clerks@guamlegislature.org

From: Speaker's Office <speaker@guamlegislature.org>
Sent: Monday, October 19, 2020 4:31 PM
To: Clerks Office
Cc: Rennae Meno
Subject: M&C Fwd: Cannabis Control Board - Economic Impact Study
Attachments: Cannabis ControL Board EIS.pdf

10/19/20	11:44 AM	10/19/20	Economic Impact Study.*	Cannabis Control Board	35GL-20-2310

Sinseru yan Minagåhet,

Office of the Speaker • Tina Rose Muña Barnes
Committee on Public Accountability, Human Resources & the Guam Buildup

35th Guam Legislature
I Mina'trentai Singko na Liheslaturan Guåhan

Guam Congress Building | 163 Chalan Santo Papa | Hagatna, GU 96910
T: (671) 477-2520/1
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Gumai pribilehu yan konfedensia este siha na mensåhi. Solo espesiåtmente para hågu ma entensioña pat ma aturisa para unrisibi. Sen prubidu kumu ti un ma aturisa para manribisa, na'setbe, pat mandespåtcha. Yanggen lachi rinisibu-mu nu este na mensåhi , put fabot ago' guatu gi I numa'huyong gi as speaker@guamlegislature.org yan despues destrosa todu siha I kopian mensåhi. Si Yu'os ma'åse'.

---------- Forwarded message ---------
From: **Vanessa Lee Williams** <vanessalee.williams@gmail.com>
Date: Mon, Oct 19, 2020 at 11:44 AM
Subject: Cannabis Control Board - Economic Impact Study
To: <speaker@guamlegislature.org>
Cc: <adrian.cruz@guam.gov>, <ursulaherrera671@gmail.com>, <nico.fujikawa@visitguam.org>

Hafa Adai,

Please the attached letter with enclosure, transmitting a copy of the Economic Impact Study obtained by GVB and adopted by the Cannabis Control Board.

Please confirm receipt, and do not hesitate to contact me with any questions.

Si Yu'os Ma'ase,

Vanessa Williams
Chair, Cannabis Control Board
487-1492

October 19, 2020

The Honorable Tina Muña Barnes
Speaker
I Mina'trentai Singko Na Liheslaturan Guahan
Guam Congress Building 163, Chalan Santo Papa
Hagatna, Guam 96910

Håfa Adai Madam Speaker,

The Cannabis Control Board (CCB), established in §8109 of Public Law 35-5, has been working diligently to ensure the appropriate rules and regulations will be implemented to promote a new thriving industry for our island. In our July 8, 2020 meeting, the board officially adopted the Independent Economic Impact Study (IEIS) as stipulated in Section 17 of P.L 35-5.

The Guam Visitors Bureau had contracted services with Tourism Economics and provided a copy of the report for board deliberation on March 13, 2020. However, due to the COVID-19 pandemic and public health emergency, the submission of the report to the legislature was unfortunately delayed.

Since the IEIS was completed prior to the pandemic, the board found it necessary to disclose that the information produced in this study represent a normal year of economic activity on Guam. The report does not demonstrate any negative impacts as a direct result of the on-going public health emergency.

For your reference kindly see attached the official Independent Economic Impact Study for the Legalization of Recreational Cannabis in Guam.

Si Yu'os Ma'åse'

Senseramente,

Vanessa L. Williams
Chairwoman
Cannabis Control Board

POTENTIAL ECONOMIC IMPACT ASSESSMENT OF LEGALIZED RECREATIONAL CANNABIS IN GUAM

Prepared for:
Guam Visitors Bureau

TOURISM ECONOMICS

Doc. No. 35GL-20-2310.*

INTRODUCTION

Guam is considering a policy change to legalize recreational cannabis and sought to understand the potential gains in economic output, employment, household income, and taxes that could result from opening up the cannabis market.

To quantify the potential economic impacts, Tourism Economics prepared a comprehensive model using data from case studies of other destinations that legalized recreational cannabis in recent years. The case studies compiled data on the levels and percentages of visitor and visitor spending changes as a result of the policy change. The case studies also provided data on resident demand.

Based on the composite analysis of the case studies, Tourism Economics constructed impact estimates for Guam, including incremental economic gains as a function of:

- Additional visitors
- Additional spending per visitor
- Local spending

EXECUTIVE SUMMARY

Potential economic impacts of legalized recreational cannabis in Guam

POTENTIAL DIRECT IMPACTS (Stabilization)

$80 million
Direct tourism spending

Representing direct spending by incremental visitors to Guam, including purchases on retail, lodging, transportation, food and beverage, and entertainment

$12 million
Direct cannabis industry spending

Representing direct spending on recreational cannabis in Guam by residents and visitors

$24 million
Direct labor income

Labor income directly supported by resident and visitor spending attributable to the legalization of recreational cannabis

754
Direct jobs

Jobs directly supported by resident and visitor spending attributable to the legalization of recreational cannabis

POTENTIAL TOTAL IMPACTS (Stabilization)

$133 million
Total output (business sales)

including direct, indirect, and induced output

$34 million
Total labor income

including direct, indirect, and induced labor income impacts

1,051
Total jobs

Including direct, indirect, and induced output

Note: the potential direct and total impacts presented in the Executive Summary represent outputs for when the recreation cannabis industry is stabilized.

Doc. No. 35GL-20-2310.*

DIRECT SPENDING IMPACTS

DIRECT SPENDING

Methodology – Overview

To estimate the direct spending resulting from the legalization of recreational cannabis in Guam, Tourism Economics separately analyzed the cannabis industry and the tourism industry.

The cannabis industry will generate incremental spending by both residents and visitors. More specifically, it will generate spending by the following segments:

- New visitor spending in the cannabis industry
- Current visitor spending in the cannabis industry
- Resident spending in the cannabis industry

In addition to the cannabis industry spending, new "cannabis" visitors will also spend on the tourism industry, including lodging, F&B, entertainment, retail, and transportation.

Case studies of destinations that recently legalized recreational cannabis were used as a basis for modeling the impact estimates for Guam. Case study findings were adjusted to account for the local economy, visitor origin, cultural issues associated with cannabis in Asia (further detailed on page 28), and other factors.

Although many destinations were examined as part of the case studies, cities within the following four states were utilized in the impact modeling:

- Colorado
- Massachusetts
- Oregon
- Washington

These four states were chosen due to the date recreational cannabis sales began, data availability, and state laws that allowed for the use **and** ability to purchase recreational cannabis. States such as Maine and Vermont allow for recreational use of cannabis, but prohibit the sale of recreational cannabis.

The following pages detail the assumptions and calculations used to estimate the number of cannabis users – both residents and visitors – and the respective spending on cannabis.

DIRECT SPENDING

Methodology – New Visitors Cannabis User Estimates

New Visitors

Destinations analyzed in the case studies experienced a 7.3% increase in visitor volume the first year recreational cannabis was legalized. The historical average growth rate for visitors to the case study destinations was 2.9% per year.

To estimate the number of new visitors to Guam due to legalization of recreational cannabis, Tourism Economics forecasted a "base scenario" and a "cannabis scenario" using the case study growth rates as a basis.

The base scenario grew the total number of visitors to Guam by 2.9% .

