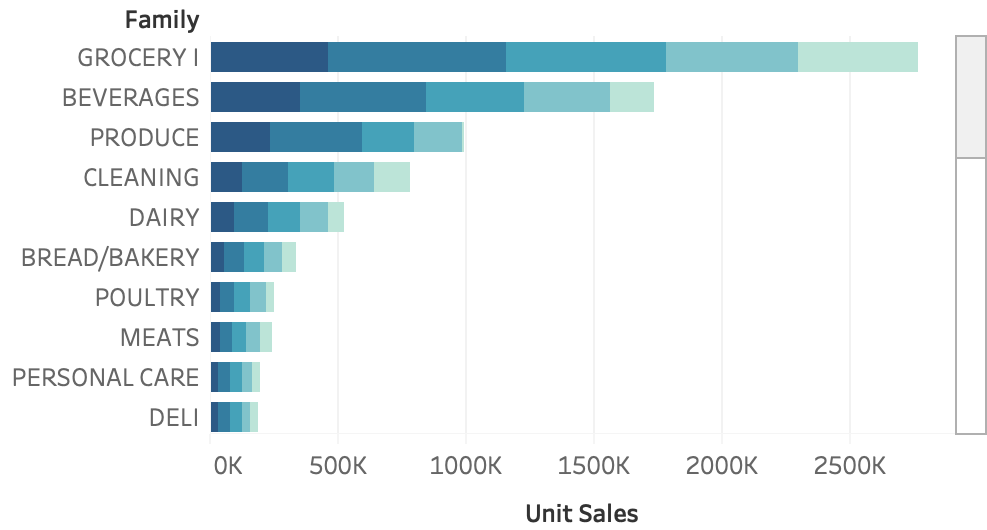# Supermarket_Sales_Analysis
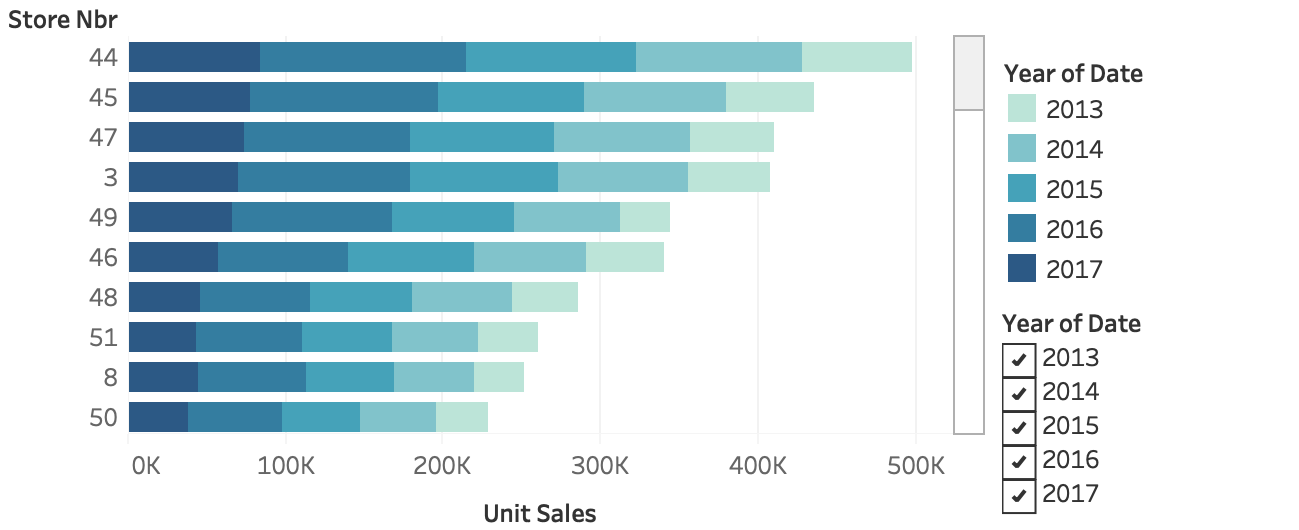
Weicheng Zhang

