

PPP LOANS

Small Business Vaccine and Corporate Sting

SPECIAL:
NULL HYPOTHESIS FAILED TO BE REJECTED

Antipasti Introduction

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 all political parties and the public, who lashed out against these firms taking part of the limited funds away from small businesses. As a result, some firms returned the loans, but others did not.

Our analysis of 24 publicly traded firms in the food service industries examined if PPP funds kept restaurants from closing.

Hypothesis H₀

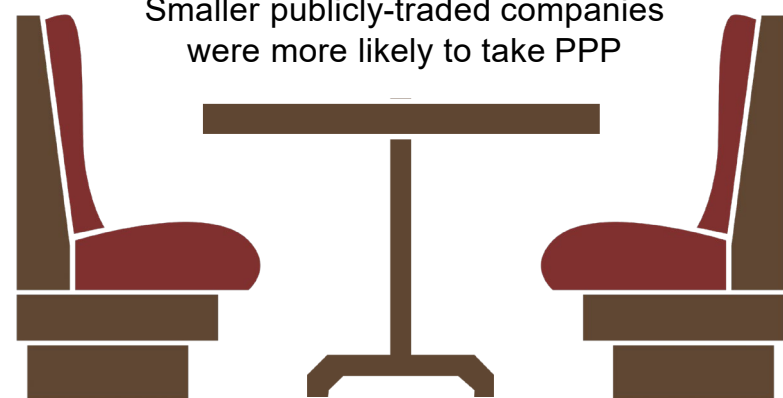
PPP acceptance did not impact the number of store closures for publicly-traded companies

Hypothesis H₁

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

Hypothesis H₂

Smaller publicly-traded companies were more likely to take PPP



Zuppe e Insalate Methods

Identify Restaurant Corporations on Russell 2000

Categorized as:

- Received PPP Funds (Took PPP)
- Returned PPP Funds (Returned PPP)
- Did Not Receive PPP Funds . . . (Did Not Take PPP)

Key Data:

- Net Change in Stores (Locations) (Company-Owned and Franchised)
- Quarterly Financial Data

Regression Analysis:

- Net Change in Stores Dependent Variable
- Quarterly Financial Data . . . Independent Variables



Did Not Take PPP
Market Cap \$794 million
Total Assets \$1.6 billion
Locations 850
Net Income . . . \$1.66 million

Took PPP
Market Cap \$1.96 billion
Total Assets \$1.2 billion
Locations 1,763
Net Income . . . \$26.6 million

Returned PPP
Market Cap \$739 million
Total Assets . . . \$459 million
Locations 251
Net Income . . . (\$ 1.9 million)

Pizza Discussion

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 ($\Delta = L_{3Q2020} - L_{3Q2019}$). 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.

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.

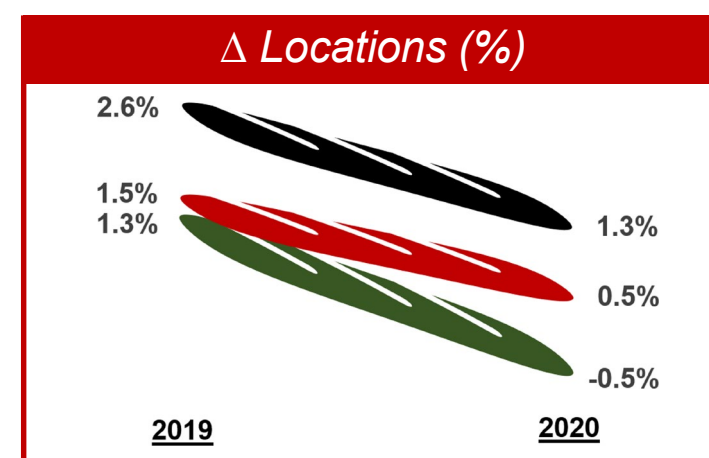
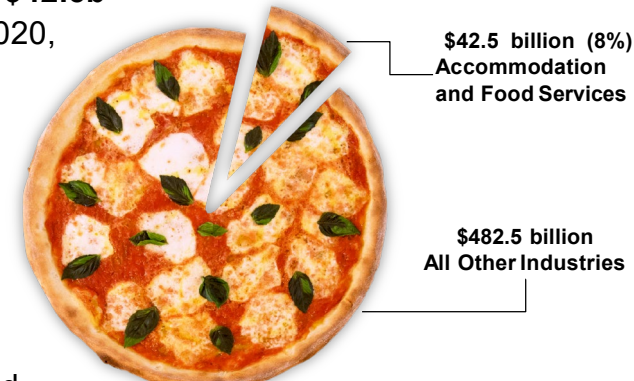
Pasta Results

Correlation with Δ Locations R² = 0.496
Regression analysis yielded no statistically significant correlation between the net change of stores with any financial data or the fact a PPP loan was taken. The analysis failed to produce a model that fit the data.

