Cannlytics

Cannabis Data Science

Saturday Morning Statistics

December 18th, 2021

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

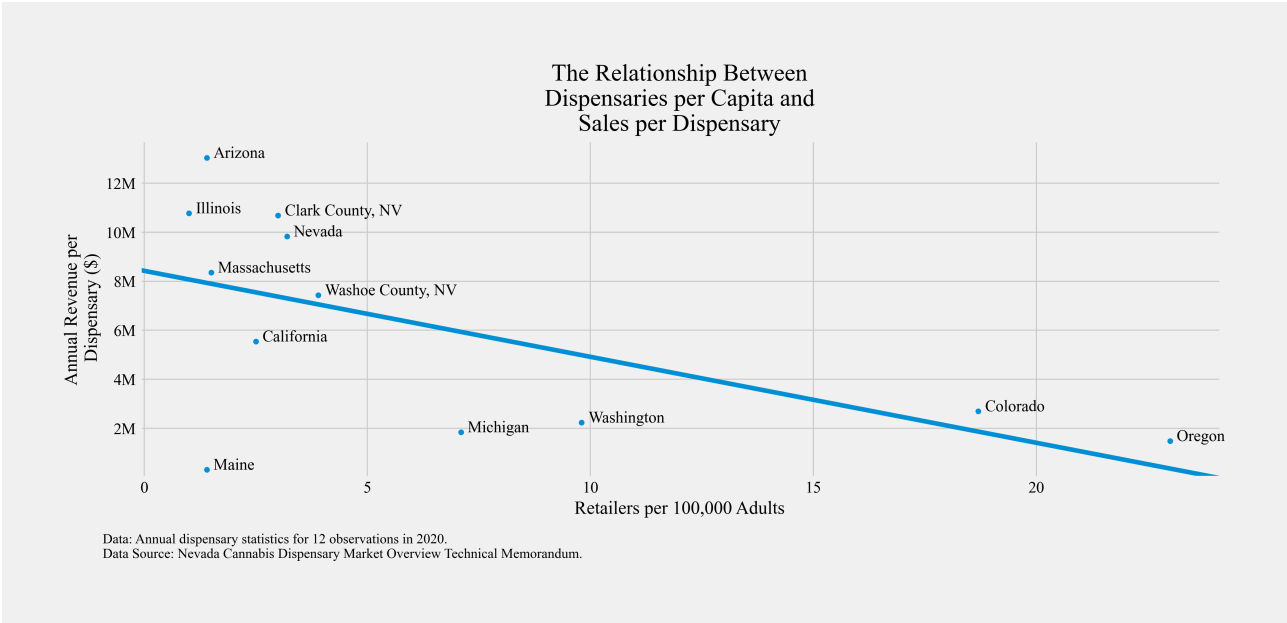

Table 2: Basic Analysis Data & Calculations, by State: 2020

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

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.

Thank you for coming.

Take some time and discuss any conclusions drawn.