Cumulative Sales
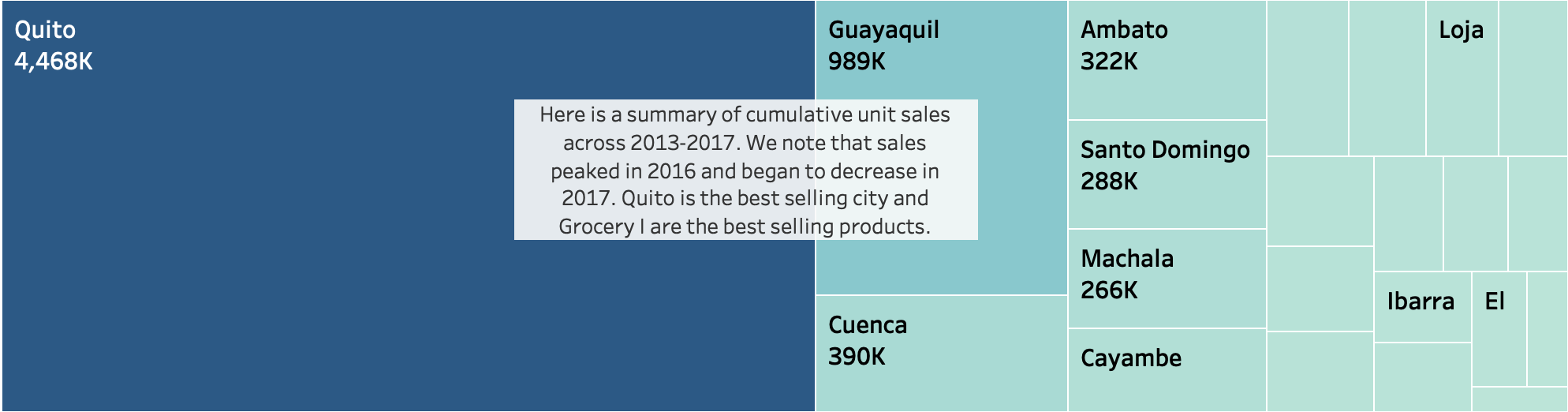
Cumulative Sales by Family in All
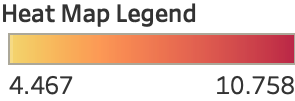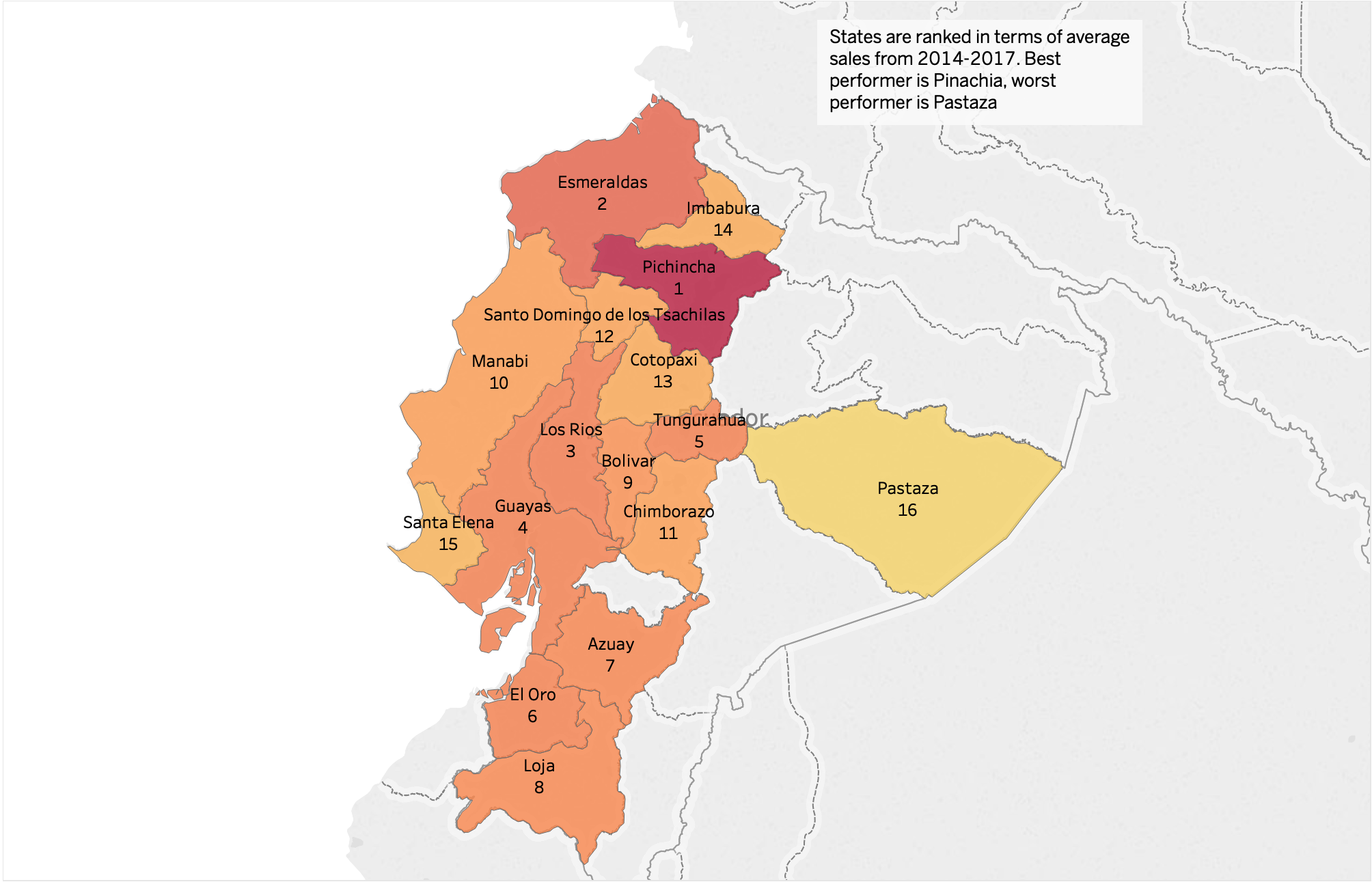
Family

