revenue (%)	Imports/ Demand (%)	Exports/ Revenue (%)	Revenue per Employee ($'000)	Wages/Revenue (%)	Employees per Est.	Average Wage ($)	Share of the Economy (%)
2006	41.67	N/A	N/A	2.41	29.70	3.80	716.84	0.00
2007	41.82	N/A	N/A	2.49	29.90	3.80	744.95	0.00
2008	42.64	N/A	N/A	2.62	31.51	3.72	824.58	0.00
2009	42.82	N/A	N/A	2.81	31.31	3.59	880.73	0.00
2010	42.62	N/A	N/A	3.02	30.30	3.59	916.10	0.00
2011	42.41	N/A	N/A	3.27	28.50	3.55	931.35	0.00
2012	40.78	N/A	N/A	3.53	27.50	3.58	972.01	0.00
2013	41.11	N/A	N/A	3.84	27.80	3.61	1,068.69	0.00
2014	39.74	N/A	N/A	4.40	26.32	3.62	1,158.65	0.00
2015	**39.62**	**N/A**	**N/A**	**4.63**	**25.95**	**3.63**	**1,200.50**	**0.00**
2016	39.66	N/A	N/A	4.81	25.72	3.78	1,237.48	0.01
2017	38.50	N/A	N/A	5.49	24.24	4.11	1,330.66	0.01
2018	37.65	N/A	N/A	6.20	23.00	4.48	1,425.55	0.01
2019	37.66	N/A	N/A	6.62	22.52	4.81	1,490.25	0.01
2020	38.32	N/A	N/A	6.78	22.59	5.10	1,531.09	0.01

Figures are inflation-adjusted 2015 dollars.

SOURCE: WWW.IBISWORLD.COM

Jargon & Glossary

Industry Jargon

CANNABIS Cannabis is a drug produced from the Cannabis sativa (commonly known as hemp) or Cannabis indica plant, which is related to nettles and hops.

DISPENSARY/COLLECTIVE A medical marijuana collective is comprised of patients that provide medical marijuana to each other on a nonprofit basis. It is the standard legal organization for growers in most states.

MARIJUANA The dried leaves and flowering tops of the pistillate hemp plant that yield tetrahydrocannabinol and are smoked in cigarettes for their intoxicating effect.

VENDOR A member of a marijuana collective that provides medical marijuana to other collective members on nonprofit basis.

IBISWorld Glossary

BARRIERS TO ENTRY High barriers to entry mean that new companies struggle to enter an industry, while low barriers mean it is easy for new companies to enter an industry.

CAPITAL INTENSITY Compares the amount of money spent on capital (plant, machinery and equipment) with that spent on labor. IBISWorld uses the ratio of depreciation to wages as a proxy for capital intensity. High capital intensity is more than $0.333 of capital to $1 of labor; medium is $0.125 to $0.333 of capital to $1 of labor; low is less than $0.125 of capital for every $1 of labor.

CONSTANT PRICES The dollar figures in the Key Statistics table, including forecasts, are adjusted for inflation using the current year (i.e. year published) as the base year. This removes the impact of changes in the purchasing power of the dollar, leaving only the "real" growth or decline in industry metrics. The inflation adjustments in IBISWorld's reports are made using the US Bureau of Economic Analysis' implicit GDP price deflator.

DOMESTIC DEMAND Spending on industry goods and services within the United States, regardless of their country of origin. It is derived by adding imports to industry revenue, and then subtracting exports.

EMPLOYMENT The number of permanent, part-time, temporary and seasonal employees, working proprietors, partners, managers and executives within the industry.

ENTERPRISE A division that is separately managed and keeps management accounts. Each enterprise consists of one or more establishments that are under common ownership or control.

ESTABLISHMENT The smallest type of accounting unit within an enterprise, an establishment is a single physical location where business is conducted or where services or industrial operations are performed. Multiple establishments under common control make up an enterprise.

EXPORTS Total value of industry goods and services sold by US companies to customers abroad.

IMPORTS Total value of industry goods and services brought in from foreign countries to be sold in the United States.

INDUSTRY CONCENTRATION An indicator of the dominance of the top four players in an industry. Concentration is considered high if the top players account for more than 70% of industry revenue. Medium is 40% to 70% of industry revenue. Low is less than 40%.

INDUSTRY REVENUE The total sales of industry goods and services (exclusive of excise and sales tax); subsidies on production; all other operating income from outside the firm (such as commission income, repair and service income, and rent, leasing and hiring income); and capital work done by rental or lease. Receipts from interest royalties, dividends and the sale of fixed tangible assets are excluded.

INDUSTRY VALUE ADDED (IVA) The market value of goods and services produced by the industry minus the cost of goods and services used in production. IVA is also described as the industry's contribution to GDP, or profit plus wages and depreciation.

INTERNATIONAL TRADE The level of international trade is determined by ratios of exports to revenue and imports to domestic demand. For exports/revenue: low is less than 5%, medium is 5% to 20%, and high is more than 20%. Imports/domestic demand: low is less than 5%, medium is 5% to 35%, and high is more than 35%.

LIFE CYCLE All industries go through periods of growth, maturity and decline. IBISWorld determines an industry's life cycle by considering its growth rate (measured by IVA) compared with GDP; the growth rate of the number of establishments; the amount of change the industry's products are undergoing; the rate of technological change; and the level of customer acceptance of industry products and services.

NONEMPLOYING ESTABLISHMENT Businesses with no paid employment or payroll, also known as nonemployers. These are mostly set up by self-employed individuals.

PROFIT IBISWorld uses earnings before interest and tax (EBIT) as an indicator of a company's profitability. It is calculated as revenue minus expenses, excluding interest and tax.

Jargon & Glossary

IBISWorld Glossary continued

VOLATILITY The level of volatility is determined by averaging the absolute change in revenue in each of the past five years. Volatility levels: very high is more than ±20 %; high volatility is ±10 % to ±20 %; moderate volatility is ±3 % to ±10 %; and low volatility is less than ±3 %.

WAGES The gross total wages and salaries of all employees in the industry. The cost of benefits is also included in this figure.

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