



SMALL BUSINESS ADMINISTRATION **SBA**

SBA REPORT

ACTIVITIES FROM 1984 TO 2022

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Content

Business Topic	Page 1
Research Questions	Page 2
Number of financed firms by SBA over years.	page 3
Overview % SBA participation	Page 4-5
Top 3 states (charge-off firms)	Page 6
The effect of distance for charge-off firms	Page 7
Relationship between the contribution of SBA and new job	Page 8-9
Segments we have at different times	Page 10
Comparison between New and existing Firms	Page 11
Number of charge-off firms in each industry	Page 12
Charge-off in Urban and Rural	Page 13
Expected Performance in Regions	Page 14
Expected performance in states	Page 15
Expected performance in industries	Page 16

SBA works to ignite change and spark action so small businesses can confidently start, grow, expand, or recover.

Business Topic

Small and medium enterprises in any field in any country are the backbone for progress in its economic status, they contribute to the development of the economy and create jobs as it is their social duty. So, encouragement toward industrial projects and entrepreneurship became important. So, SBA and banks side by side with finance start-ups, and existing firms could launch or complete their activities. Some companies pay loans and others don't. Based on that concern, I focus on what are the reasons behind these companies that fail to pay loans, measure SBA and firms' performance, and in the future, if any listed company requests a loan again, will that request be approved or not?

What is SBA?

SBA is Created in 1953, the U.S. Small Business Administration (SBA) continues to help small business owners and entrepreneurs pursue the American dream. SBA is the only cabinet-level federal agency fully dedicated to small businesses and provides counseling, capital, and contracting expertise as the nation's only go-to resource and voice for small businesses.

Data Source

Kaggle. The dataset contains (899,165) rows and columns 27
Data Preprocessing is needed for transformations, remove null values, strange symbols and make predictions using python.

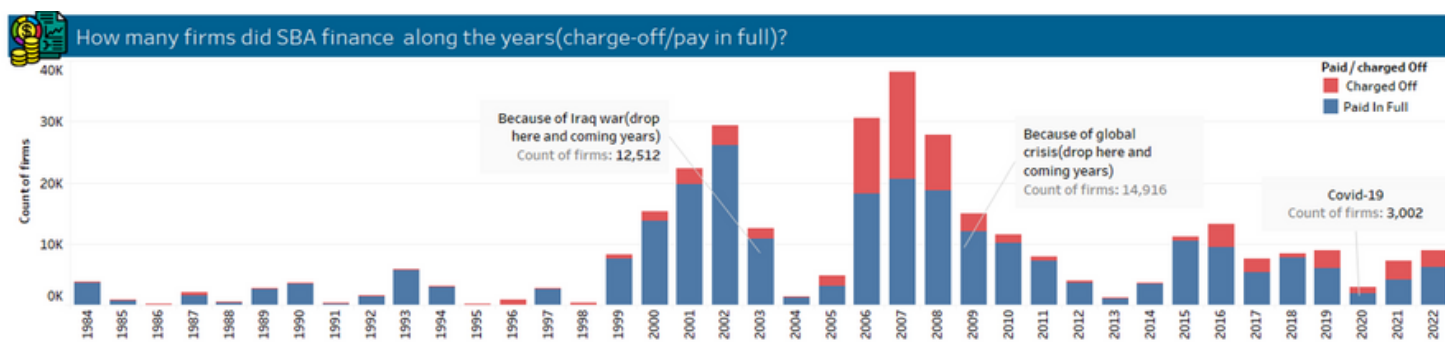
Research Questions:

There are many companies that take loans, some succeed to pay, and others fail to pay the loans. Introduced questions later will cover the main points that should be taken into consideration to measure the performance of SBA and to predict the future.

1. How many firms did SBA finance over the years?
2. What is the % of SBA participation during a great recession? And not in a great recession what was the status?
3. What are the highest states that have a high number of charge-off firms?
4. Does distance (Not the same state) affect Change-off?
5. Does SBA contribution increase the Number of New jobs?
6. Does SBA contribution increase the Number of New jobs? during the Great Recession for default firms
7. How many clusters do we have (charge-off firms)?
8. Had New Business Firms been affected more than Existing businesses by the Global Crisis?
9. Which year has an extremely high number of charge-off firms in these sectors?
10. Does Rural have more charge-off firms than Urban?
11. In the future, How many firms will pay in Full /charge-off in each region?
12. In the future, How many firms will pay in Full /charge-off (same state or not)?
13. In the future, How many firms will pay in Full /charge-off in each industry?

Analysis Section





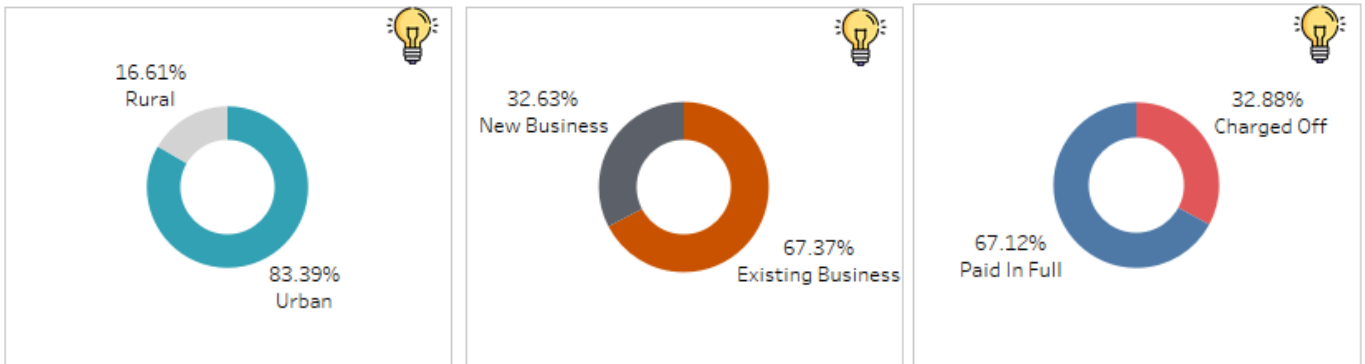
- In the latest 2002, there was Iraq war affected the number of funded firms by SBA. It was in 2003, 12,512 firms, and in 2004, 1,306 firms totally funded, regardless of their status. (Pay in full/charge-off).

