Cannlytics

Cannabis Data Science

Meetup

November 24th, 2021

Cannabis Licenses by Type in Massachusetts

Licensing Applications | November 18, 2021

The totals below are number of licenses approved by category.

Type	#
Craft Marijuana Cooperative	3
Marijuana Courier	11
Marijuana Delivery Operator	1
Independent Testing Laboratory	14
Marijuana Cultivator	285
Marijuana Microbusiness	23
Marijuana Product Manufacturer	218
Marijuana Research Facility	0
Marijuana Retailer	379
Marijuana Third Party Transporter	4
Marijuana Transporter with Other Existing ME License	7
Total	945

Source: Massachusetts Cannabis Control Commission

Cannabis Licenses Approval Stage in Massachusetts

Licensing Applications | November 18, 2021

TYPE	PENDING APPLICATION	PRE-CERTIFIED/ ENDORSEMENT	INITIAL LICENSE DENIED	PROVISIONALLY APPROVED	PROVISIONAL LICENSE	FINAL LICENSE	COMMENCE OPERATION	TOTAL
Craft Marijuana Cooperative	3	-	0	1	2	0	0	6
Marijuana Courier License	8	-	0	0	5	1	5	19
Marijuana Courier Pre-Certification	15	74	-	-	-	-	-	89
Independent Testing Laboratory	6	-	0	1	5	0	8	20
Marijuana Cultivator	67	-	2	28	164	31	62	354
Marijuana Delivery Operator License	13	-	0	0	1	0	0	14
Marijuana Delivery Operator Pre-Certification	14	48	-	-	-	-	-	62
Marijuana Microbusiness	8	-	0	4	13	2	4	31
Marijuana Product Manufacturer	48	-	1	30	120	13	55	267
Marijuana Research Facility	7	-	0	0	0	0	0	7
Marijuana Retailer	63	-	1	27	165	11	176	443
Marijuana Transporter with Other Existing ME License	0	-	0	3	2	0	3	8
Microbusiness Delivery	0	2	0	0	0	0	1	3
Third Party Transporter	7	-	0	0	1	0	2	10
Total	259	124	4	94	478	58	316	1,333

Source: Massachusetts Cannabis Control Commission

Dispensary Statistics

Table 2: Basic Analysis Data & Calculations, by State: 2020

State	Year Adult-Use Legalized	21+ Population	Revenue	Dispensaries (2021)	Dispensaries / 100,000	Revenue / Dispensary
Alaska	2014	542,152		145	26.7	
Arizona	2020	5,486,239	$1,030,000,000	79	1.4	$13,037,975
California	2016	30,131,464	$4,101,540,638	740	2.5	$5,542,622
Colorado	2012	4,347,644	$2,191,091,679	812	18.7	$2,698,389
Illinois	2019	9,570,274	$1,034,790,099	96	1.0	$10,779,064
Maine	2016	1,062,570	$4,706,160	15	1.4	$313,744
Massachusetts	2016	5,426,264	$702,407,378	84	1.5	$8,361,993
Michigan	2018	7,513,559	$984,700,000	535	7.1	$1,840,561
Montana	2020	811,418				
Nevada	2016	2,524,682	$786,479,410	80	3.2	$9,830,993
Oregon	2014	3,249,774	$1,111,027,558	748	23.0	$1,485,331
Vermont	2018	491,627		7	1.4	
Virginia	2021	6,473,738				
Washington	2012	5,783,473	$1,266,224,177	566	9.8	$2,237,145
Nevada Counties						
Clark	2016	1,878,401	$609,167,054	57	3.0	$10,687,141
Washoe	2016	387,180	$111,585,750	15	3.9	$7,439,050

Note: Blanks denote data not available.
Sources: Various

Source: Nevada Cannabis Dispensary Market Overview Technical Memorandum

Market Structure

Market Structure	Number of Firms	Barriers to Entry	Market Power
Perfect Competition	∞	None	None
Monopolistic Competition	Many	Low	Low
Oligopoly	Few	High	Medium
Monopoly	1	Blocked	High

Research Question: What is the relationship between dispensaries per capita and revenue per dispensary?

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Panel Data

A panel has the form

$$X_{it}, \quad i = 1, \ldots, N, \quad t = 1, \ldots, T,$$

where i is the individual dimension and t is the time dimension.

A general panel data regression model is written as

$$y_{it} = \alpha + \beta' X_{it} + u_{it}$$

where

$$u_{it} = \mu_i + v_{it}$$

Estimation with a **fixed effects** or **random effects** model depends on assumptions about μ_i, the individual-specific, time-invariant effects.
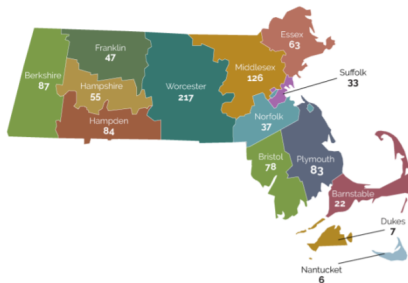
Future work: Look at geographic distribution of licensees

Cannabis
Control
Commission
COMMONWEALTH OF MASSACHUSETTS

Licensing Applications | November 18, 2021

The totals below are the total number of licenses by county.

COUNTY	#	+/-
BARNSTABLE	22	
BERKSHIRE	87	+2
BRISTOL	78	
DUKES	7	
ESSEX	63	+1
FRANKLIN	47	
HAMPDEN	84	+2
HAMPSHIRE	55	
MIDDLESEX	126	+5
NANTUCKET	6	
NORFOLK	37	+1
PLYMOUTH	83	+2
SUFFOLK	33	+2
WORCESTER	217	+2
TOTAL	945	+17

Thank you for coming.