The cannabis scenario grew the total number of visitors to Guam by 65% of the 7.3% growth experienced by case study destinations. Given the cultural issues associated with cannabis in Asia and the availability of closer options to participate in recreational cannabis for long haul markets, we assumed that Guam will incur 65% of the growth that was experienced by the case study destinations.

The difference in the base scenario and the cannabis scenario resulted in approximately 31,500 new visitors to Guam in the first year of legalization.

New Visitor Calculation		
		First Year
Base Scenario		
Base Scenario Visitor Growth		2.9%
Guam 2019 Visitor Total	x	1,667,000
Base Scenario Visitor Total		1,714,500
Cannabis Scenario		
Cannabis Scenario Visitor Growth		7.3%
Adjustment for Cultural Issues & Long Haul Visitors	x	65%
Adjusted Cannabis Scenario Visitor Growth		4.7%
Guam 2019 Visitor Total	x	1,667,000
Cannabis Scenario Visitor Total		1,746,000
New "Cannabis" Visitors		31,500

Source: Tourism Economics

DIRECT SPENDING

Methodology – Current Visitors Cannabis User Estimates

Current Visitors

A Longwoods International report produced for Colorado Tourism in June 2019 stated that 12% of Colorado visitors were interested in cannabis tourism. This assumption was used as the basis for estimating the number of current visitors expected to purchase cannabis in Guam.

Tourism Economics assumed that 12% or nearly 209,500 new and current visitors to Guam will purchase cannabis. Approximately 178,000 of these visitors are current visitors given the previous calculation that estimated 31,500 new visitors.

Visitors originating from Asian countries accounted for 91% or 162,000 of the 178,000 current visitors expected to purchase cannabis. Given the cultural issues associated with cannabis in Asia, we assumed that 15% of the 162,000 current Asian visitors or approximately 24,500 current Asian visitors will purchase cannabis.

In total – after adjusting for the Asian cultural issues and US Mainland military visitors – it is expected that approximately 35,000 current visitors will purchase cannabis in the first year of legalization.

Current Visitor Cannabis User Calculation

		First Year
Cannabis Scenario Visitor Total		1,746,000
% of Visitors to Purchase Cannabis	x	12%
Total Visitors to Purchase Cannabis		209,500
New "Cannabis" Visitors	-	31,500
Current Visitors to Purchase Cannabis		178,000
% of Current Visitors Originating from Asia	x	91%
Current Asian Visitors to Purchase Cannabis		162,000
% of Asian Visitors to Purchase Cannabis	x	15%
Adjusted – Current Asian Visitors to Purchase Cannabis		24,500
Current Non-Asian Visitors to Purchase Cannabis*	+	10,500
Total Current Visitors to Purchase Cannabis		35,000

Source: Tourism Economics

*Current Non-Asian Visitors to Purchase Cannabis = (Current Visitors to Purchase Cannabis - Current Asian Visitors to Purchase Cannabis) * Adjustment for US Mainland Military Visitors = (178,000 - 162,000) * 65% = 10,500

DIRECT SPENDING

Methodology – Resident Cannabis User Estimates

Residents

Approximately 24% of Colorado residents over the age of 21 use cannabis, according to a study prepared by the Marijuana Policy Group LLC for the Colorado Department of Revenue in August 2018 and population statistics from the US Census Bureau.

A study by Marist in 2017 found that approximately 14% of American adults are "regular users" or people who use cannabis at least once per month.

Tourism Economics averaged the two studies and assumed that 19% of the Guam population over 21 years old will purchase cannabis in the first year of legalization. The estimate was adjusted to 13% or 14,500 residents after accounting for the income differential in Guam and the United States.

Resident Cannabis Users Calculation		
		First Year
% of Colorado Resident Adult Cannabis Users		24%
% of US Adult Cannabis Users		14%
Average Adult Cannabis Users		19%
Guam Adult Population	x	115,000
Guam Resident Adult Cannabis Users		22,000
Adjustment for Guam/US income	x	66%
Adjusted Guam Resident Adult Cannabis Users		14,500

Source: Tourism Economics

DIRECT SPENDING

Methodology – Cannabis Spending Estimates

New and Current Visitors

According to the Colorado Department of Revenue study, Colorado visitors consume approximately 1.0 grams of cannabis per day while visiting Colorado and stay for an average of 2.9 days. The study also estimated that a gram of recreational cannabis cost $6.90. In total, new and current visitors are expected to spend $1.3 million on cannabis in the first year of legalization.

Residents

According to the Colorado Department of Revenue study, Colorado residents who use cannabis consume approximately 1.4 grams of cannabis per day for 141 days each year. Guam resident consumption was adjusted to 0.7 grams of cannabis per day after accounting for the income differential in Guam and Colorado. In total, Guam residents over the age of 21 are expected to spend $10.2 million on cannabis in the first year of legalization.

New and Current Visitor Cannabis Spending Calculation

		First Year
Guam New & Current Visitor Cannabis Users*		66,500
Grams Consumed per Day	x	1.0
Average Cost per Gram of Recreational Cannabis	x	$6.90
Average Visitor Length of Stay	x	2.9
Visitor Cannabis Spending (million)		$1.3

Resident Cannabis Spending Calculation

		First Year
Guam Resident Adult Cannabis Users		14,500
Grams Consumed per Day	x	0.7
Average Cost per Gram of Recreational Cannabis	x	$6.90
Average Days Cannabis Used per Year	x	141
Resident Cannabis Spending (million)		$10.2

Source: Tourism Economics

*Guam New & Current Visitor Cannabis Users = New "Cannabis" Visitors + Total Current Visitors to Purchase Cannabis = 31,500 +35,000 = 66,500

DIRECT SPENDING

Cannabis industry spending

Legalizing recreational cannabis in Guam is expected to generate nearly $11.5 million in spending in the cannabis industry by residents and visitors in the first year of legalization

Legalizing recreational cannabis is expected to increase the number of visitors to Guam by 31,500 or approximately 1.8% in the first year of legalization. Additionally, 35,000 current visitors – approximately 2% of all visitors – are expected to partake in the cannabis industry. In total, 3.8% of all visitors to Guam – 1.8% new visitors and 2% current visitors – are expected to use cannabis in the first year of legalization.

Each new and current visitor that uses cannabis is expected to spend approximately $20 per trip on cannabis. In total, visitors are expected to spend approximately $1.3 million on cannabis in the first year of legalization.

Nearly 13% of Guam residents over 21 years old are expected to use recreational cannabis. Each resident that uses recreational cannabis is expected to spend an average of $705 per year on cannabis. In total, residents are expected to spend approximately $10.2 million on cannabis in the first year of legalization.

