

US Business Ownership and Employee Statistical Analysis

Project Team:

Temesgen Fekadu, Victor Pham, Paul Polsinelli, and Christian Rodriguez

Genesis 10, Dev10

Jul. 18th, 2022

US Business Ownership and Employee Statistical Analysis

Section 1 – Intro and context

The US Census Bureau published statistics in their Annual Business Survey (ABS) under the headings Company Summary, Characteristics of Businesses, and Characteristics of Business Owners for the year 2017 (listed under the published year 2018) (US Census Bureau, 2021). The website provides the following summary for these statistics:

- **Company Summary.** Provides data for employer businesses by sector, sex, ethnicity, race, veteran status, years in business, receipts size of firm, and employment size of firm for the U.S., states, and metro areas. Data for counties and economic places are available for 2018.
- **Characteristics of Businesses.** Provides data for respondent employer firms by sector, sex, ethnicity, race, veteran status, years in business, receipts size of firm, and employment size of firm for the U.S., states, and metro areas, including detailed business characteristics. Data for counties and economic places are available for 2018.
- **Characteristics of Business Owners.** Provides data for owners of respondent employer firms by sector, sex, ethnicity, race, and veteran status for the U.S., states, and metro areas, including detailed owner characteristics. Data for counties and economic places are available for 2018.

Methodology for their ABS can be found at www.census.gov/programs-surveys/abs/technical-documentation/methodology.html.

Information relating to each of the headings are broken down into API Call, Examples, Geographies, Variables, and Example Call: US Level Employer firms data. Api's for national, state, metropolitan, or combined areas are found under the 'Examples' link.

Section 2 – Questions

In looking over the data many questions come to mind. We chose a few of those questions to examine that would begin to give us a deeper understanding of what the data could reveal.

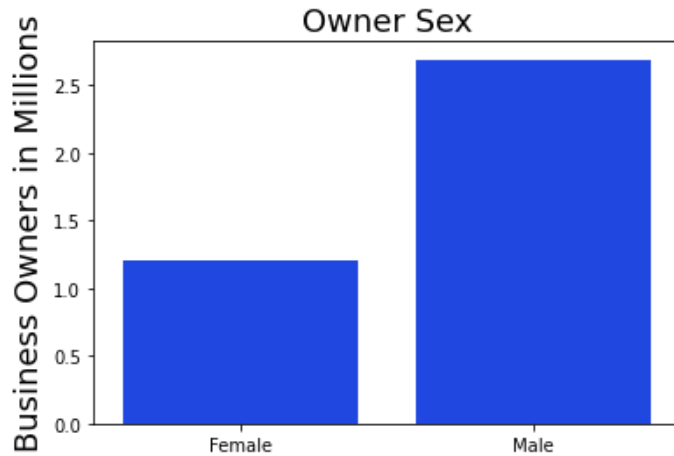
The relevant questions we started with are as follows:

1. Which demographics have the highest and lowest number of business owners?
2. What is the correlation between number of employees, annual payroll, & sales revenue?
3. Which states have the most and least business owners?
4. What degrees do business owners have?