GROCERY I	
BEVERAGES	
PRODUCE	
CLEANING	
DAIRY	
BREAD/BAKERY	
POULTRY	
MEATS	
PERSONAL CARE	
DELI	

0K 500K 1000K 1500K 2000K 2500K

Unit Sales

Cumulative Sales by Store in All

Store Nbr

44	
45	
47	
3	
49	
46	
48	
51	
8	
50	

0K 100K 200K 300K 400K 500K

Unit Sales

Unit Sales
33K ▬▬▬ 4,468K

Year of Date
- 2013
- 2014
- 2015
- 2016
- 2017

Year of Date
- ✔ 2013
- ✔ 2014
- ✔ 2015
- ✔ 2016
- ✔ 2017

Cumulative Sales by City in 2013, 2014, 2015 and 2 more

Quito
4,468K

Guayaquil
989K

Ambato
322K

Loja

Santo Domingo
288K

Here is a summary of cumulative unit sales across 2013-2017. We note that sales peaked in 2016 and began to decrease in 2017. Quito is the best selling city and Grocery I are the best selling products.

Machala
266K

Ibarra   **El**

Cuenca
390K

Cayambe

Heat Map Legend

4.467 10.758

States are ranked in terms of average sales from 2014-2017. Best performer is Pinachia, worst performer is Pastaza