In 2008, there was a great recession, when economic status was affected to a high degree. In 2008, 27,882 firms were funded as a total regardless of status (pay in full/charge-off).

- In 2009, only 14,916 firms were funded. As expected after the crisis, there was a drop.
- In 2020, Covid-19 was also the third stage that which the whole world had been affected.

3,002 firms only funded. That was a huge health crisis that led to a drop in economic status since Cholera.

What is % SBA participation during the great recession?



% SBA Participation during Great Recession

% SBA Participation during Great Recession

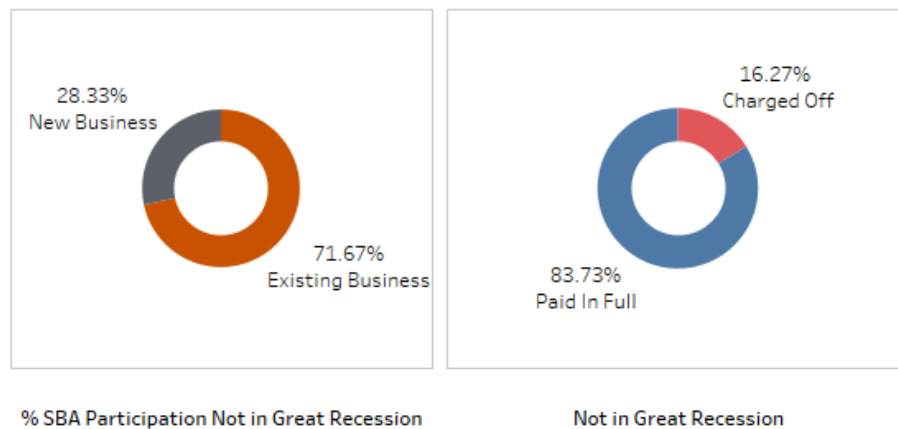
During Great Recession

The great recession was a huge stage that no one would forget its effect on the economic status of the USA and the world as a whole. These graphs show SBA participation in the great recession stage for:

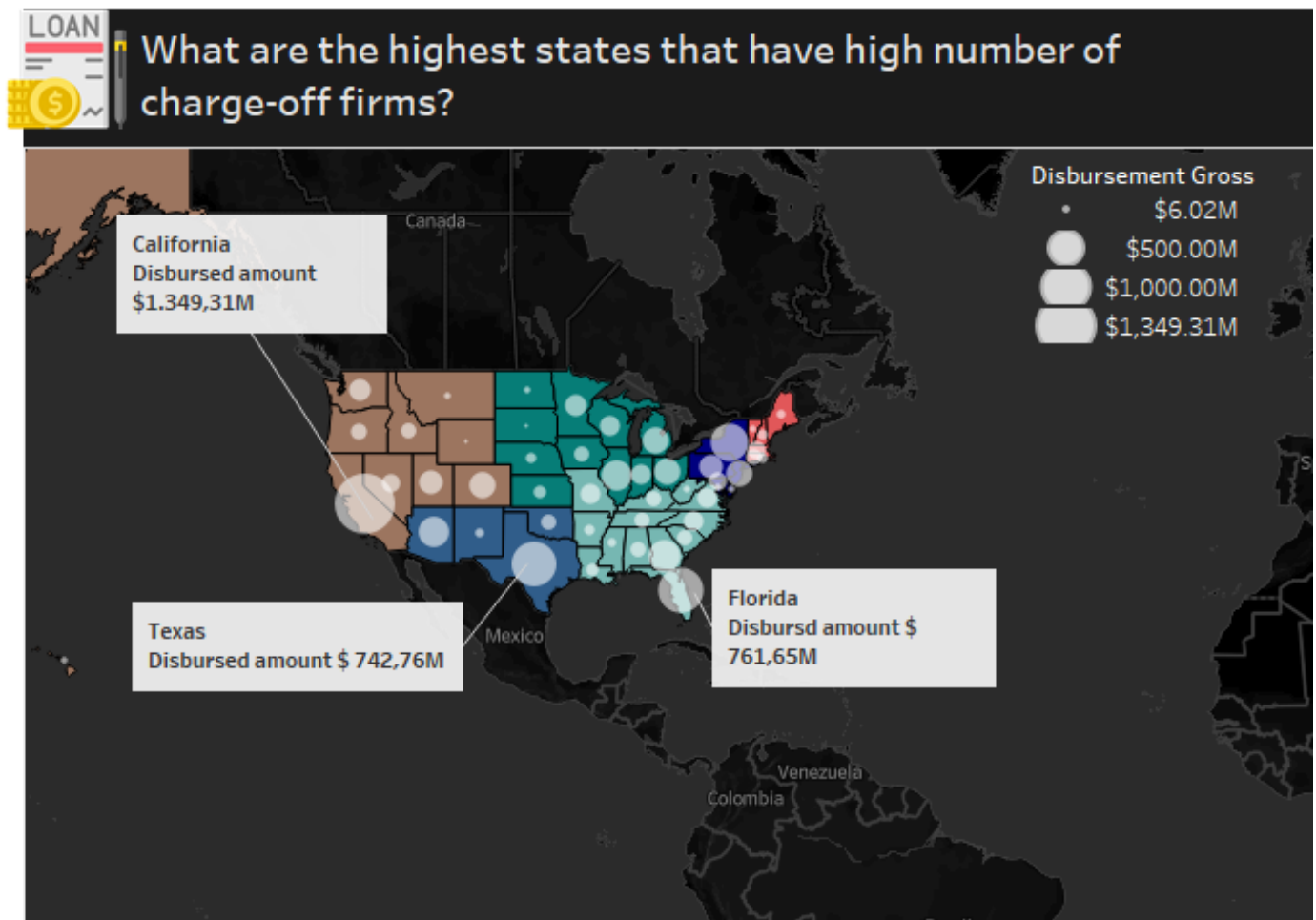
1. urban and rural.
2. Existing business and new business.
 - Existing business (existence in the market for more than 2 years)
 - new business(existence in the market for less than or equal to 2 years).
3. % Firms that are paid in full and charged off.