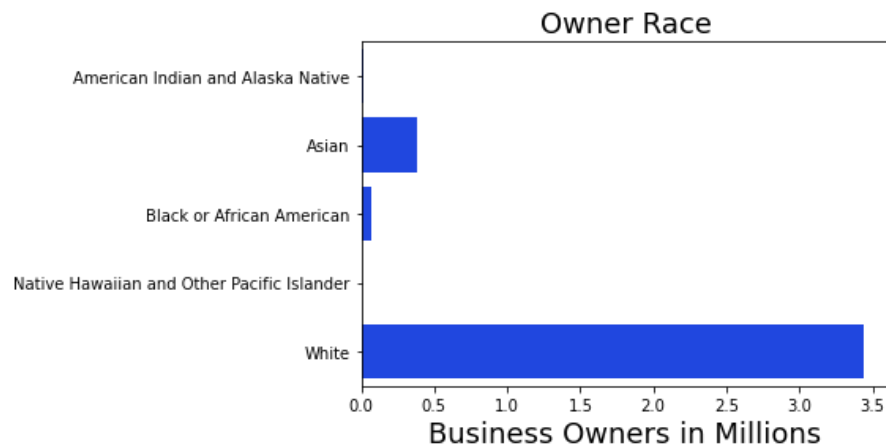
Section 3 – Analysis

When trying to understand the nature of US businesses it helps to understand how they are constructed demographically. The goal may be to promote the advancement of a particular demography or to peer into the demographic make-up to glean insights into what is making the business work, or how to make them work better, both domestically and in the global marketplace. What makes US businesses tick in their human construction?

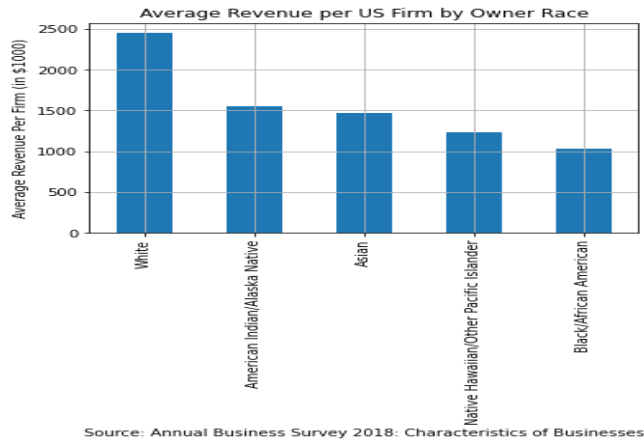
Let's start by taking a look at some of the basic constituents of the owners nationwide. We immediately see a large disparity in the sexes with about 1.3 million women owning businesses and men more than doubling that with close to 3 million owners.



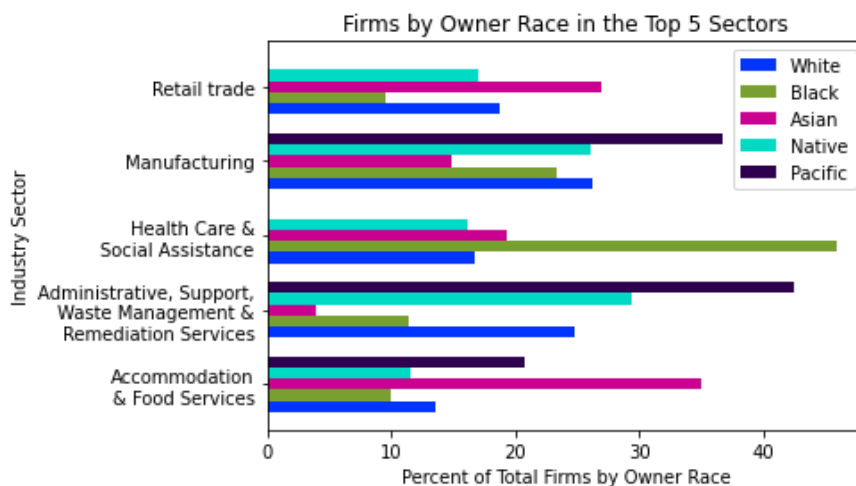
Another demographic breakdown that can give insights for use in business and social policy creation is race. Race is an historical and ongoing issue in the US and the data presented in this chart immediately gives us an idea of why. Though it would be helpful, the high contrast of numbers almost does not need supporting data to tell us about the great disparity in ownership amongst the race demographic.



