

Changes in Colorado Alcohol Distribution Law:

Preliminary evidence from scanner data on changes in household retail alcohol purchase patterns

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- Policy changes have reshaped the Colorado alcohol retail market. Starting in January 2019, licensed retailers could sell full-strength beer. The number of retail liquor licenses held by a single entity is set to increase over time.
- CO households have re-allocated part of their alcohol expenditure. The value of alcohol purchases in CO liquor stores appears steady in the 2015-2019 period, however, in 2019, beer purchases declined sharply. Other alcohol retailers saw overall higher purchases, and a spike in beer purchases in 2019.

Effective January 1, 2019, Colorado Senate Bill (SB) 18-243 allowed all retailers with a fermented malt beverage license to sell full-strength (alcohol content at or above 3.2%) beer for off-premises consumption. Furthermore, SB 16-197 increased the limit of retail liquor licenses held by a single entity from one to two in 2017, with further increases scheduled in 2022 (three licenses) and 2027 (four). These regulatory changes are likely to reshape the Colorado beer market as consumers may modify their shopping destination or purchase basket, and producers adapt to new demands from retailers they traditionally did not sell to.

We use five years (2015-2019) of Nielsen Homescan Data¹ (henceforth “Homescan”) to understand how alcohol purchases by Colorado households changed throughout the period when the deregulation laws came into effect. Specifically, study how Colorado households substituted across alcohol types (beer, wine, and hard liquors) and retailer types (liquor stores and other alcohol retailers²), presenting some preliminary evidence of the overall changes in the Colorado alcohol retail market.

Panelists participating in the Homescan data collection use an at-home scanner to record all purchases made after each shopping trip. These records include alcoholic products, categorized as beer, wine, and hard liquor. The data contain information on household composition, and on all recorded purchases, including individual products purchased, and when and where purchases are made. Overall, there are sixty-six retail channels that are covered in the Homescan data. The top five retail channels in terms of number of visits are grocery stores, discount stores, dollar stores, warehouse clubs, and drug stores. In Colorado, the top four retail channels of interest for alcohol purchases are liquor stores, grocery stores, discount stores, and warehouse clubs.

¹ Researchers' own analyses was based in part on data from Nielsen Consumer LLC and marketing databases provided through the NielsenIQ Datasets at the Kilts Center for Marketing Data Center at The University of Chicago Booth School of Business. The conclusions drawn from the NielsenIQ data are those of the researchers and do not reflect the views of NielsenIQ. NielsenIQ is not responsible for, had no role in, and was not involved in analyzing and preparing the results reported herein.

² We classify alcohol retail channels into liquor stores and other alcohol retailers. Liquor stores are the retailers eligible to hold liquor stores licenses. Other alcohol retailers are retailers that can hold both fermented malt beverage licenses or liquor-licensed drugstore licenses, such as grocery stores or big-box stores (warehouse clubs).

During each year, about 1,200 Colorado households participate in the Homescan data collection. As households rotate in and out of the data collection process, over the course of the five years considered in this analysis (2015-2019), the data include a total number of 1,950 participating households. The subsample used in this study is comprised by 1,419 households who reported at least one alcoholic beverage purchase during our study period, referred to as “Alcohol Purchasers”³.

Table 1 shows total retail household alcohol purchases of beer, wine, and hard liquor by year. Retail alcohol purchases in the sample totaled at around \$210 million between 2015 to 2017 and then increased to reach \$269 million in 2019. The proportion of each alcohol category fluctuated over the years. The proportion of beer purchases was 34% in 2015 and decreased by about 5 points to reach 30% in 2016 and 2017. The proportion of wine purchases was 28%, 27%, and 31% in 2015 to 2017, respectively. In 2019, when SB 18-243 came into effect, the proportion of beer purchases increased by 9 points to reach 39%, capturing share from hard liquor (-4%) and wine (-5%) purchases alike. Despite the redistribution of shares, expenditures in alcoholic products kept growing across all categories from 2017 to 2019, with beer increasing by 67% in value, wine by 8%, and hard liquor by 14%. Given these values, it is possible that the deregulation of retail alcohol distribution played a role in stimulating the growth of the Colorado alcohol market.

Table 1. Annual value of total retail alcohol purchases (in \$ Million) by Colorado households (2015-2019) by alcohol type, and year.

Alcohol type	Annual value of alcohol purchases (\$ Million)				
	2015	2016	2017	2018	2019
Beer	71.26	64.80	63.47	82.57	106.00
Wine	58.79	58.54	65.83	73.20	71.30
Hard liquor	76.43	90.02	79.84	78.31	91.39

Source: authors’ elaboration on Nielsen Homescan data.