% SBA participation in Urban was higher than in rural with a percentage of 83.39 %

% SBA participation for existing business was 67. 33% while firms that were able to pay their loan were 67.12%



% SBA participation for existing businesses not in great recession was higher than new businesses with a percentage of 71. 67% while firms that were able to pay their loan were 83.73% The great recession had an effect that percentage of charged-off firms increased with a difference of 16.61% (up)



California, Florida, and Texas are the top 3 states that have a high number of charged-off firms with disbursement amounts of \$ 1,349,31M \$ 761,65M \$ 742,76M respectively



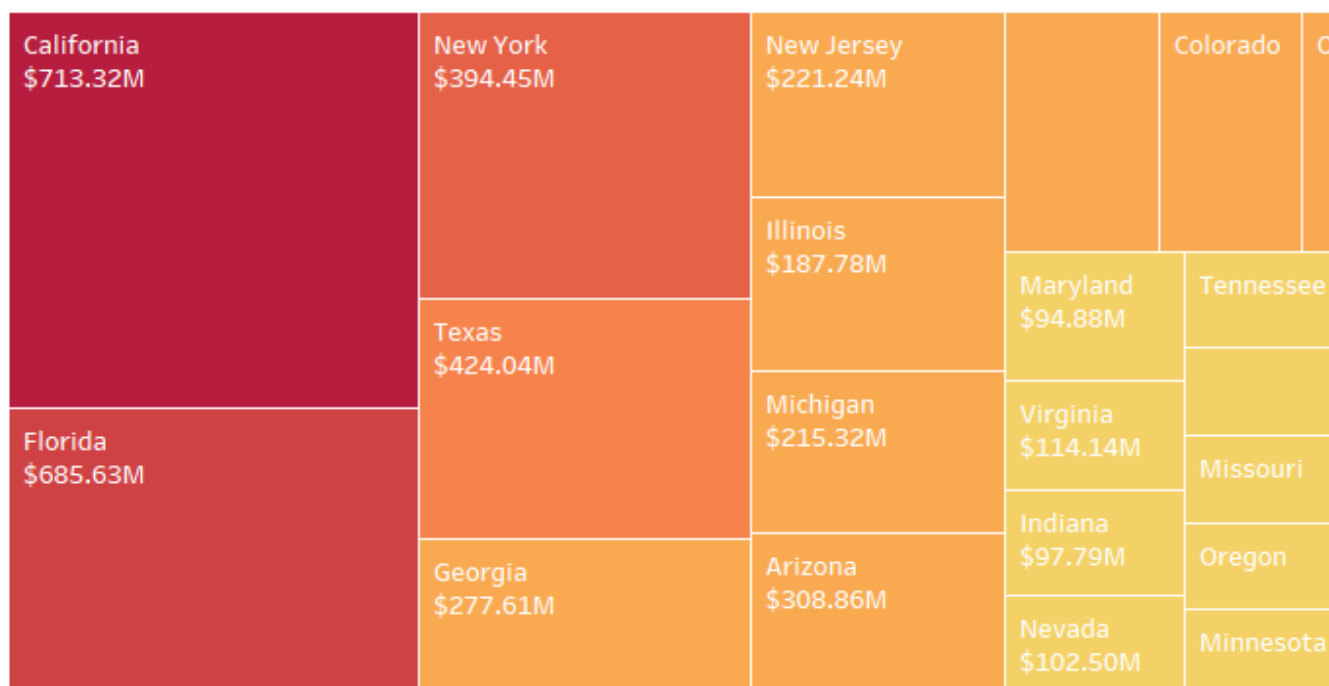
Does distance(Not the same state)affect on Charge-off?

