The Implementation of Paycheck Protection Program on the Recovery of Restaurant Industry in COVID-19

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Abstract. The epidemic has had a significant negative impact on many industries that rely on foot traffic for profit, with the restaurant industry being the most representative. The government also implemented different levels of lockdowns and subsidies at the beginning of the outbreak to control the spread of the epidemic while subsidizing the affected companies. This paper analyzes the extent to which the Paycheck Protection Program (PPP) under the Coronavirus Aid, Relief, and Economic Security Act (CARESA) for small companies helped the restaurant industry. Even with the limitations of incomplete information on small companies, the results indicate that the first round of the PPP loans helped the restaurant industry's transaction rate, but many restaurants decided to lay off employees because they did not receive follow-up subsidies. Therefore, it is inferred that the help of the PPP is phased, bringing significant boost effect immediately but not sustaining long-term economic recovery. This analysis also provides the basis for a more effective and applicable emergency relief program in the future.

Keywords: COVID-19, Restaurant Industry, Fiscal Policy, Relief programs.

1. Introduction

Coronavirus is an airborne, highly infectious virus. The primary mode of transmission is person-to-person, with droplets from infected patients carrying the virus and infecting people within one meter of them. During the early stages of the outbreak, many countries took emergency lockdown actions. Along with this decision to lockdown, many industries that rely on in-person activities (e.g., the restaurant industry), drive their operations faced unprecedented challenges. According to data publicized on the US Bureau of Labor Statistics, unemployment was as high as 14.8% during the lockdown, and many small companies chose to shut down their business because of unaffordable high levels of debt.

Even though the CARES Act was enacted timely to relieve the stress of individuals and businesses, coronavirus still brought an irreversible impact on the short-term recovery of small businesses. This pandemic has had a particularly serious negative impact on the restaurant industry, where the larger the infectors, the lower the restaurant demand [1]. Dine-in guests in many countries dropped to zero as governments around the world adopted social movement restrictions. Restaurants that are not able to provide a delivery service encountered a more severe liquidity crisis [2]. According to previous literature, the restaurant companies with larger size, greater leverage, higher cash flow, and greater internationalization have better ability to against the impacts of COVID-19 [3]. Some existing studies indicate that it is almost impossible for restaurant industry to oscillate back to the normal state in pre-epidemic state. The reason is that the widespread promotion of contactless delivery and artificial intelligence servers during the epidemic has undoubtedly brought new challenges to the traditional restaurant business [4]. As stated, restaurants of different sizes in the restaurant industry are affected differently.

Among them, the small-scale restaurants are the most seriously affected. Some of the bills in CAREs are specifically designed for small companies. This article will focus on the analysis of the Paycheck Payment Program (PPP), which assisted companies to maintain their workforce in times of the COVID-19 crisis [5]. According to previous research, the implementation of PPP nationwide had successfully improved the ratio of business survival as well as lead to a moderate decrease in unemployment rate [6]. PPP increased employment in the targeted companies by 2-5% with a peak effect around mid-May 2020. In addition, as a result of the PPP, employers maintained 3.6 million additional jobs from mid-May 2020 and 1.4 million additional jobs by the end of 2020 [7]. Current research has shown that PPP is very effective in driving the economic recovery approach in general.

However, s research gap exists at the effectiveness of the implementation of PPP on the restaurant industry specifically. This paper is dedicated to fill in that information considering that the restaurant industry has a great economic impact on the region, where the restaurant industry contributes to regional job growth and supports local agriculture. The extent of the impact of PPP on the recovery of the restaurant industry will be determined by comparing the restaurant industry data before and after the time of disbursement of PPP loans. The rest part of the paper is organized as follows. The Sec. 2 will discuss the impact of COVID-19 on the restaurant industry through analyzing transaction rates of full-service restaurants. The Sec. 3 will introduce the basics of the PPP including amount of loans and distribution status. The Sec. 4 will analyze the impact of PPP on the restaurant industry through comparison of recovery status around the time of allocation of the PPP loans. The Sec. 5 included a case analysis of PF Chang's as a representation of the restaurant that are eligible to receive the PPP loans. Subsequently, the limitations of the study is discussed with the proposal for future prospects. Eventually, a brief summary is given in Sec. 7.

2. The COVID-19 Impact on the Restaurant Industry

Owing to the spread of COVID-19 and the fact that its spread among person-to person, many industries that rely on foot traffic for profit (tourism, hotels, restaurants, etc.) have been greatly affected. In December 2019, three months before the Coronavirus outbreak, 2019 Vixxo Restaurant Survey results showed that more than 60 percent of people would choose to dine-in at a restaurant rather than ordering take-out. In this environment, only some well-funded restaurants can support a shift from traditional operation mode to online delivery. However, during the epidemic, according to the National Restaurant Association, the number of people willing to dine-in decreased to less than 30% with the remaining 70% preferring to either order take-out or cook at home. This sudden shift in the eating habits of the public has certainly deepened the impact of the outbreak on the restaurant industry [2].