Esmeraldas 2

Imbabura 14

Pichincha 1

Santo Domingo de los Tsachilas 12

Manabi 10

Cotopaxi 13

Tungurahua 5

Los Rios 3

Bolivar 9

Pastaza 16

Santa Elena 15

Guayas 4

Chimborazo 11

Azuay 7

El Oro 6

Loja 8

Ecuador

State Selector

- ✔ Azuay
- ✔ Bolivar
- ✔ Chimborazo
- ✔ Cotopaxi
- ✔ El Oro
- ✔ Esmeraldas
- ✔ Guayas
- ✔ Imbabura
- ✔ Loja
- ✔ Los Rios
- ✔ Manabi
- ✔ Pastaza
- ✔ Pichincha
- ✔ Santa Elena
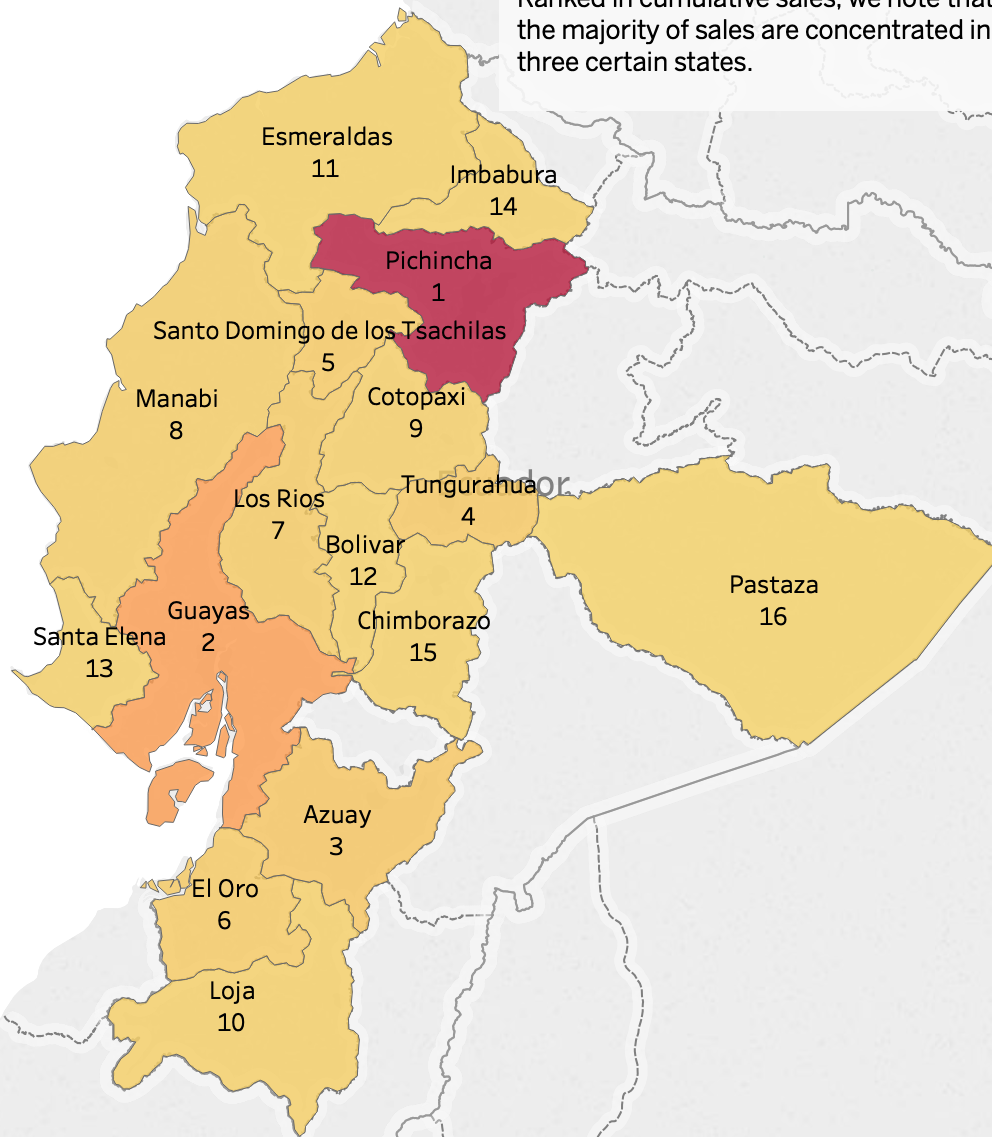- ✔ Santo Domingo de los ..
- ✔ Tungurahua

Ranked in cumulative sales, we note that the majority of sales are concentrated in the three certain states.
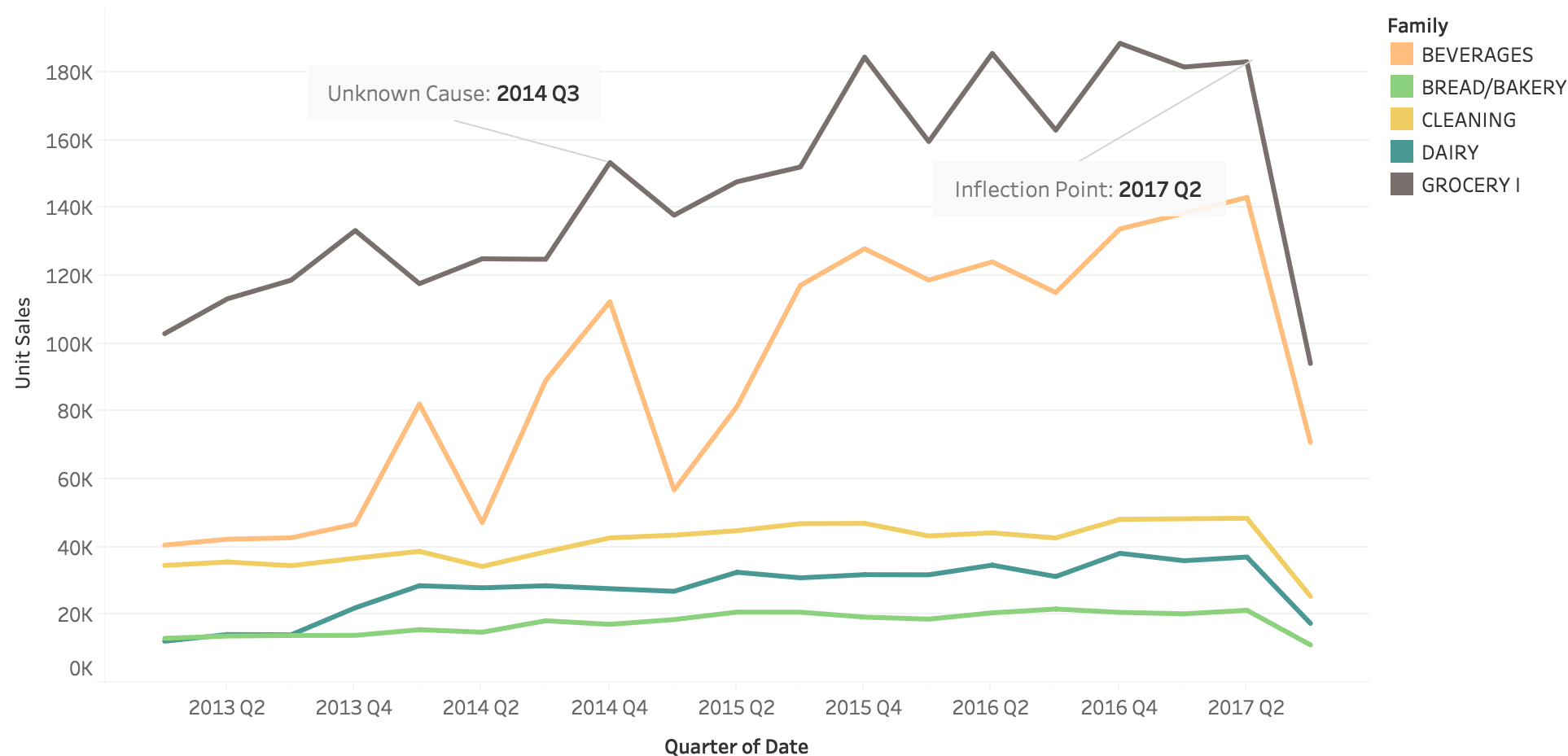
Heat Map Legend