Numer of default firms

24



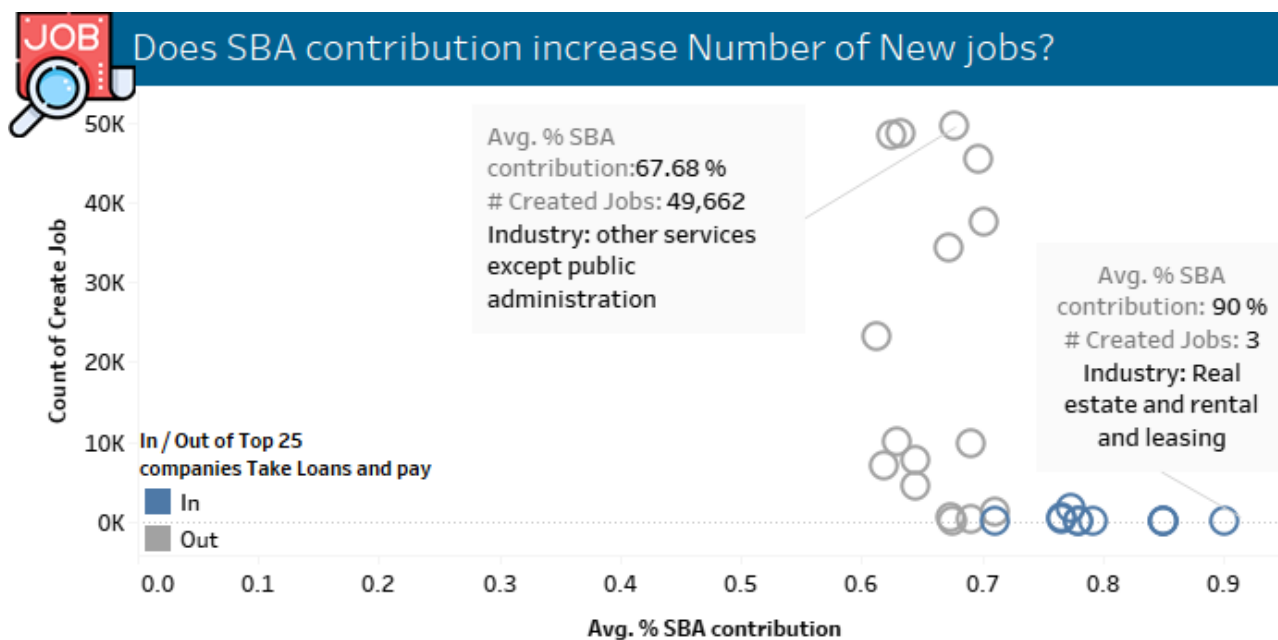
8,052



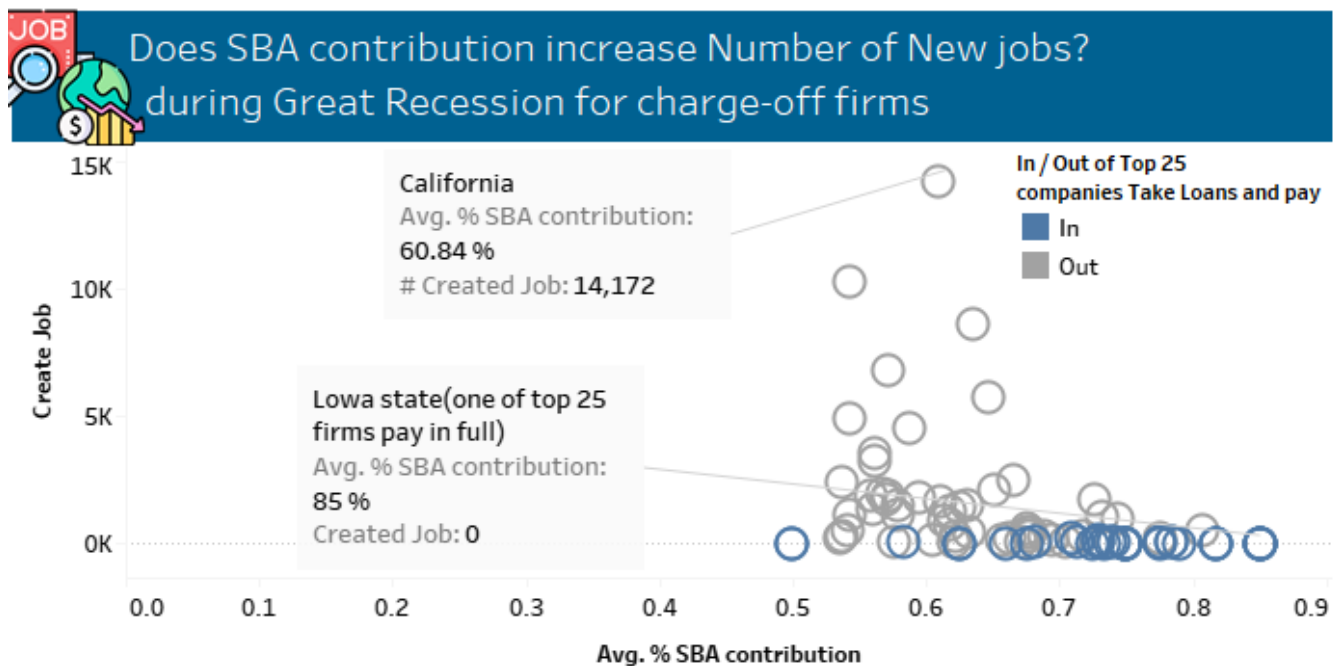
- Yes. Some firms ask for loans where they are in the same state of banks, others are not in the same state.

For firms that are not in the same state as banks, the number that charge-off is higher than for charge-off firms that are in the same state.

- California, Florida, and New York state that have a higher number of charge-off firms not in the same state with disbursement amounts of \$ 713,32M, \$ 685,63M, and \$ 394,45M respectively.

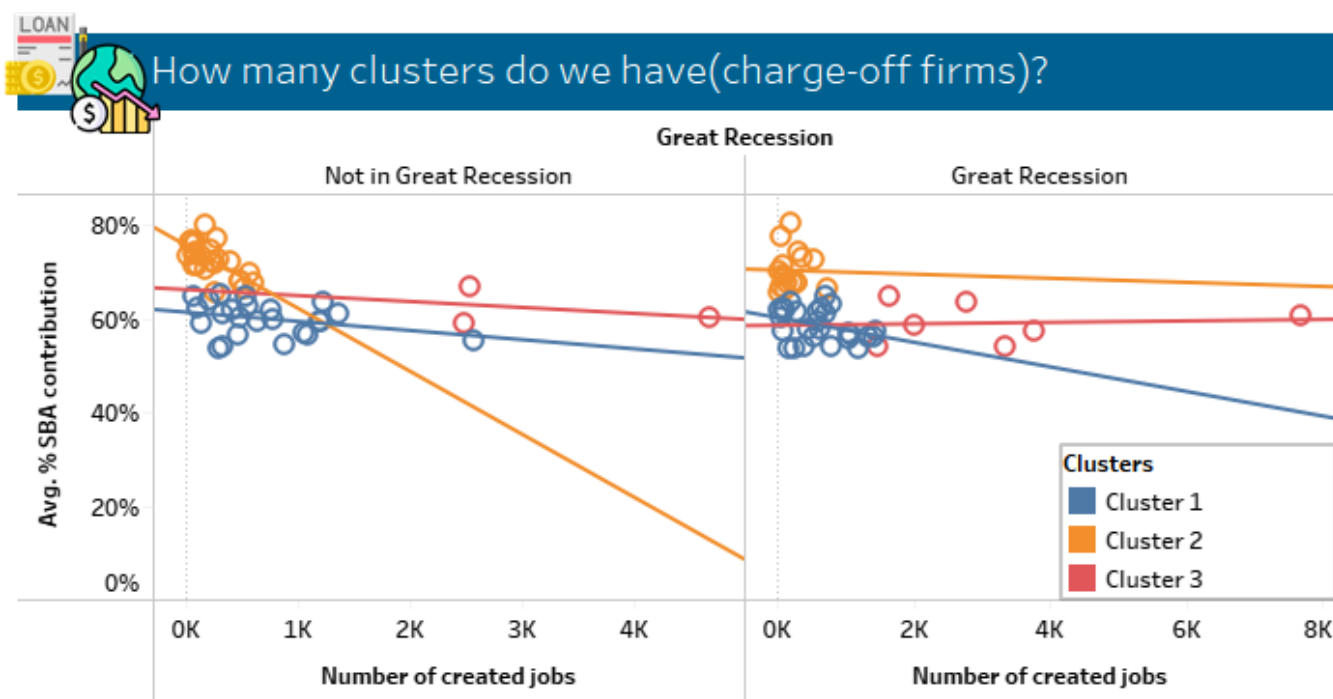


- No. Some firms are fully financed by SBA but created jobs are low while there are less financed firms and several jobs created are higher.
- The number of jobs provided in other service except public administration industry is the highest among other industries. with the contribution of SBA 67.68%, the number of created jobs is 49,662
- The number of jobs created in the real estate industry that is financed by SBA is the lowest among other industries, the number of jobs created is 3, with an average contribution of 90%