Cannabis Industry Direct Spending

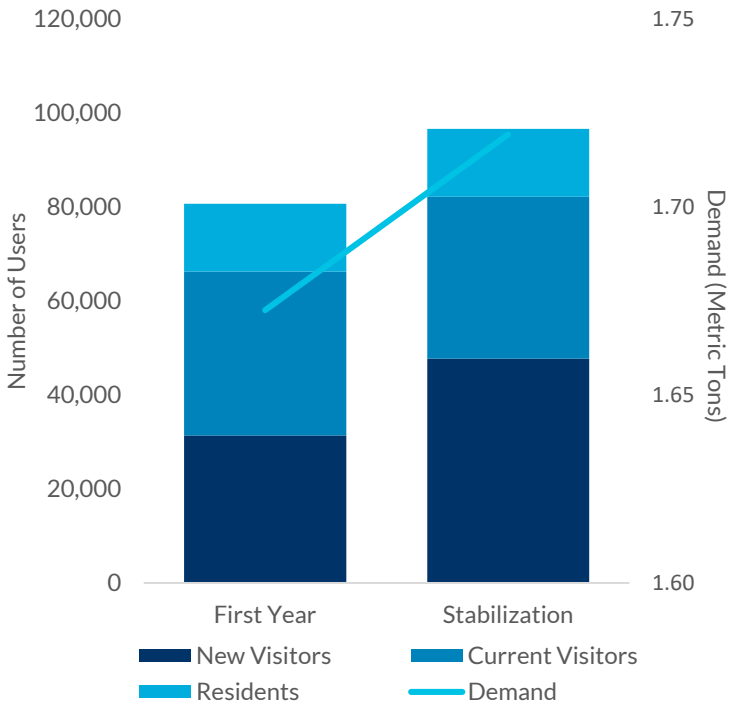
	First Year	Stabilization
Cannabis Users		
New Visitors	31,500	48,000
Current Visitors	35,000	34,500
Residents	14,500	14,500
Total Cannabis Users	81,000	97,000
Cannabis Users as a Percent of Visitors and Adult Residents		
New Visitors	1.8%	2.6%
Current Visitors	2.0%	1.8%
Residents	12.6%	12.6%
Visitor & Resident Cannabis Spending		
Visitor Cannabis User Spend per Trip	$20	
Resident Cannabis User Spend per Year	$705	
Cannabis Industry Direct Spending (millions)		
Visitors	$1.3	$1.7
Residents	$10.2	$10.2
Total Cannabis Industry Direct Spending	$11.5	$11.9

Source: Tourism Economics

DIRECT SPENDING

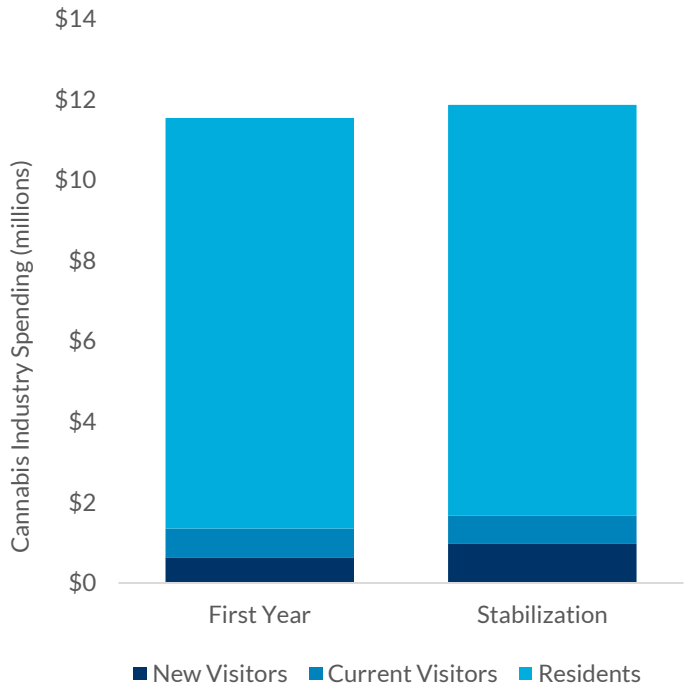
Cannabis industry users and spending

Recreational Cannabis Users and Demand



Source: Tourism Economics

Recreational Cannabis Spending



Source: Tourism Economics

Doc. No. 35GL-20-2310.*

DIRECT SPENDING

Visitor and cannabis industry spending

Legalizing recreational cannabis in Guam is expected to generate $64 million in spending across a wide range of sectors in the first year of legalization

Residents, new visitors, and existing visitors are expected to spend $11.5 million in the cannabis industry in the first year of legalization and nearly $11.9 million when the cannabis industry is stabilized.

In addition to spending in the cannabis industry, new visitors coming to Guam as a result of legalization will spend $52.5 million on tourism in the first year of legalization. They are expected to spend $13 million on lodging, $10 million on retail, and $8 million on food and beverages. Entertainment, local transportation, and other spending will round out the new visitor spending, registering $4 million, $2 million, and $15.5 million, respectively.

New visitor spending on tourism is expected to be $80 million when the cannabis industry is stabilized.

$11.5M CANNABIS INDUSTRY SPENDING

+

$52.5M TOTAL NEW VISITOR TOURISM SPENDING



Note: Lodging spending includes all industry activity, including meetings, catering, etc.

DIRECT SPENDING

Direct economic impacts

The estimated direct spending of $64 million – which includes cannabis industry and new visitor tourism spending – is projected to support 528 full-time equivalent jobs on an annualized basis*, and $17 million in direct labor income the first year of legalization.

Legalizing recreational cannabis in Guam will also generate significant fiscal (tax) impacts as spending ripples through the Guam economy. We estimate that direct spending will generate $8 million in tax revenue the first year of legalization.

Direct spending impact ($ millions & jobs)

	First Year	Stabilization
Direct spending attributable to legalized recreational cannabis	$64	$92
Direct labor income	$17	$24
Direct jobs*	528	754
Direct tax revenue	$8	$12

Source: Tourism Economics

*The full-time equivalent concept converts part-time and temporary jobs to a full-time equivalent annual basis, based on output and wages.

ECONOMIC IMPACTS



ECONOMIC IMPACTS

How cannabis industry and new visitor spending generates employment and income

Our analysis of spending attributable to the legalization of recreational cannabis in Guam begins with actual spending by residents and visitors, but also considers the downstream effects of this injection of spending into the local economy. To determine the total economic impact of resident and visitor spending attributable to the legalization of recreational cannabis, we input visitor spending into a model of the Guam economy created in IMPLAN. This move calculates three distinct types of impact: direct, indirect, and induced.

The impacts on business sales, jobs, wages, and taxes are calculated for all three levels of impact.

1. **Direct Impacts**: Visitors create direct economic value within a discreet group of sectors (e.g. entertainment, transportation). This supports a relative proportion of jobs, wages, taxes, and GDP within each sector.

2. **Indirect Impacts:** Each directly affected sector also purchases goods and services as inputs (e.g. food wholesalers, utilities) into production. These impacts are called indirect impacts.

3. **Induced Impacts**: Lastly, the induced impact is generated when employees whose wages are generated either directly or indirectly by visitors, spend those wages in the local economy.