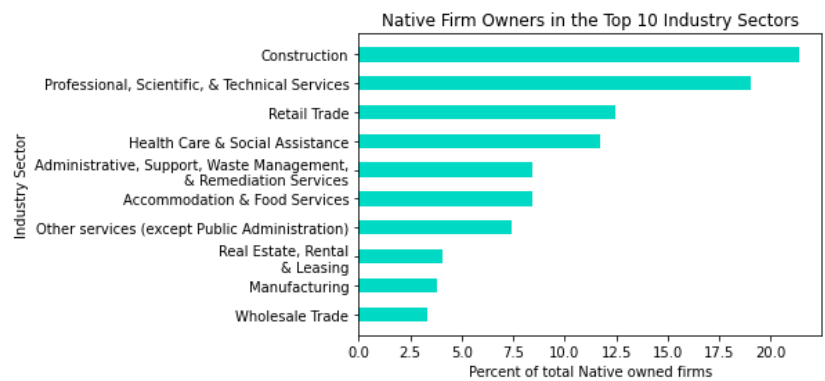
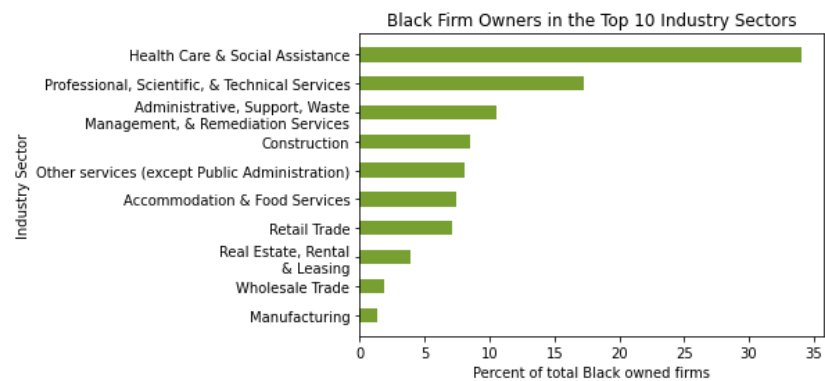
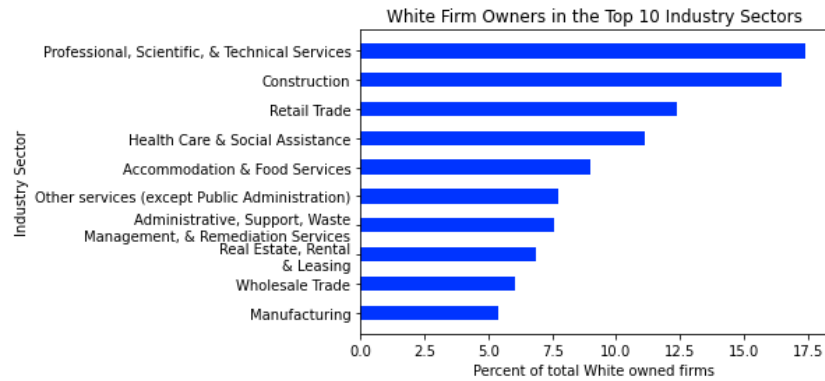
This apparent disparity seems to be reinforced by analysis of the correlation between the average revenue of a business or firm and the owner's race.

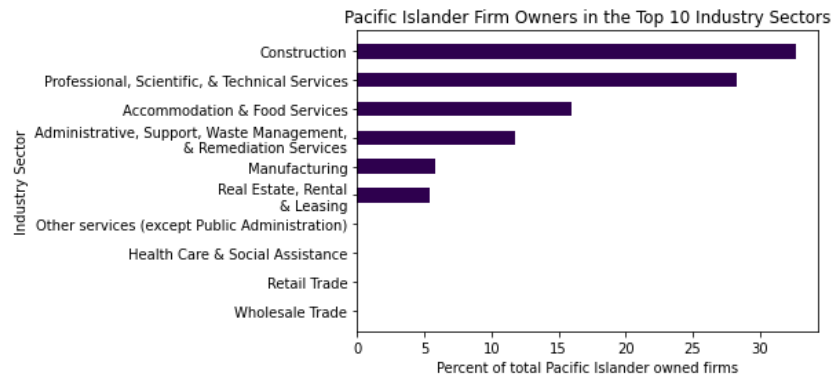


With the picture that is beginning to emerge, looking at some other factors might shed more light on the factors at play here. To do that, we dig deeper into the data to see what else it tells us. Since the US economy is highly diversified, perhaps there are factors within that diversity that help deepen our understanding of the issue. Let us look at industry sectors by race to that end.



