
Visualization of SBA Disaster Loan Data for FY 2017-2019

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Business Problem

Small Business Owners need to understand how the market works and where these disaster loans are generally distributed. Our question is what region is more likely to receive a small business loan? The Dataset provides verified loss and approved loan amount totals for both home and disaster loans, however we will be focused on the business aspect and it is segmented by city, county, zip code and state.

Visual Objective:

We would like to present users with the ability to see trends in which state/city in the US these disaster loans are being distributed. We will also select certain years from the last three years and see if there are any growing or declining trends in the dataset.

Design Approach:

Making a map displaying cities in the US where total amount of disaster loans were disbursed from 2017-2019 with blue points relaying cities receiving the loan and red points indicating a larger amount. The use of bubble charts to show cities and counties that received the highest total approved loan amount.

Visual Principles Applied

Color: Using a different color for cities with highest loan relief (red), followed by blue for everything else. For both bubble charts, randomized use of colors, with the total approved loan amount city/county having a brighter color.

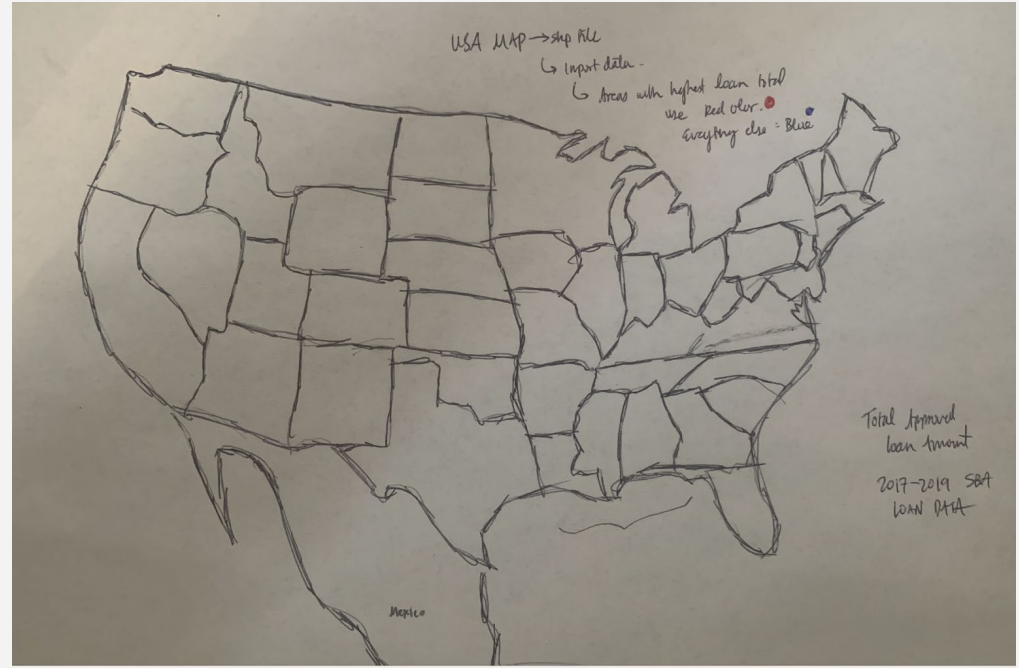
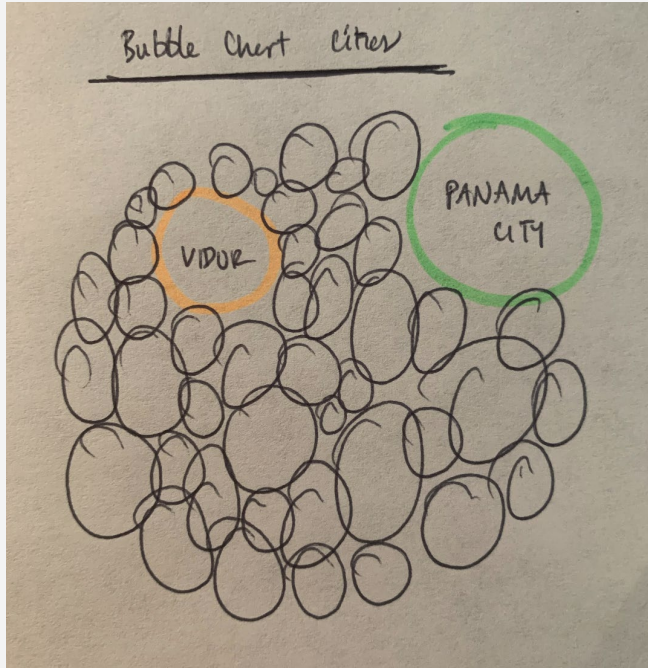
Use of Space: Show information using a map and bubble chart to demonstrate graphical area as well as a scatter chart to show damage property loan distribution.