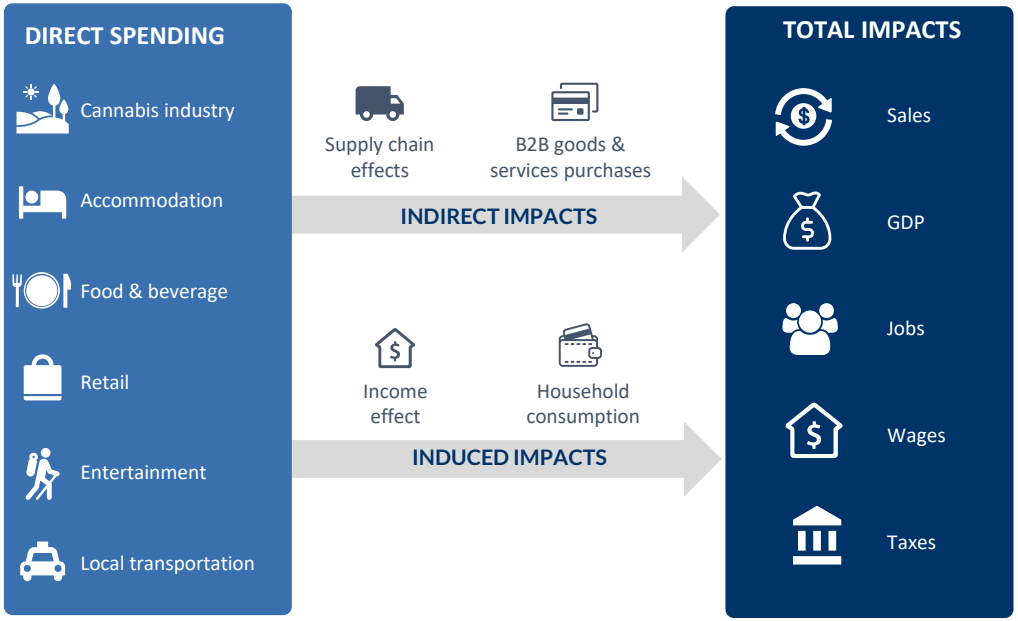
DIRECT TOURISM INDUSTRY

Introduction and definitions

How resident and visitor spending generates employment and income

IMPLAN is particularly effective because it calculates these three levels of impact – direct, indirect, and induced – for a broad set of indicators. These include the following:

- Spending
- Wages
- Employment
- Federal Taxes
- State Taxes
- Local Taxes



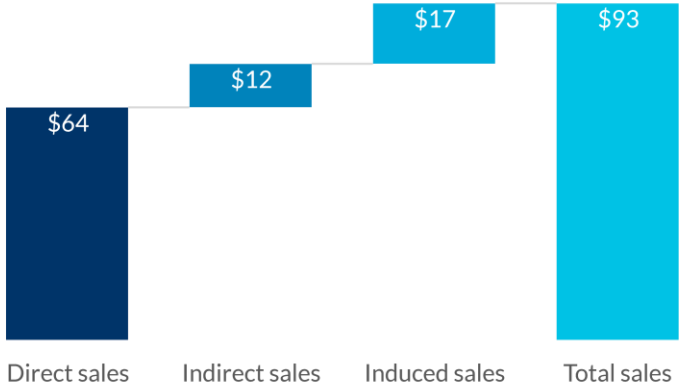
ECONOMIC IMPACTS

Business sales impacts by industry

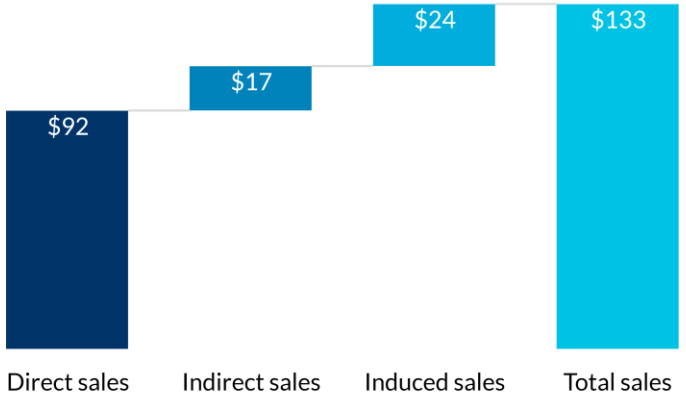
The estimated direct spending of $64 million is expected to translate into $93 million in business sales including indirect and induced impacts in the first year of legalization.

While the majority of sales are in industries directly serving visitors, $9 million in business sales accrued to the finance, insurance, and real estate industry (as presented on the following page) as a result of selling to tourism businesses. Similarly, significant benefits accrued to sectors such as the business services ($6 million) and education and health care ($3 million).

Summary economic impacts ($ millions) – First Year



Summary economic impacts ($ millions) – Stabilization



Source: Tourism Economics

ECONOMIC IMPACTS

Business sales impacts by industry

Business sales impacts by industry – First Year

Amounts in millions of current dollars	Direct	Indirect	Induced	Total
Total, all industries	**$64.0**	**$11.9**	**$16.7**	**$92.6**
By industry				
Retail Trade	$15.2	$0.5	$1.4	$17.0
Lodging	$14.1	$0.1	$0.1	$14.2
Other Transport	$10.0	$1.6	$0.3	$11.9
Finance, Insurance and Real Estate	$0.5	$3.3	$5.6	$9.4
Food & Beverage	$6.9	$0.4	$1.5	$8.7
Government	$6.7	$0.5	$0.3	$7.5
Business Services	$1.6	$2.9	$0.9	$5.5
Recreation and Entertainment	$3.3	$0.3	$0.5	$4.1
Education and Health Care	$0.0	$0.0	$3.4	$3.4
Manufacturing	$1.8	$0.1	$0.1	$2.1
Wholesale Trade	$0.8	$0.4	$0.5	$1.7
Personal Services	$0.4	$0.3	$0.9	$1.6
Agriculture, Fishing, Mining	$1.4	$0.1	$0.1	$1.5
Gasoline Stations	$1.3	$0.0	$0.1	$1.4
Construction and Utilities	$0.0	$0.8	$0.4	$1.2
Communications	$0.0	$0.5	$0.5	$1.1
Air Transport	$0.0	$0.2	$0.2	$0.3