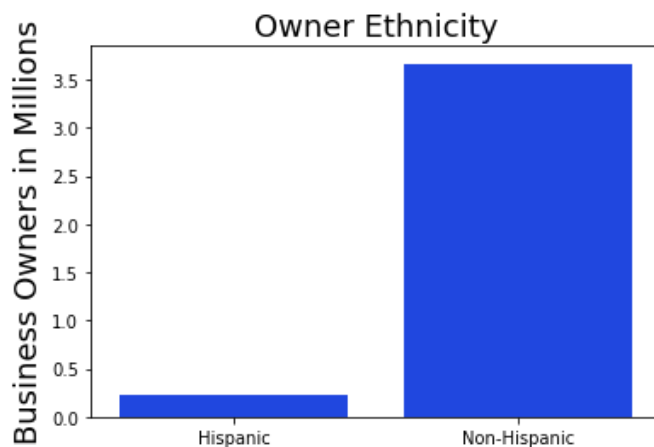
This chart does indeed start to show clear differences in what type of firms are owned based on the owner's race. But no clear conclusions can be drawn from just this data alone. Perhaps if we break it down and focus on each type of firm by race individually we can paint a better picture. So, we will examine each individually.



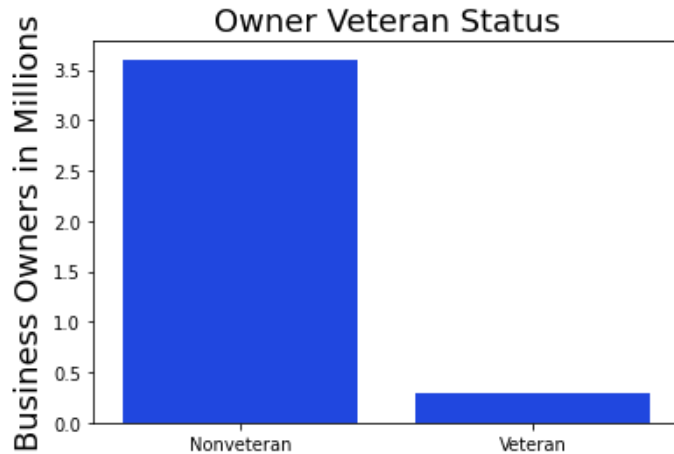


A clearer picture of the owners by individual race does emerge, but not of the bigger picture.

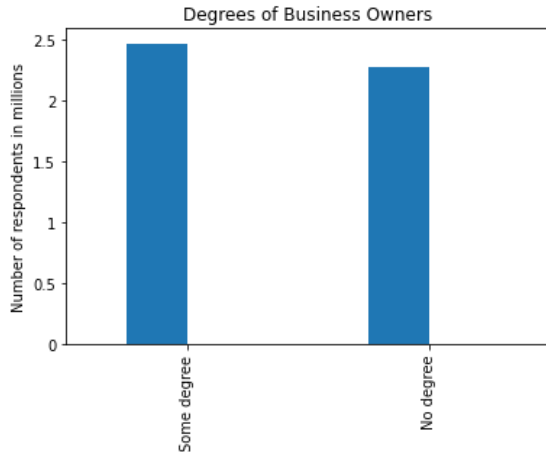
In a similar vein, ethnicity paints the same type of picture. In this case the data available was only Hispanic and non-Hispanic. Just like the *US Business Owners by Race* graph, supporting data is not necessary to see the clear disparity.