32,746   4,691,038

State Selector

- ✔ Azuay
- ✔ Bolivar
- ✔ Chimborazo
- ✔ Cotopaxi
- ✔ El Oro
- ✔ Esmeraldas
- ✔ Guayas
- ✔ Imbabura
- ✔ Loja
- ✔ Los Rios
- ✔ Manabi
- ✔ Pastaza
- ✔ Pichincha
- ✔ Santa Elena
- ✔ Santo Domingo de los ..
- ✔ Tungurahua

Esmeraldas 11
Imbabura 14
Pichincha 1
Santo Domingo de los Tsachilas 5
Manabi 8
Cotopaxi 9
Los Rios 7
Tungurahua 4
Bolivar 12
Pastaza 16
Santa Elena 13
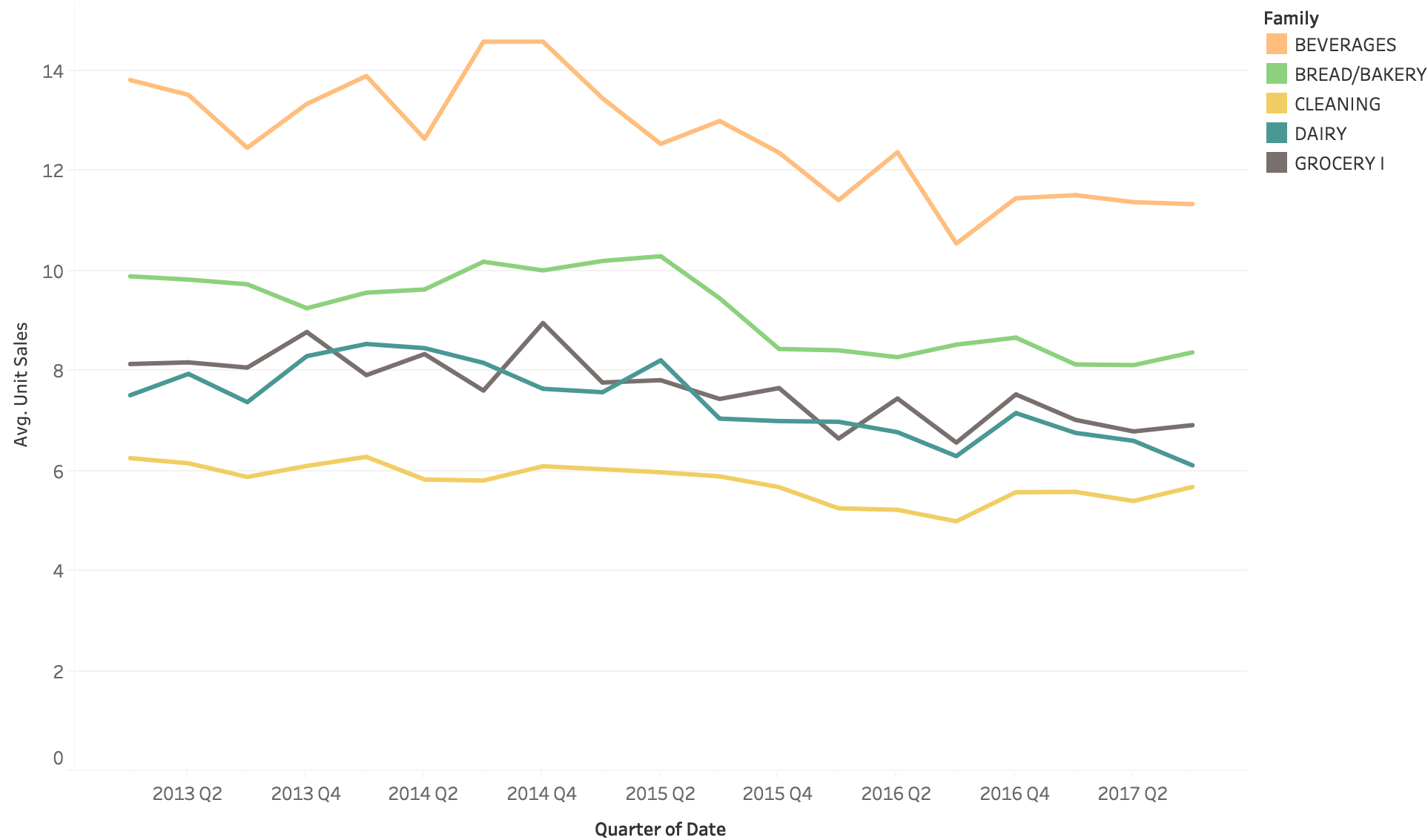Guayas 2
Chimborazo 15
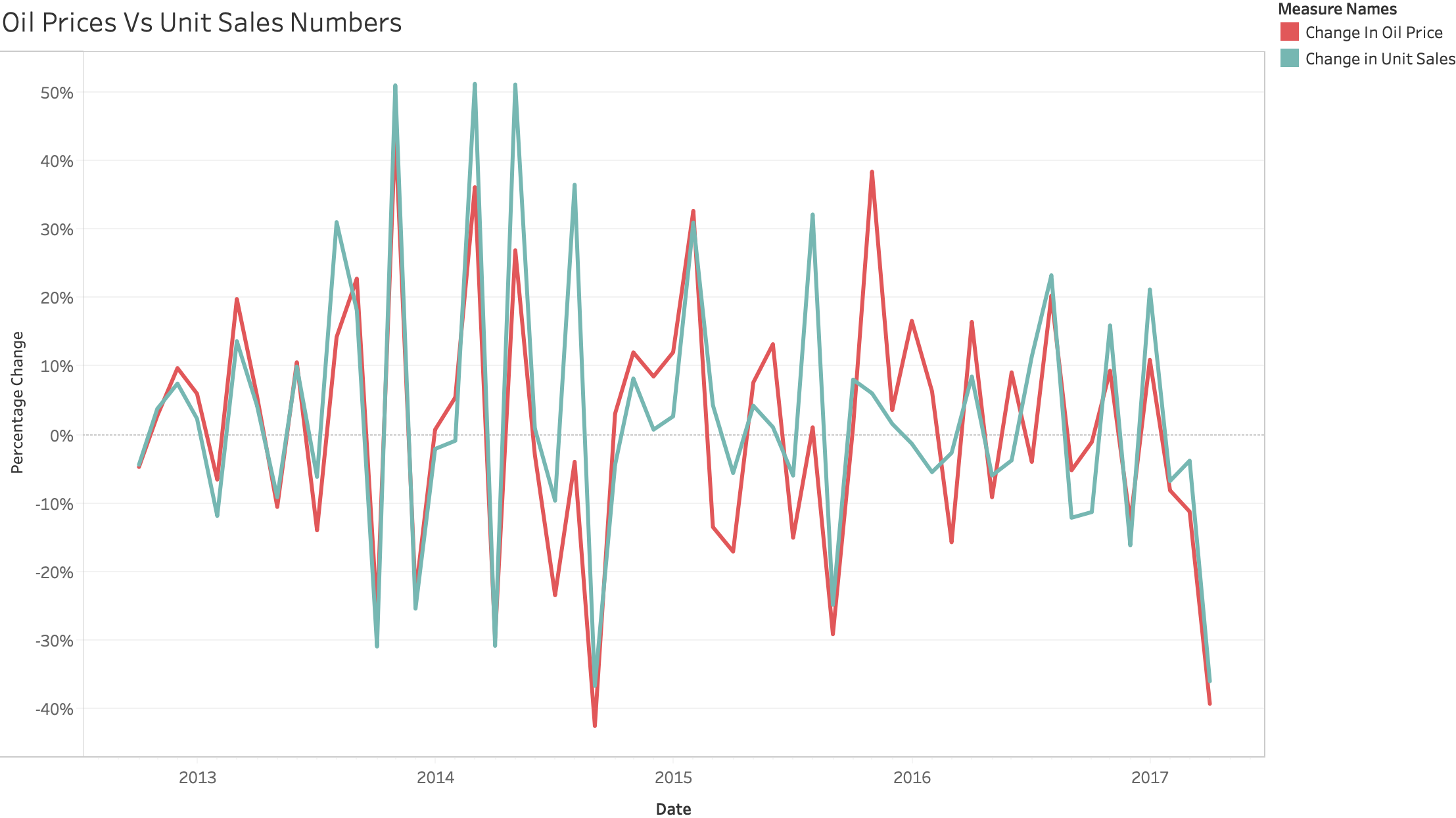Azuay 3
El Oro 6
Loja 10