Source: Tourism Economics

Business sales impacts by industry – Stabilization

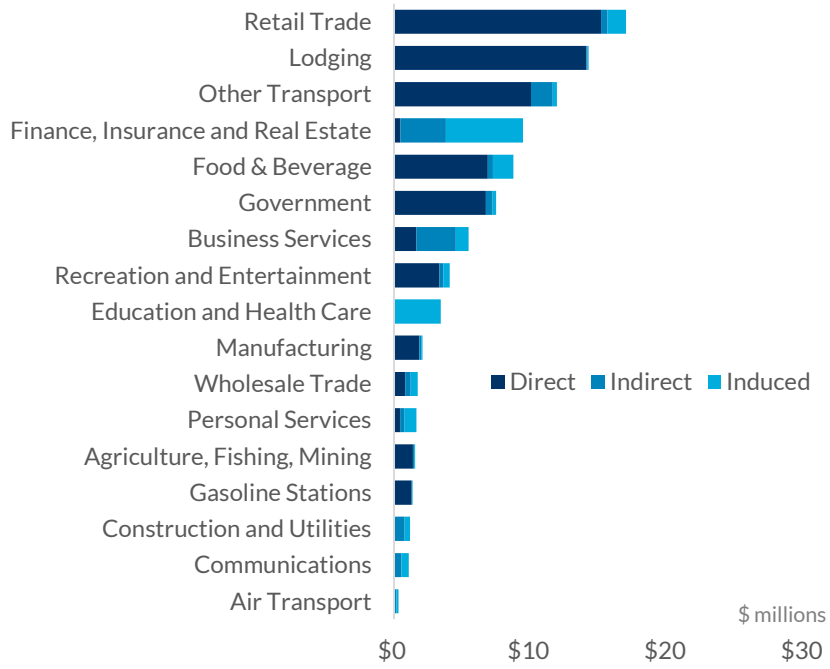
Amounts in millions of current dollars	Direct	Indirect	Induced	Total
Total, all industries	**$91.8**	**$17.2**	**$23.9**	**$132.9**
By industry				
Retail Trade	$21.1	$0.7	$2.0	$23.7
Lodging	$21.4	$0.1	$0.1	$21.7
Other Transport	$15.3	$2.4	$0.5	$18.1
Finance, Insurance and Real Estate	$0.7	$4.8	$8.1	$13.6
Food & Beverage	$10.5	$0.5	$2.2	$13.1
Government	$8.5	$0.7	$0.4	$9.6
Business Services	$2.5	$4.0	$1.3	$7.9
Recreation and Entertainment	$5.0	$0.4	$0.7	$6.1
Education and Health Care	$0.0	$0.0	$4.9	$4.9
Personal Services	$0.7	$0.5	$1.2	$2.4
Manufacturing	$1.9	$0.2	$0.2	$2.2
Wholesale Trade	$0.8	$0.6	$0.7	$2.1
Gasoline Stations	$1.9	$0.0	$0.1	$2.1
Construction and Utilities	$0.0	$1.1	$0.5	$1.7
Agriculture, Fishing, Mining	$1.4	$0.1	$0.1	$1.6
Communications	$0.0	$0.8	$0.8	$1.5
Air Transport	$0.0	$0.2	$0.2	$0.5

Source: Tourism Economics

ECONOMIC IMPACTS

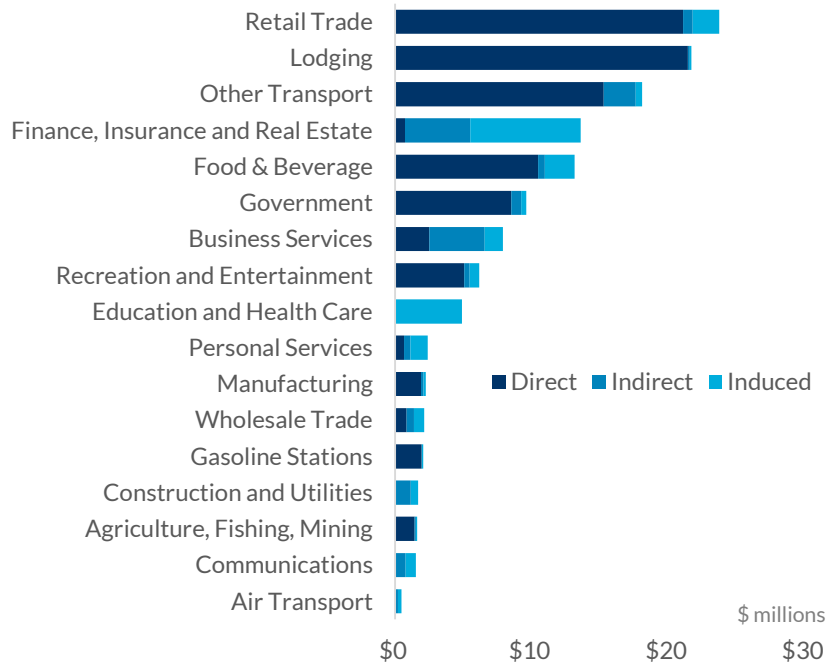
Business sales impacts by industry

Business sales impacts by industry – First Year



Source: Tourism Economics

Business sales impacts by industry – Stabilization



Source: Tourism Economics

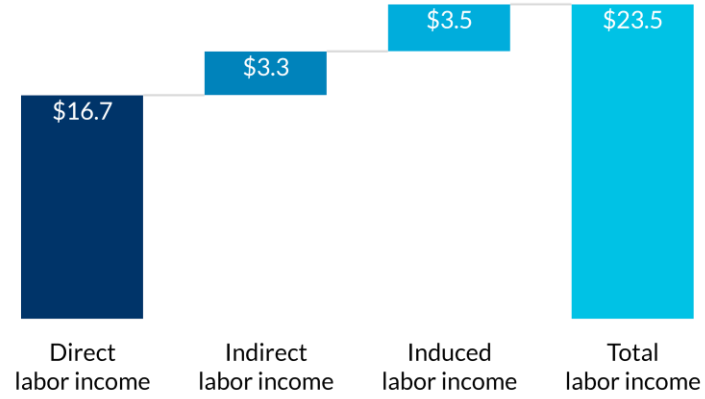
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ECONOMIC IMPACTS

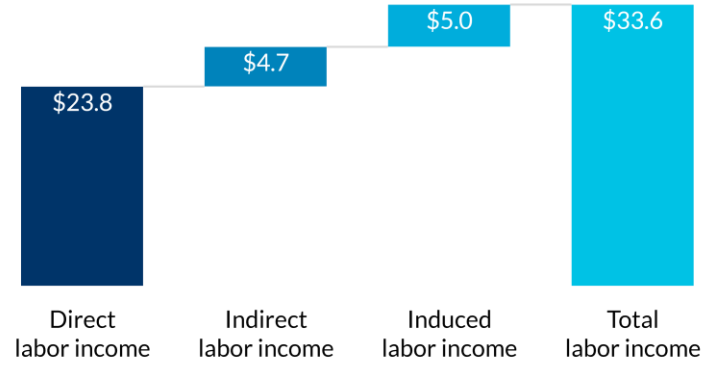
Labor income impacts by industry

Resident and visitor spending resulting from the legalization of recreational cannabis in Guam is expected to generate $17 million in direct personal income, and $24 million including indirect and induced impacts, in the first year of legalization.

Summary labor impacts ($ millions) – First Year



Summary labor impacts ($ millions) – Stabilization



Source: Tourism Economics

ECONOMIC IMPACTS

Labor income impacts by industry

Labor income impacts by industry – First Year

Amounts in millions of current dollars	Direct	Indirect	Induced	Total
Total, all industries	**$16.7**	**$3.3**	**$3.5**	**$23.5**
By industry				
Other Transport	$3.3	$0.5	$0.1	$4.0
Lodging	$3.4	$0.0	$0.0	$3.5
Business Services	$2.0	$1.0	$0.3	$3.4
Government	$2.5	$0.3	$0.1	$2.9
Food & Beverage	$1.7	$0.1	$0.4	$2.2
Retail Trade	$1.6	$0.0	$0.1	$1.8
Education and Health Care	$0.0	$0.0	$1.2	$1.2
Finance, Insurance and Real Estate	$0.0	$0.6	$0.6	$1.2
Recreation and Entertainment	$0.9	$0.1	$0.1	$1.2
Agriculture, Fishing, Mining	$0.8	$0.0	$0.0	$0.9
Personal Services	$0.1	$0.1	$0.2	$0.4
Construction and Utilities	$0.0	$0.2	$0.1	$0.3
Communications	$0.1	$0.0	$0.0	$0.2
Wholesale Trade	$0.0	$0.1	$0.1	$0.2
Manufacturing	$0.1	$0.0	$0.0	$0.1
Gasoline Stations	$0.1	$0.0	$0.0	$0.1
Air Transport	$0.0	$0.0	$0.0	$0.0