Difference in Market Cap Means p = 0.052
The graphs below highlight the differences in the categorized firms and how they were affected during the pandemic.

Piece of the Pie . . . \$42.5b

Through August of 2020, \$525 billion in PPP were distributed across many industries. The Accommodation and Food Service industry accounted for just 8.1% of all PPP loans distributed.



T-tests show these observations as insignificant

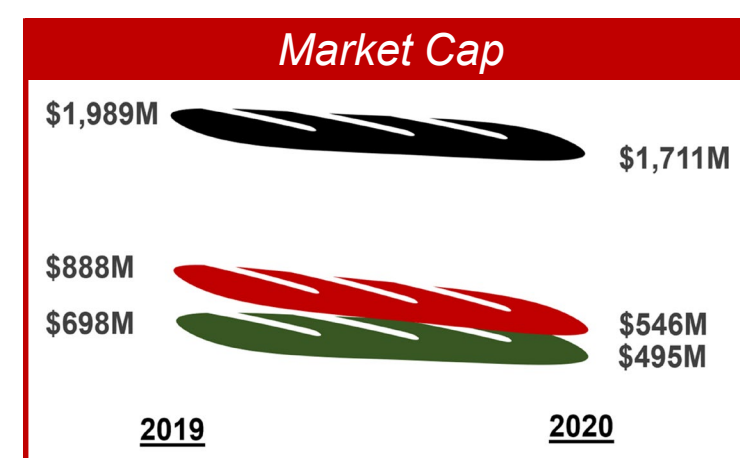


Tabella 1

Panel 1: Firms that Did Not Take PPP

Ticker	Δ Net Inc (%)	Mkt Cap (\$mil)	Total Assets (\$mil)	Δ Locations (%)
BLMN	-3.25%	1335.90	3433.58	-0.48%
CAKE	-8.22%	1228.70	2828.06	32.78%
CHUY	5.11%	374.60	487.69	-4.72%
EAT	-0.45%	1977.30	2335.30	-0.72%
JACK	4.85%	255.40	1906.49	-0.09%
LOCO	3.23%	564.80	621.65	-1.03%
NDLS	-3.71%	310.60	363.17	-0.87%
PLAY	-44.22%	817.50	2385.06	5.38%
TACO	13.47%	308.70	745.68	1.71%
TAST	2.56%	321.30	1776.17	1.02%
Mean	-3.06%	749.48	1688.28	3.30%
Std Deviation	15.64%	584.49	1081.57	10.66%

Panel 2: Firms Returning PPP Loans

Ticker	Δ Net Inc (%)	Mkt Cap (\$mil)	Total Assets (\$mil)	Δ Locations (%)
FRGI	16.85%	241.80	551.77	-6.38%
JAX	-5.17%	79.10	239.44	0.00%
NATH	4.43%	217.40	106.33	-10.79%
PBPB	-16.20%	87.90	306.80	-1.27%
RUTH	-12.76%	378.50	552.51	-5.10%
SHAK	-10.82%	2729.40	1123.94	17.32%
Mean	-3.95%	622.35	480.13	-1.04%
Std Deviation	12.48%	1038.14	361.26	9.78%

Panel 3: Firms Taking PPP Loans

Ticker	Δ Net Inc (%)	Mkt Cap (\$mil)	Total Assets (\$mil)	Δ Locations (%)
BJRI	-4.63%	657.70	1066.75	0.48%
CBRL	20.63%	2699.80	2920.12	0.57%
DENN	-30.49%	642.10	450.80	-2.46%
DIN	-13.90%	896.20	2070.92	-2.88%
PZZA	3.22%	2652.10	816.68	0.32%
RRGB	-2.46%	203.80	1033.27	-2.50%
TXRH	-0.99%	4191.20	2188.01	4.36%
WING	3.91%	4027.50	219.69	10.37%
Mean	-3.09%	1996.30	1345.78	1.03%
Std Deviation	14.77%	1599.88	944.02	4.46%

Dolci Conclusions

Conclusive Evidence 0
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.

Bevande References

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