- No. During the Great Recession (2008) the number of created jobs in Iowa state (which is one of the top firms that paid in full, that was nearly fully financed by SBA) was the lowest among other states created jobs, it was zero.

While in California the number of created jobs was the highest at 14,172 jobs with an average contribution from SBA of 60.84%

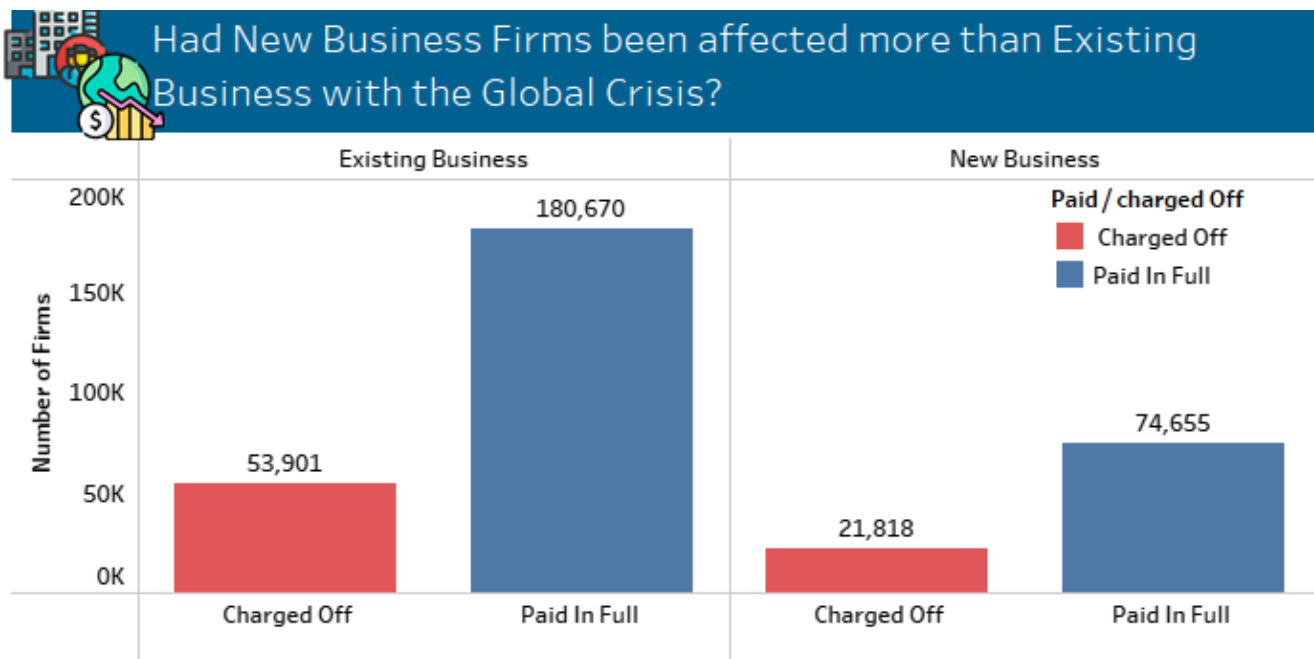


We have 3 clusters/segments of charge-off firms, not in the Great Recession:

- Cluster 1: get contribution from SBA (54 % - 64%) but the number of created jobs is ranged from (70 - 2,562) and its trend indicates that the number of jobs increases while the contribution of SBA decreases.
- Cluster 2: gets a high contribution from SBA(65 % - 84%) but the number of created jobs is less than Cluster 1 and Cluster 3. Created jobs ranged from (29 - 601) and its trend is low.
- while some states that get a low contribution of SBA(59 % - 67%) provide a high number of jobs such as TX state which provides 2,530 jobs.