Source: Tourism Economics

Labor income impacts by industry – Stabilization

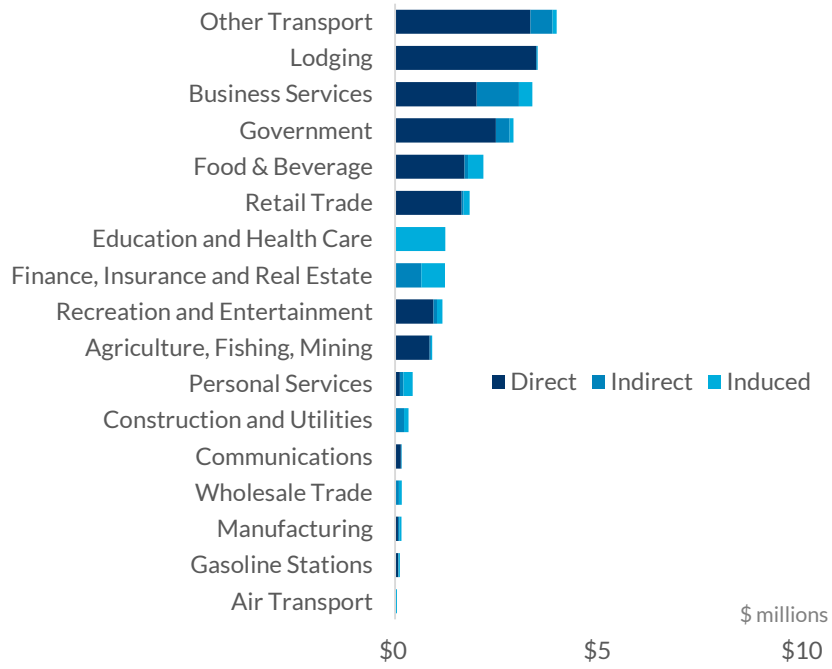
Amounts in millions of current dollars	Direct	Indirect	Induced	Total
Total, all industries	**$23.8**	**$4.7**	**$5.0**	**$33.6**
By industry				
Other Transport	$5.0	$0.8	$0.1	$6.0
Lodging	$5.2	$0.0	$0.0	$5.3
Government	$3.7	$0.5	$0.1	$4.4
Business Services	$2.2	$1.5	$0.5	$4.2
Food & Beverage	$2.6	$0.1	$0.5	$3.2
Retail Trade	$2.2	$0.1	$0.2	$2.4
Education and Health Care	$0.0	$0.0	$1.7	$1.8
Finance, Insurance and Real Estate	$0.0	$0.9	$0.8	$1.8
Recreation and Entertainment	$1.4	$0.1	$0.2	$1.7
Agriculture, Fishing, Mining	$0.9	$0.0	$0.0	$0.9
Personal Services	$0.2	$0.1	$0.3	$0.6
Construction and Utilities	$0.0	$0.3	$0.2	$0.5
Communications	$0.0	$0.1	$0.1	$0.2
Wholesale Trade	$0.1	$0.0	$0.1	$0.2
Manufacturing	$0.1	$0.0	$0.0	$0.2
Gasoline Stations	$0.1	$0.0	$0.0	$0.2
Air Transport	$0.0	$0.0	$0.0	$0.1

Source: Tourism Economics

ECONOMIC IMPACTS

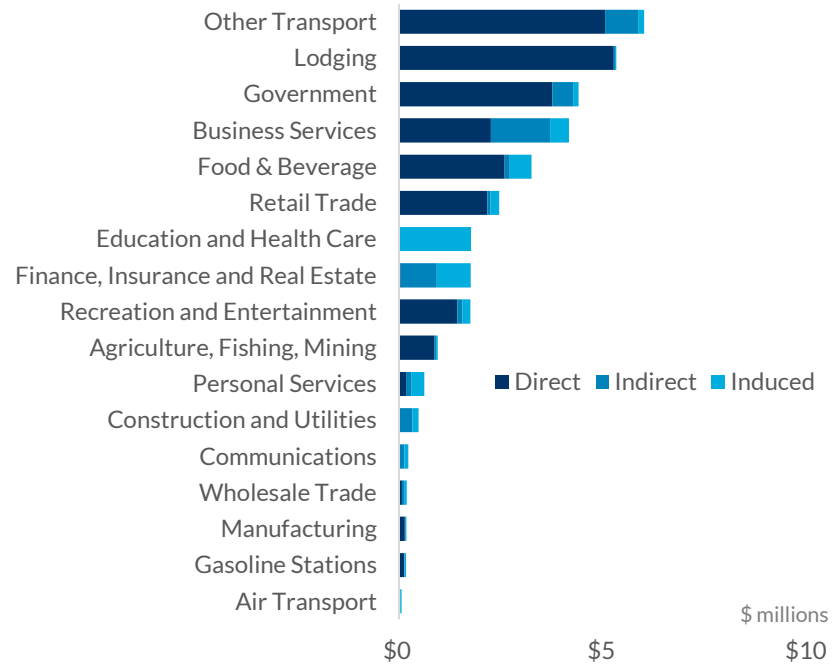
Labor income impacts by industry

Labor income impacts by industry – First Year



Source: Tourism Economics

Labor income impacts by industry – Stabilization



Source: Tourism Economics

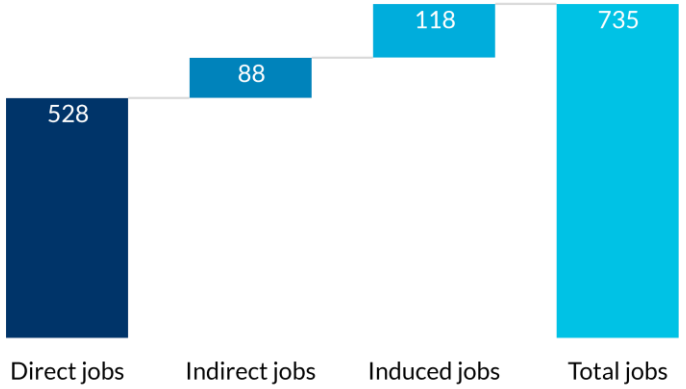
ECONOMIC IMPACTS

Job impacts by industry

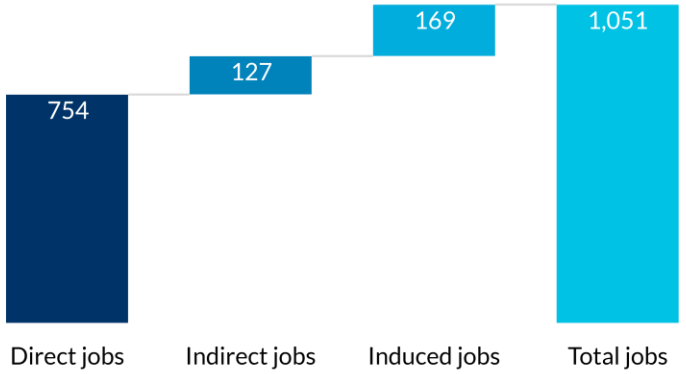
In the first year of legalization, resident and visitor spending is expected to generate 735 full-time equivalent jobs* on an annualized basis when indirect and induced impacts are considered. Notably, total business sales are expected to produce output of $126,000 per worker.