Context: The bubble chart shows top cities/counties where highest number of disaster loan is dispersed over a three year period. The map shows geographically where loans were dispersed throughout the US.

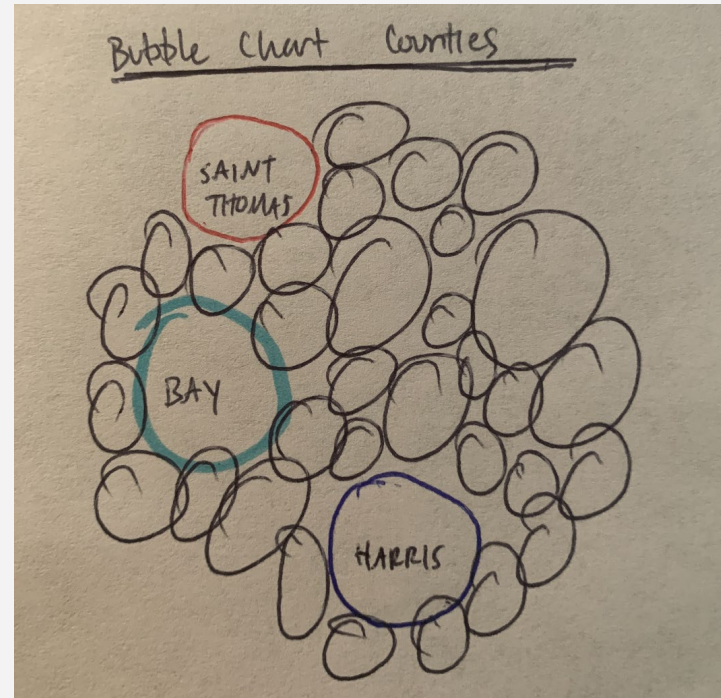
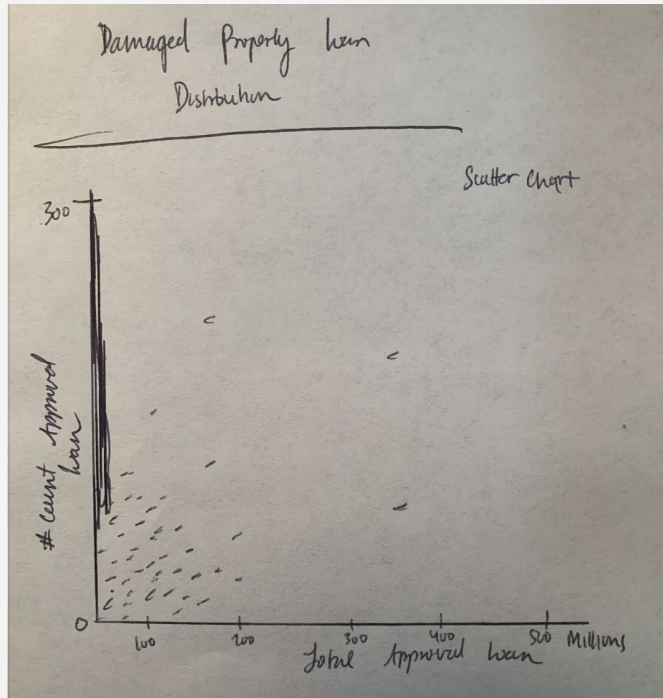
Text: Reduce text as much as possible, use of simple map/bubble chart/scatter chart to understand the information.

Clutter: Reducing clutter of information by displaying the right amount of data/text to explain business problem.

Visual Design (1/2):