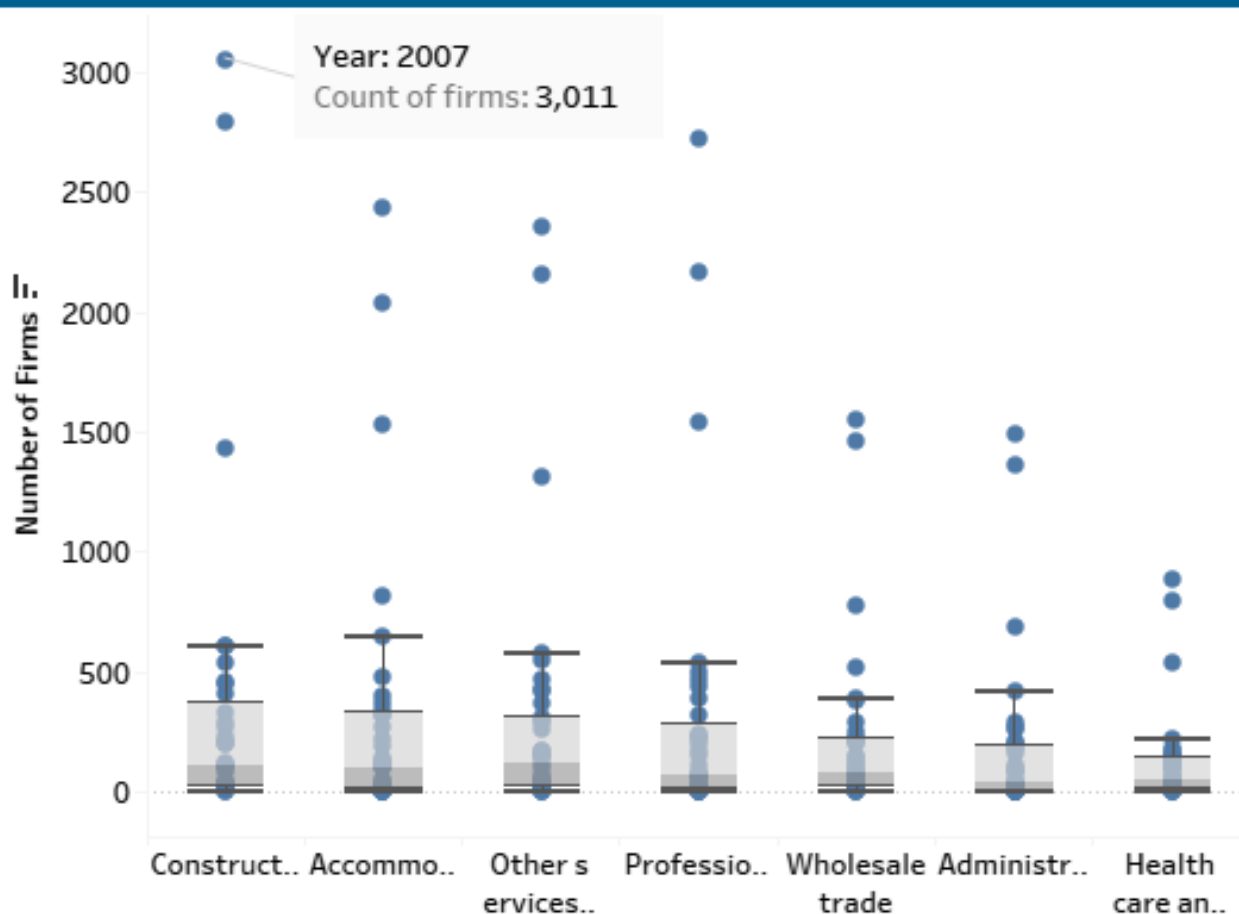
For the behavior in the great recession:

- Cluster 1: gets a high contribution from SBA(65 % - 81%) but the number of created jobs is low (29- 1,453) jobs.
- The cluster2: gets a contribution from SBA(66%) but several created jobs are low (36- 747) jobs and its trend is low.
- Cluster 3: while some states that get a low contribution of SBA(54% - 61%) provide a high number of jobs such as CA state which provides 7,671 jobs.

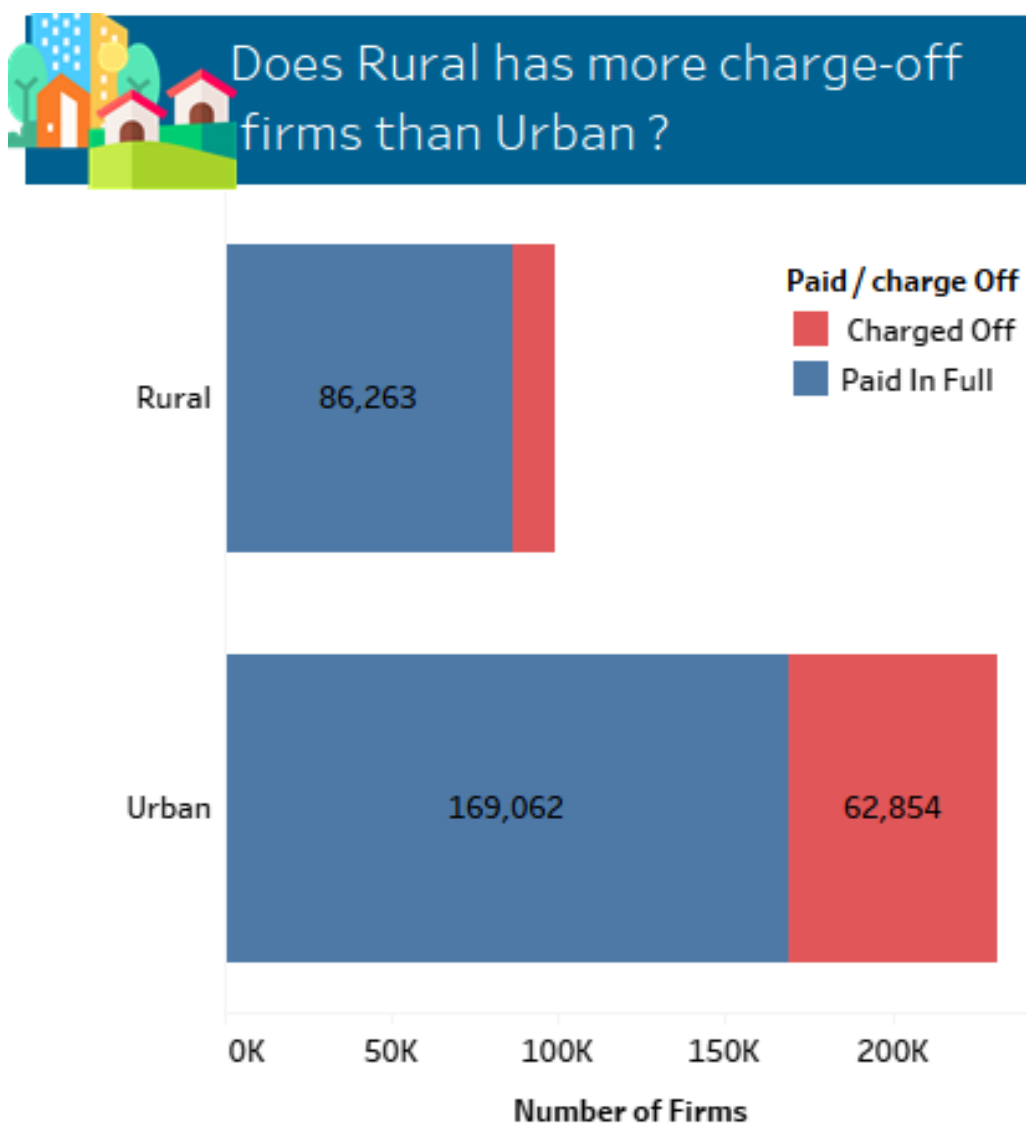


- No, during the Great Recession (2008) the number of charged-off firms in existing businesses (53,901) was higher than that of new businesses. (21,818)
- The number of firms (pay in full) in existing business was higher than new business.
- But by calculating the ratio between charged off and paid in full for a new business, I found that is equal to the ratio between charged off and paid in full for an existing business.