*The full-time equivalent concept converts part-time and temporary jobs to a full-time equivalent annual basis, based on output and wages.

Summary job impacts – First Year



Summary job impacts – Stabilization



Source: Tourism Economics

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ECONOMIC IMPACTS

Job impacts by industry

Job impacts by industry – First Year

	Direct	Indirect	Induced	Total
Total, all industries	**528**	**88**	**118**	**735**
By industry				
Food & Beverage	108	5	20	133
Retail Trade	94	5	15	114
Other Transport	86	11	2	100
Lodging	90	1	0	91
Business Services	48	31	11	90
Recreation and Entertainment	41	5	5	51
Personal Services	13	4	14	32
Education and Health Care	0	0	29	29
Finance, Insurance and Real Estate	1	13	13	27
Government	22	3	1	27
Agriculture, Fishing, Mining	15	2	1	18
Wholesale Trade	4	2	3	9
Construction and Utilities	0	3	2	5
Gasoline Stations	2	0	1	3
Manufacturing	2	0	0	3
Communications	0	2	1	3
Air Transport	0	0	0	1

Source: Tourism Economics

Job impacts by industry – Stabilization

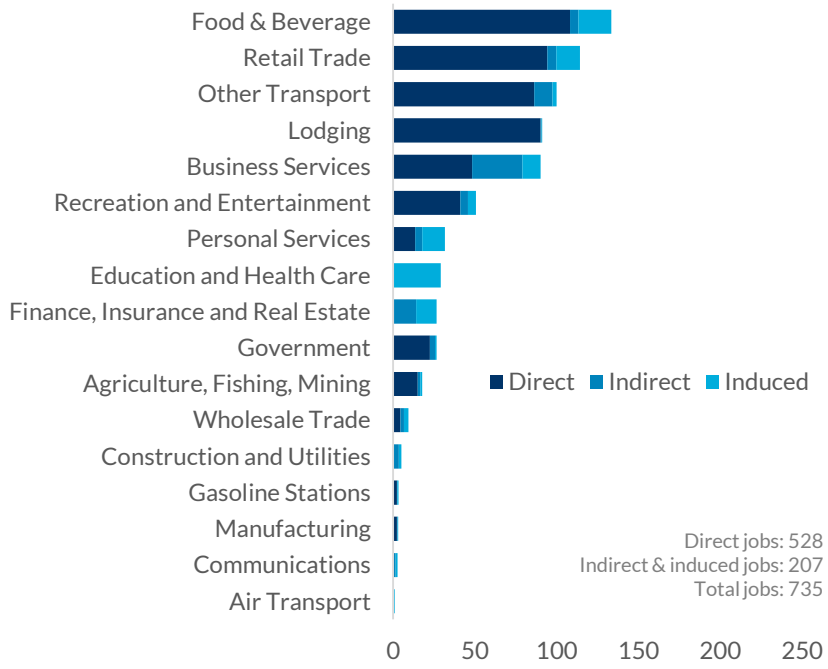
	Direct	Indirect	Induced	Total
Total, all industries	**754**	**127**	**169**	**1,051**
By industry				
Food & Beverage	165	7	29	201
Other Transport	131	17	4	151
Retail Trade	122	8	21	151
Lodging	137	1	1	139
Business Services	55	43	16	114
Recreation and Entertainment	62	7	7	76
Personal Services	20	6	20	47
Education and Health Care	0	1	41	42
Government	34	5	1	40
Finance, Insurance and Real Estate	1	19	18	38
Agriculture, Fishing, Mining	15	2	1	19
Wholesale Trade	4	3	4	12
Construction and Utilities	0	5	2	7
Gasoline Stations	3	0	1	5
Communications	0	2	1	4
Manufacturing	2	1	0	3
Air Transport	0	1	1	1

Source: Tourism Economics

ECONOMIC IMPACTS

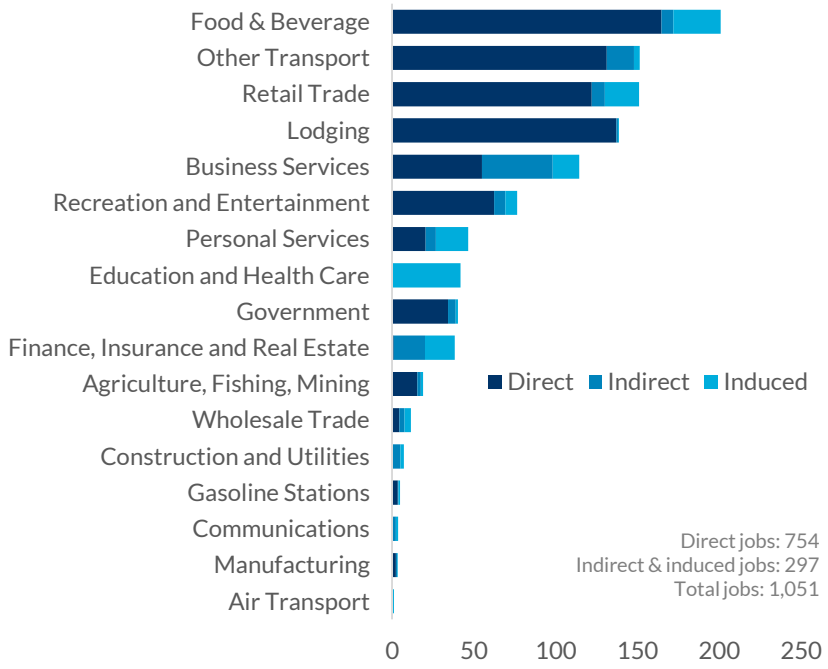
Job impacts by industry

Job impacts by industry – First Year



Source: Tourism Economics

Job impacts by industry – Stabilization



Source: Tourism Economics

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ECONOMIC IMPACTS

Fiscal (tax) impacts

Resident and visitor spending resulting from the legalization of recreational cannabis in Guam is expected to generate approximately $11 million in total tax revenues in the first year of legalization.

Taxes – First Year

Amounts in millions of nominal dollars

	Direct	Indirect / Induced	Total
Total Tax Revenues	**$8.4**	**$2.5**	**$10.8**
Personal Income	$1.0	$0.4	$1.4
Corporate	$0.5	$0.4	$0.9
Indirect Business	$0.8	$0.3	$1.1
Social Insurance	$2.2	$0.9	$3.0
Hotel Occupancy Tax	$1.5	$0.0	$1.5
Gross Receipts Tax	$1.5	$0.5	$2.0
Special Revenues	$1.0	$0.0	$1.0

Source: Tourism Economics

Taxes – Stabilization

Amounts in millions of nominal dollars

	Direct	Indirect / Induced	Total
Total Tax Revenues	**$12.0**	**$3.5**	**$15.6**
Personal Income	$1.4	$0.6	$2.0
Corporate	$0.7	$0.6	$1.3
Indirect Business	$1.1	$0.4	$1.5
Social Insurance	$3.1	$1.2	$4.4
Hotel Occupancy Tax	$2.4	$0.0	$2.4
Gross Receipts Tax	$2.2	$0.7	$2.9
Special Revenues	$1.2	$0.0	$1.2

Source: Tourism Economics

Note: tax estimates exclude any potential new taxes created as a result of legalizing recreational cannabis.