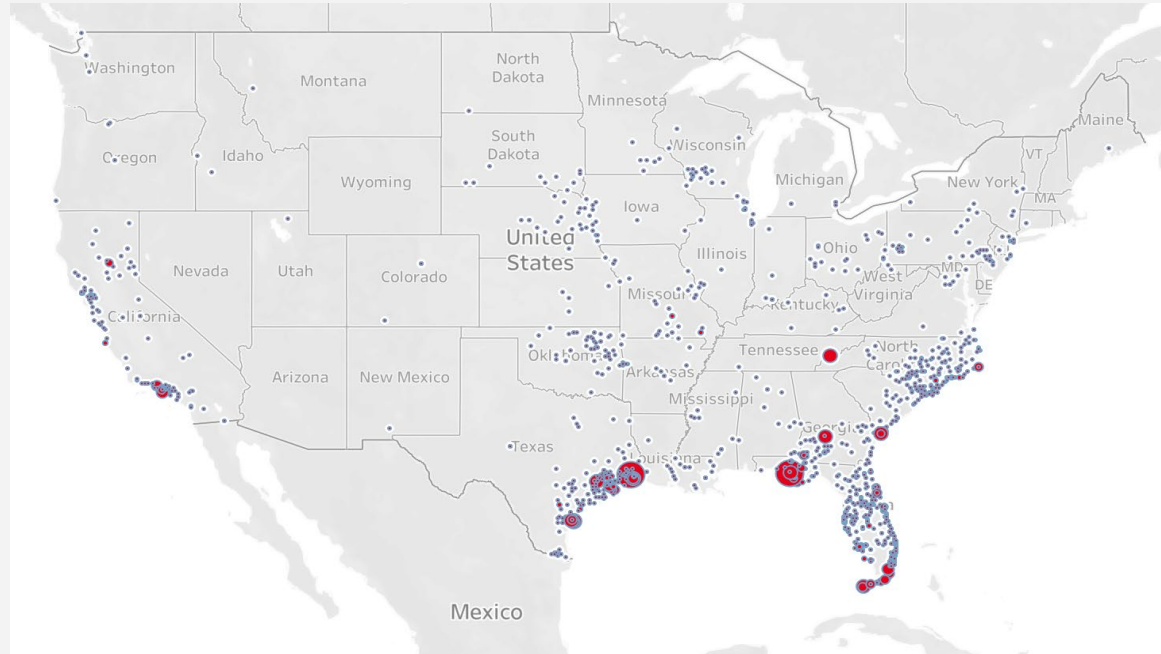


Visual Design (2/2):



Prototype (1/2):

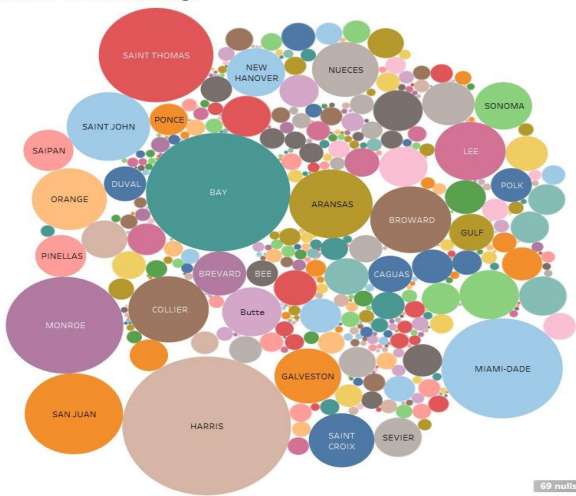
From the prototype map and packed bubble chart, we can conclude that Vidor, TX and Panama City, FL had the highest total approved loan amount from 2017-2019.



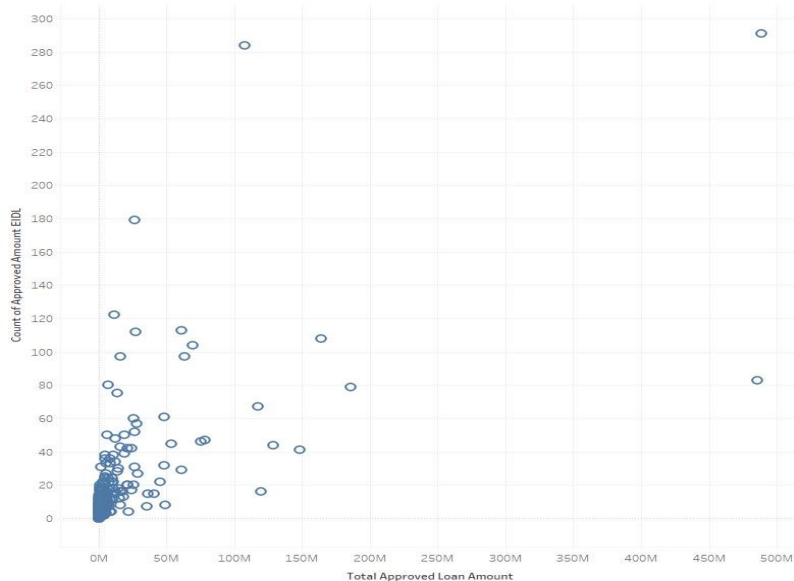
Prototype (2/2):

County Damage Distribution/Magnitude: From 2017-2019, the county distribution of the damage is displayed here. The larger the bubble is, the higher the damage that occurred. Identifying this information can give us actionable insight for future preventative measures as Natural disasters grow more powerful and we are able to mix this data to predict who might need more assistance depending on weather pattern data matching.

Counties with Most Damage



Damaged Property Loan Distribution



Sum of Total Approved Loan Amount vs. count of Approved Amount EIDL. Details are shown for Damaged Property County/Parish Name. The view is filtered on Damaged Property County/Parish Name, which excludes Null.

SBA 2017-2019 Disaster Verified Loss

Verified Loss Real Estate	16,626,004,814
Total Verified Loss	18,334,291,221

Works Cited

- “Open Government Data Sources: The U.S. Small Business Administration.” *Small Business Administration*, www.sba.gov/about-sba/sba-performance/open-government/digital-sba/open-data/open-data-sources.