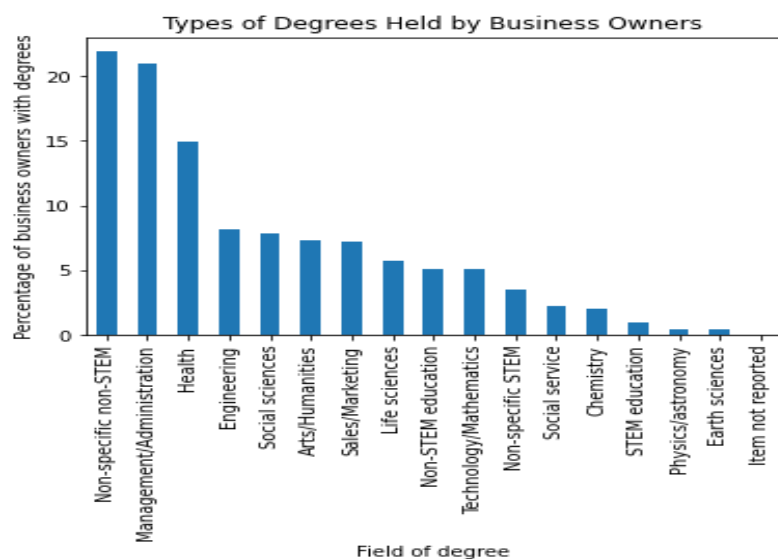
Another place we can see a big contrast, though I wouldn't say disparity, is the ownership numbers of veterans vs. non-veterans. In this case, common sense tells us there are more non-veterans proportionate to veterans in the US population, so at face value, this data makes sense.



To continue our examination of the data and what it tells us about US business, we turn to education. Here we see a surprisingly different trend, perhaps unexpected. There is very little disparity between business owners with degrees and without degrees. In that sense at least, US business is on a level playing field on its surface.



As a curiosity, let's see what degrees those business owners who have them have attained. One might first guess that a high percentage of them have business degrees or a closely related degree.



Surprisingly perhaps, that assumption does not hold true at all. Although, we can see that management/administration is a very big portion of those degrees, though not a majority. We see actually a great deal of sciences and STEM, with a surprisingly relatively high percentage of social sciences and arts/humanities.

Section 4 – Summary

We examined US businesses through their owners to gain insights into them as a whole and to answer four basic questions that a surface layer inspection of the Annual Business Survey gave us. The questions we started with were answered, but along the way, deeper questions emerged. Those questions included why there seemed to be such a large disparity of ownership between different demographics including race, ethnicity, and sex. We attempted to gain more insight through more focused examination of the data but ultimately came up lacking. We also looked at veterans and education levels among owners and found some surprises.

Section 5 - Conclusions

Though the census data answered many of our original questions and more, some questions remain unanswered, requiring more data to complete the picture. Although we could see a large disparity in business ownership in the US by race, other factors could give us a deeper understanding of the issue, such as raw numbers or percentages of each race in the overall US demographic, generational and current poverty levels, early education quality, and others. To start to draw any really solid conclusions on the effects of the industry sectors have on particular owners by race we would need to see financial breakdowns by those sectors and also look into historical economic trends and owners by race of those sectors. For women owners, a deeper understanding could be gained of the disparity with men through historical analysis of workforce numbers and higher education levels for starters. In the case of Ethnicity, inclusion of more ethnicities in the data would give a greater overall picture of the situation. Though the veteran data is intuitively good at face value, it would be interesting to see whether or not the percentages by each population verify parity between the groups. The educational data we examined might start to bear the beginnings of real answers to the questions we developed along the way if we correlated it with some of the racial data, but ultimately a much more in depth study is required with much more data.

References

US Census Bureau. (2021, October 14). *Annual Business Survey (ABS) APIs*. Census.Gov.

Retrieved July 15, 2022, from <https://www.census.gov/data/developers/data-sets/abs.2019.html>