Which year has an extremely high number of charge-off firms in these sectors ?



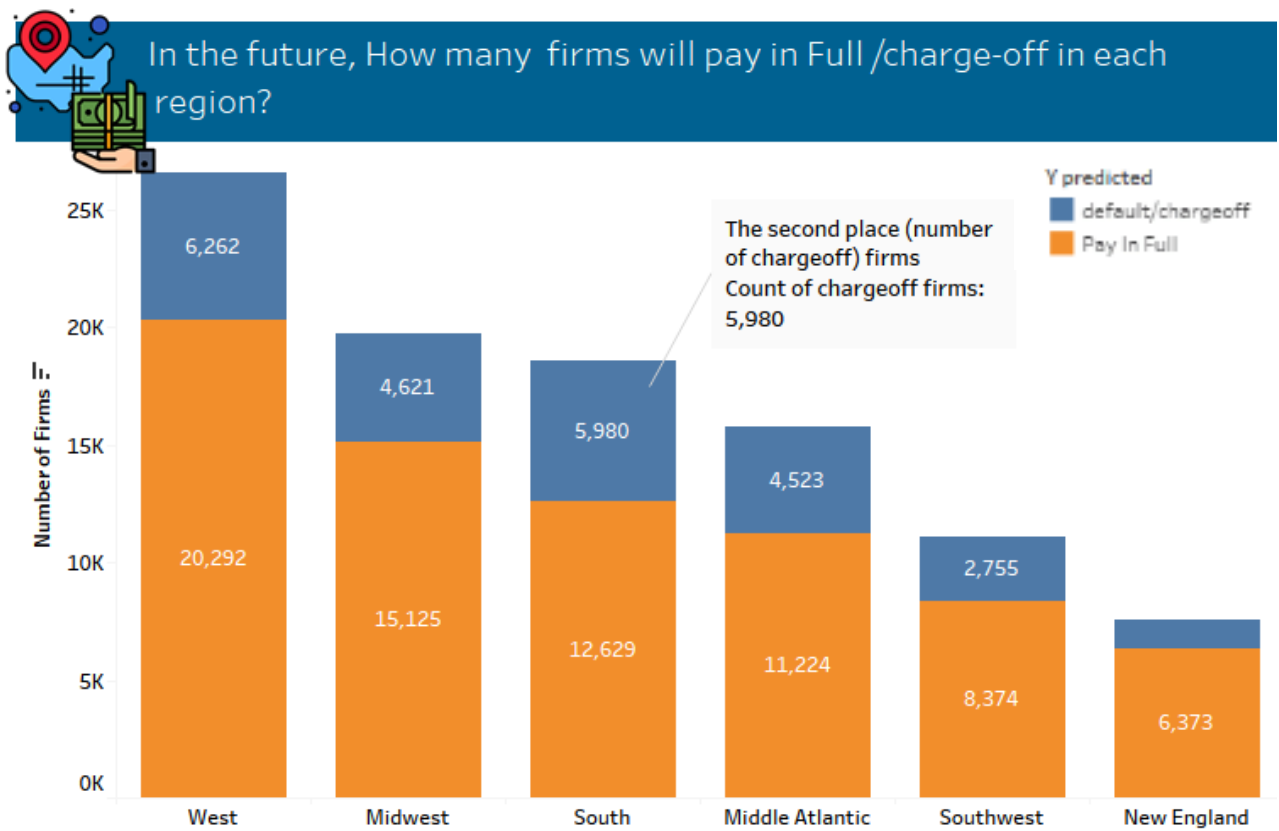
- the Year 2007, was the year that had a lot of charge-off firms for all sectors.
- The construction industry was the highest industry in 2007 and had a high number of charge-off firms.
- Healthcare is the lowest industry that has charge-off firms.



- No. Rural had less charge-off firms than urban firms (12,865). While the number of pay in full in urban is higher than in rural with a number of 169,062