Cumulative Sales By Family

An inflection point occured in Q1-Q2 2017. There is also an unknown cause of decrease in sales in Q3 2014. We can also note here that dairy, cleaning and bread items are relatively inelastic. The drop in 2017 is due to incomplete data.
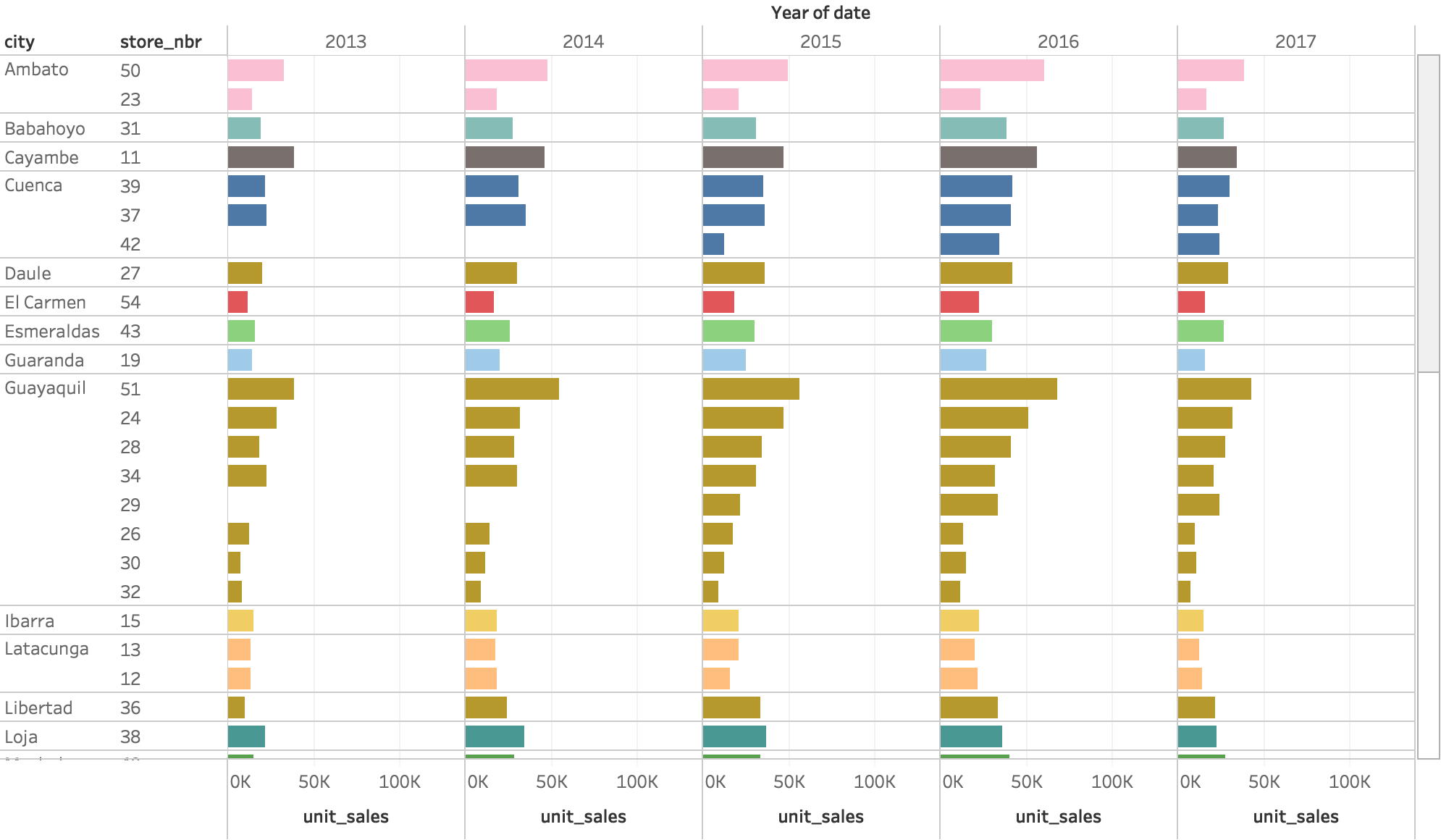
Average Sales By Family

Average sales by family is relatively consistent.

