PPP LOANS
Small Business Vaccine and Corporate Sting

Covid-19 Starter
The sudden shutdowns and home quarantines of the COVID-19 pandemic caused significant disruptions and directly impacted businesses that rely heavily on in-store customers. One key industry that saw major impacts was restaurants, which were forced to either pivot to take-out, reduce their workforce, or shutter their business altogether.

As a result, the U.S. Congress sought to provide relief by passing the CARES Act of 2020, in which the Payroll Protection Program (PPP) offered forgivable loan assistance to small businesses that kept employees on the payroll.

A Dish of PPP Controversy
It was soon discovered that many publicly traded companies took as much as $10 million in PPP loans. These controversial loans prompted responses from companies that took part of the limited funds for workers, or shutter their business altogether.

These loans distributed through August of 2020, PPP acceptance did not impact the number of store closures for publicly-traded companies. PPP acceptance impacted the number of store closures for smaller publicly-traded companies, more likely to take PPP loans.

Hypothesis ............ $H_0$
PPP acceptance did not impact the number of store closures for publicly-traded companies

Hypothesis ............ $H_1$
Smaller publicly-traded companies were more likely to take PPP loans

PPP acceptance impacted the number of store closures for smaller publicly-traded companies

Interesting trends amongst the groups were noted, including that firms who kept PPP loans had the highest number of locations, greatest Net Income, and largest Market Cap. However, t-tests found these observations to be not significant.

Finally, it is of importance to note that very few of the firms identified as having kept PPP directly incurred a PPP loan that would be shown within their financial reports. Independent franchisees took most loans.

For the regression analysis test, the net change in physical locations $L$ was defined as the change between the third quarter in 2019 and the third quarter in 2020 ($L = L_{2020} - L_{2019}$). This period was chosen to capture the dramatic economic disruption in March and April of 2020.

Of critical note for the regression analysis is the limited amount of data that likely plays a role in the lack of a conclusive model. This research was done with midcap firms from the Russell 2000 index. Had the research been expanded to include other larger and smaller firms, the tests would have been broader and more complete. This larger data pool might have further backed up the conclusion or would have shown PPP to be effective. The data were further complicated by some corporations selling or purchasing franchises, drastically deflating or inflating location numbers per firm.

There is no conclusive evidence of a significant relationship between PPP status and restaurant survival for these publicly traded corporations.

Sample Size Needed ........ >24
A renewed effort of the research would need a larger sample size and information beyond public financial statements to produce more conclusive results.

Being Counterintuitive ...... priceless
Trends were observed that anecdotally suggested larger firms with more locations were more likely to take PPP loans.

Conclusions

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References

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