Table 2 shows the annual numbers of unique Universal Product Codes (UPCs) purchased, and the total value of household retail alcohol purchases by retailer type and year. The top left panel of Table 2 shows the total number of unique UPCs purchased each year in liquor stores. We observe a decreasing pattern in the number of liquor stores’ UPCs sold, with a sharp drop in 2019. Overall, about 60% of the 324 fewer UPCs purchased in liquor stores in 2019 compared to 2015, are beer products (-195 UPCs). The opposite pattern is observed for UPCs purchased at stores other than liquor stores, showcased on the lower-left panel of Table 2. The number of unique UPCs purchased grew, especially in 2019, mostly because of the increase in beer and wine UPCs. Interestingly, the sharpest increase in the number of unique beer UPCs purchased is recorded in 2019, when SB 18-243 came into effect, while for wine the biggest increase occurred in 2018, the year after SB 16-197 allowed two retail liquor licenses to be held by a single entity. In the right panels of Table 2 we show the total value of alcohol purchases in liquor stores (top panel) and other stores (bottom panel), which tell a similar story. While the total value of purchases in liquor stores remains relatively stable in the period in analysis (showing a decline of about -

³ We compared summary statistics of the Colorado households in the Homescan data, and those of the Alcohol Purchasers subsample, with official statistics obtained from the US [Bureau of Census website](#). The characteristics of the Colorado Homescan households are in line with those reported by official statistics. Additionally, differences between the subsample of alcohol consumers and the total Colorado Homescan sample are negligible. All the values reported in Table 1 and Table 2 are obtained using the weights provided by Nielsen to project the sampled households to be nationally representative.

6%), alcoholic purchases in other retailers surged in value, so that the proportion of liquor stores purchases shrank from 73.3% to 56.2% of the total market. The total value of alcohol purchases in other retailers grew by approximately 157% from 2015 to 2019, and the largest increase comes from the spike in the value of household beer purchases (from \$23.6 million to \$71.4 million, more than a 200% increase).

Table 2. Number of unique UPCs purchased and total value of alcohol purchased by Colorado households (2015-2019) by retailer type, alcohol type, and year.

Retailer Type	Alcohol type	Number of unique UPCs					Total value of alcohol purchases*				
		2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Liquor Stores	Beer	534	530	499	490	339	47.7	43.2	43	45.2	34.6
	Wine	1008	975	918	913	941	47.1	42.7	50.1	51.9	47.7
	Hard liquor	701	758	721	708	639	66	63.7	60.3	62.4	68.7
	<i>Total</i>	<i>2243</i>	<i>2263</i>	<i>2138</i>	<i>2111</i>	<i>1919</i>	<i>160.8</i>	<i>149.6</i>	<i>153.4</i>	<i>159.5</i>	<i>151</i>
Other alcohol retailers	Beer	219	238	270	277	482	23.6	21.6	20.5	37.4	71.4
	Wine	355	414	381	454	477	11.7	15.9	15.8	21.3	23.6
	Hard Liquor	206	249	209	216	262	10.5	26.3	19.5	15.9	22.7
	<i>Total</i>	<i>780</i>	<i>901</i>	<i>860</i>	<i>947</i>	<i>1221</i>	<i>45.8</i>	<i>63.8</i>	<i>55.8</i>	<i>74.6</i>	<i>117.7</i>

*Values expressed in \$ Millions.

Source: Authors' elaboration on Nielsen Homescan data.

Overall, our analysis shows that while the value of alcohol purchases in liquor stores in Colorado during the 2015-2019 period remained relatively stable, following the deregulation of the retail alcohol sales, the value of purchases at other alcohol retailers increased. It is also possible that SB 16-197, which allows large entities to hold one more retail liquor license may have contributed to the growth in unique wine UPCs purchased at other alcohol retailers observed in 2018. Also, SB 18-243, which allows the distribution of full-strength beer in other alcohol retailers, may be a large contributor of the increase in purchases from other alcohol retailers observed in 2019, which is driving the growth of the Colorado retail alcohol market. As shown by the data, in 2019, the number of unique beer UPCs and the value of beer purchased decreased in liquor stores but increased in other alcohol retailers: it is possible that SB 18-243 may have resulted in households re-allocating their purchases of beer across channels. Additional research is needed to quantify the different effects that the changes in Colorado retail alcohol distribution law may have had on the State's alcohol retail markets.