Oil Prices Vs Unit Sales Numbers

Oil price of Ecuador and unit sales show high correlation. No information on causality.
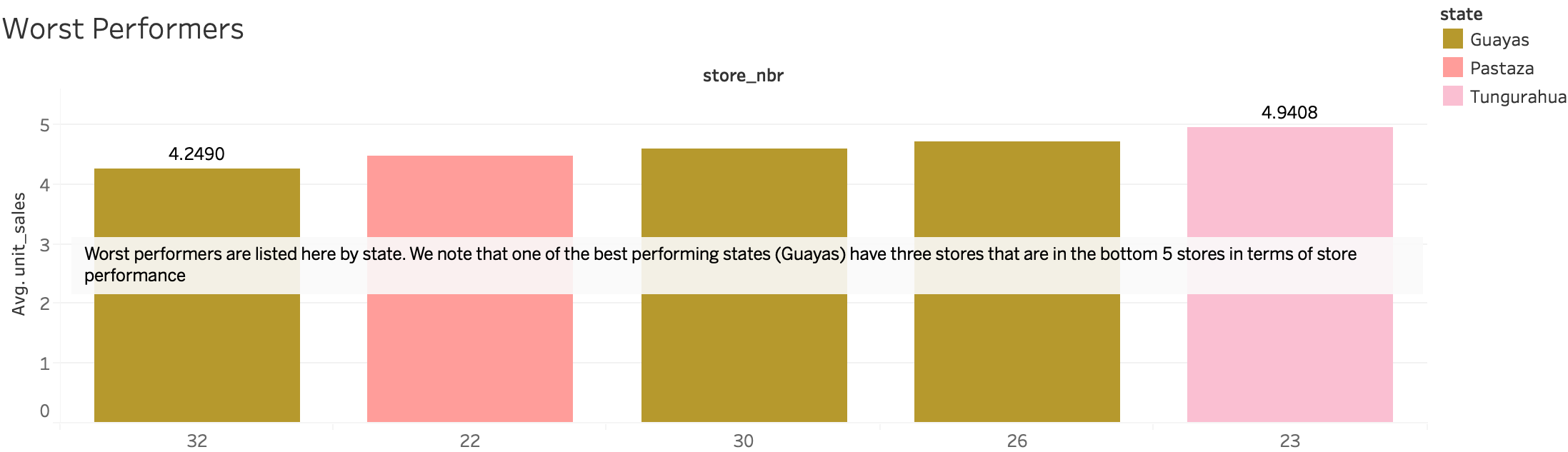
Cumulative Sales By Stores and City

State Selecter
- ✔ Azuay
- ✔ Bolivar
- ✔ Chimborazo
- ✔ Cotopaxi
- ✔ El Oro
- ✔ Esmeraldas
- ✔ Guayas
- ✔ Imbabura
- ✔ Loja
- ✔ Los Rios
- ✔ Manabi
- ✔ Pastaza
- ✔ Pichincha
- ✔ Santa Elena
- ✔ Santo Domingo de los ..
- ✔ Tungurahua

city	store_nbr	2013	2014	2015	2016	2017
Ambato	50					
	23					
Babahoyo	31					
Cayambe	11					
Cuenca	39					
	37					
	42					
Daule	27					
El Carmen	54					
Esmeraldas	43					
Guaranda	19					
Guayaquil	51					
	24					
	28					
	34					
	29					
	26					
	30					
	32					
Ibarra	15					
Latacunga	13					
	12					
Libertad	36					
Loja	38					

Year of date — unit_sales (0K, 50K, 100K)

Best performing cities are Quito and Esmeraldas. Quito has 18 stores, and its sales have made up more than half of the total sales from year 2013 to 2017. In this cohort, 32 is underperforming. Also, differences are large in the same city. This may mean that some stores can be moved to other locations.

Worst Performers

state
- Guayas
- Pastaza
- Tungurahua

Avg. unit_sales

Worst performers are listed here by state. We note that one of the best performing states (Guayas) have three stores that are in the bottom 5 stores in terms of store performance

4.2490 — 32 (Guayas)

4.9408 — 23 (Tungurahua)

22 (Pastaza)

30 (Guayas)

26 (Guayas)

Worst Units Sales by Family

Family

Avg. Unit Sales

1.4982 — HARDWARE

1.9753 — BEAUTY

Worst unit sales in terms of family: hardware and babycare needs attention.

HARDWARE   BABY CARE   HOME APPLIANCES   AUTOMOTIVE   BEAUTY