Prediction Section

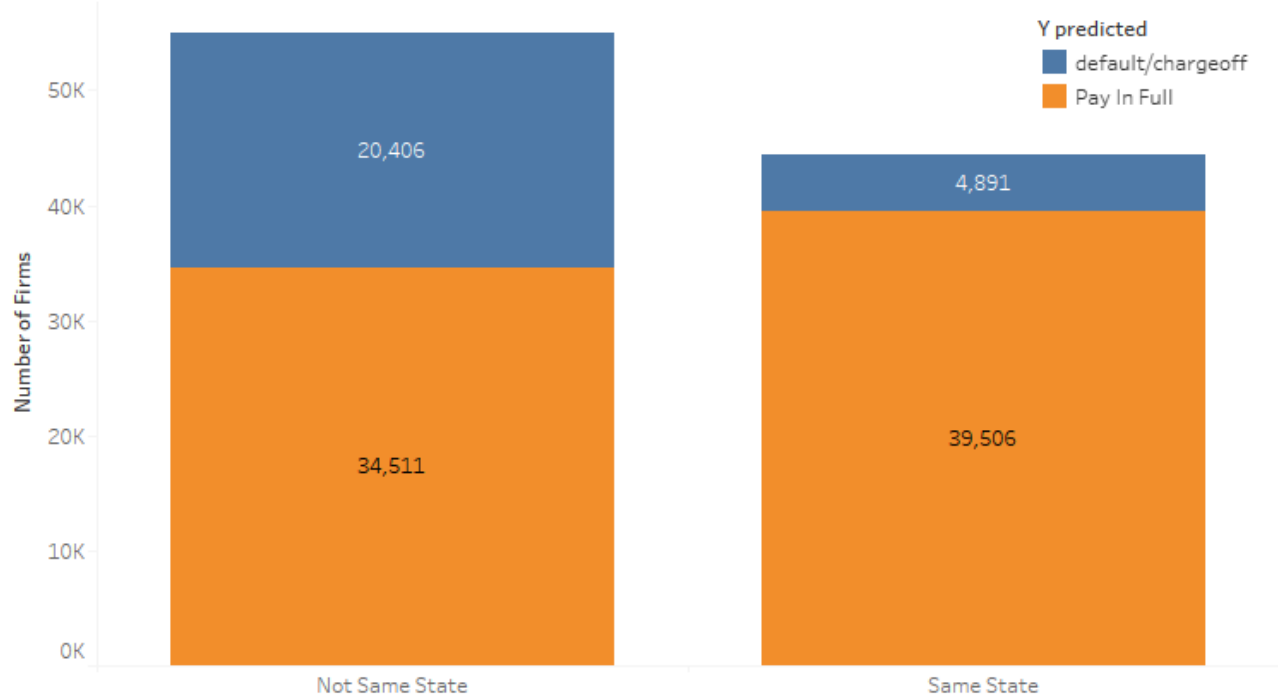




Based on a sample taken for prediction:

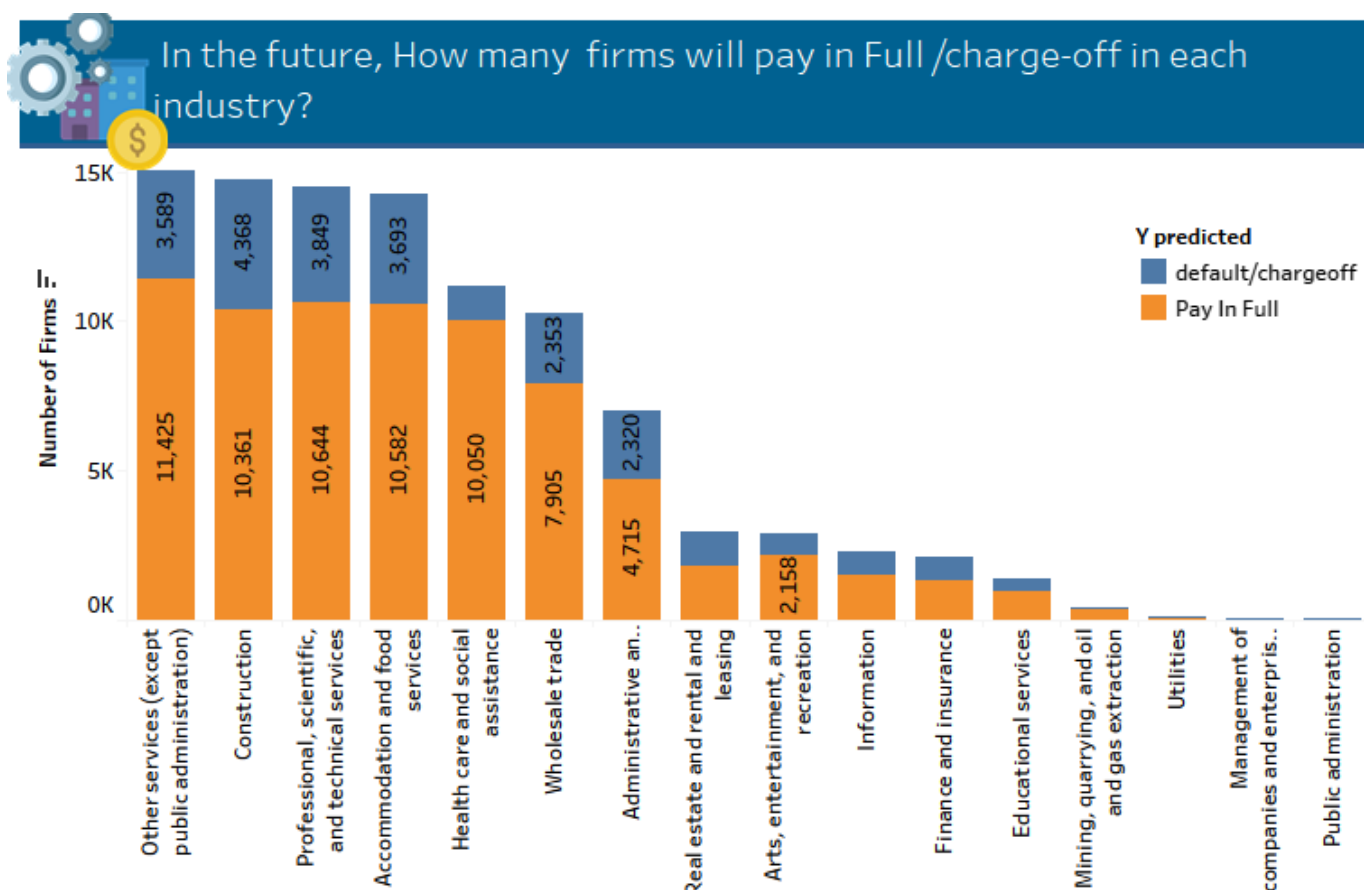
- West region has the highest number of firms as a total of charge-off and pays in full. The number of firms that will pay in full is (20,292), which is higher than in other regions.
- South is in the second place of numbers of charge-off firms (5,980) while Midwest is in second place for several firms that will pay in full.
- New England is the lowest region regarding the number of firms that will pay in full or charge-off.

In the future, How many firms will pay in Full /charge-off (same state or not)?



Based on the a sample taken for prediction:

- Still, there is a threat to finance firms not in the same state, the number is still high.
- The number of firms that will pay in full in the same state is higher than the number that is not in the same state. The number of firms that will pay in the same state is 39,506, while the number is 34,511 in different states.
- The number of firms that will be charge-off in different states will be higher than the number of firms that will be charge-off at the same state, the number of charge-off firms that are in different states is 20,406 while the number of charge-offs at the same state is 4,891



Based on a sample taken for prediction:

- Other service except public administration industry will be the highest industry that will have a high number of pay in full.
- Construction will be in the first place regarding charge-off firms. number of charge-offs is expected to be 4,368
- Public administration is the lowest industry for charge-off and pay in full.