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CASE STUDIES

Cannabis in Asia

The cultural issues associated with cannabis in Asia can potentially diminish the impact of legalizing recreational cannabis in Guam, especially given the large percentage of international visitors originating from Asia.

Recreational cannabis in Asia is currently a criminal offense that carries a penalty of imprisonment up to five years and a fine. Some countries punish and imprison residents who consume cannabis while abroad and return with traces of the substance in their system. Recreational cannabis can even lead to the death penalty in certain Asian countries if possessed in large quantities or trafficked.

Despite the penalties associated with recreational cannabis, some Asian countries started to soften its stance as cannabis laws become more relaxed in Europe and North and South America. For example, China, Thailand, and Singapore are all pursuing research into the healthcare applications of cannabis. Thailand and South Korea both legalized medical cannabis in February 2019 and March 2019, respectively.

Thailand also is seeking to decriminalize possession of the cannabis plant and plans to pay residents $2,225 for each mature medical-grade cannabis plant and up to $13,350 per year for six plants.

Asia could become a major market for cannabis in the future. According to a study by Prohibition Partners, there will be an estimated 85.5 million cannabis users in Asia in 2024 generating a cannabis market value of $8.5 billion. The medical cannabis market is expected to account for $5.8 billion and the recreational cannabis market is expected to account for $2.7 billion. The study assumes all Asian countries will legalize medical cannabis and all, except China, will have regulated recreational use.

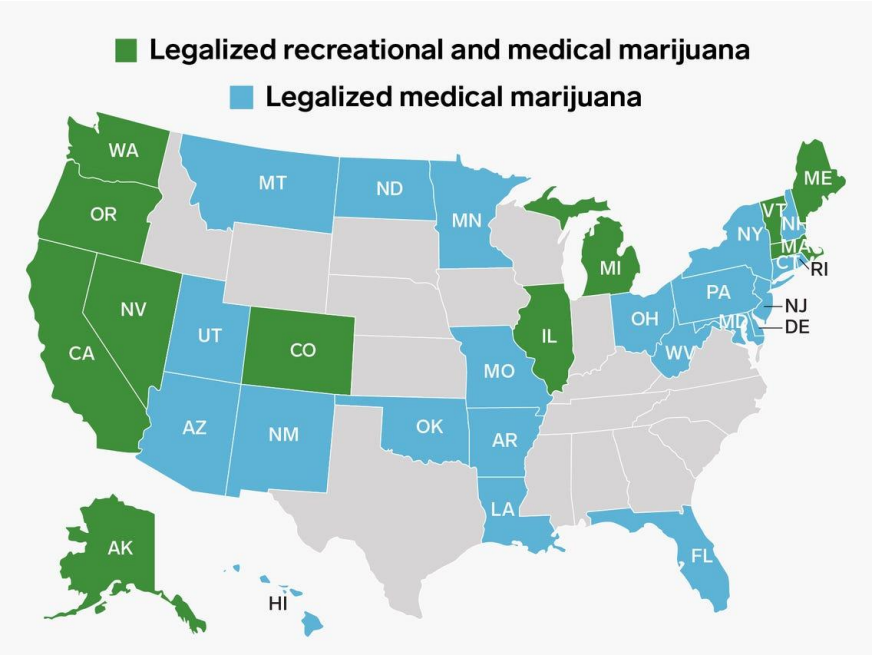
Case Studies

The following pages provide information regarding the legislation and tax implications of recreational cannabis in the following four case study states.:

- Colorado
- Massachusetts
- Oregon
- Washington

As of January 1, 2020, there were 11 states in the US that allowed for the use of recreational cannabis. In 2012, Colorado and Washington passed laws allowing for the use of recreational cannabis – the first states to do so. The first commercial sale of cannabis in Colorado and Washington was in 2014.

Alaska, Washington DC, and Oregon legalized recreational cannabis in 2014, followed by California, Massachusetts, Maine, and Nevada in 2016. In 2018, Vermont and Michigan legalized recreational cannabis. Illinois most recently legalized recreational cannabis in 2019.



Source: Business Insider
Note: as of January 1, 2020

Recreational Cannabis

State Laws

	Colorado	Massachusetts	Oregon	Washington
Important Dates				
Law Passed	November 2012	November 2016	November 2014	November 2012
First Commercial Sales	January 2014	November 2018	July 2015	July 2014
Possession and Cultivation Limits				
Age	21+	21+	21+	21+
Usable Cannabis	1oz	1oz	1oz public / 8oz home	1oz
Plants	6 (3 mature)	6 per person / 12 per residence	4	Illegal
Hash / Concentrates	1oz	5g	16oz solid infused, 72oz liquid infused, 1oz extract	16oz solid infused, 72oz liquid infused, 7g concentrate
State Taxes on Recreational Cannabis				
Excise Tax	15%	10.75%	-	37%
Sales Tax*	15%	-	17%	-

Source: State Tax Departments, Pros & Cons of Currents Issues (ProCon.org), Tax Foundation
Note: Recreational cannabis sales in Colorado is exempt from state sales tax starting July 1, 2017. Oregon does not have a general state sales tax. Some states also allow for local taxes on recreational cannabis.

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Recreational Cannabis

State Laws

	Colorado	Massachusetts	Oregon	Washington*
Cannabis State Tax Revenue				
FY 2014	$67,594,323	-	-	$1,575
FY 2015	$130,411,173	-	-	$64,881,111
FY 2016	$193,604,810	-	$20,652,983	$185,669,141
FY 2017	$247,368,473	-	$70,263,897	$314,839,660
FY 2018	$266,529,637	$1,769,525	$82,203,729	$120,615,211
FY 2019	$302,458,426	$47,848,632	$102,094,948	Not Available
Cannabis State Tax Revenue Distribution				
Marijuana Tax Fund	71.85%	100%	-	-
General Fund	15.56%	-	-	51.1%
Education	12.59%	-	40%	9.3%
Health	-	-	25%	30.1%
Police	-	-	15%	-
Research	-	-	-	0.3%
Cities / Counties	-	-	20%	3.9%
Other	-	-	-	5.3%

Source: State Tax Departments
Note: Washington cannabis tax revenue distribution is an effective rate based on taxes distributed through FY 2018.

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- Travel forecasts that are directly linked to the economic and demographic outlook for origins and destinations
- Economic impact analysis that highlights the value of visitors, events, developments, and industry segments
- Policy analysis that informs critical funding, taxation, and travel facilitation decisions
- Market assessments that define market allocation and investment decisions

Tourism Economics operates out of regional headquarters in Philadelphia and Oxford, with offices in Belfast, Buenos Aires, Dubai, Frankfurt, and Ontario.

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