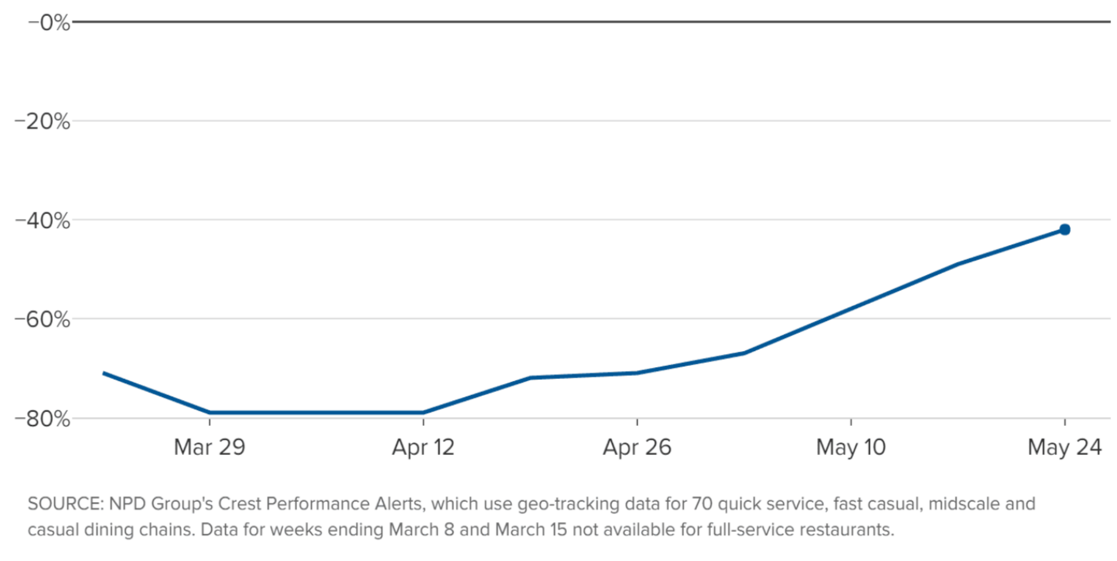

Fig. 1 2020 Full-Service Restaurant Transactions.

Figure 1 depicts a comparison of transactions from full-service restaurants in March 2020 to May 2020 based on data collected in 2019. Full-service restaurants were hit the hardest for several reasons. One of the main reasons is that fast food and other restaurants that have provided delivery services have developed maturity, resulting in full-service restaurants not able to complete the transformation in a short time. A research that calculated the relationship between daily new cases confirmed in the

US every day and visits to restaurants had proven that under the sub-category for fast-food services, the demand was less affected comparing to that of full-service restaurant [1]. In addition to take-outs, during the epidemic, many consumers prefer self-cooking at home due to health concerns. Even after the lockdown was eased, the dine-in rate did not return to pre-pandemic level because there were still customers who were concerned about exposure to the virus and thus reduced the frequency and confidence of dine-ins. The most direct solution to restore confidence in the dine-in restaurant industry to the lost customer base was to reduce patronage and to sanitize and clean more frequently, but both steps were very costly and led to a slower rebound in restaurant turnover after the bottom was reached [4]. Compared to the large catering companies that have available working capitals to adjust their business model in a timely manner, small dine-in companies are the ones that received the biggest hit due to COVID-19 in the whole industry. Nevertheless, as the industry's turnover plummeted during the epidemic, the restaurant industry's stock market plummeted and investors' confidence was undermined. Current studies have shown that the large restaurant industry will be less affected but speculated that they will enter a slow recovery period due to investors' uncertainty [3].

3. Basic Descriptions of Paycheck Protection Program

The CARES Act was proposed into law on March 27, 2020, which allocated $2.2 trillion as an economic aid to individuals, families, and businesses affected due to the outbreak of the Coronavirus. The PPP under the CARES act is dedicated to assist small businesses to recover on a solid base which are eligible for businesses with less than 500 employees or meet the Small Business Administration (SBA) size standards. The loans under the PPP are funded by private lenders or credit unions that are backed up by the SBA to incentivize small businesses by assisting with their pay-rolls and reducing the unemployment rate through hiring back laid-off workers. Round 1 of the PPP was initiated on April 3, 2020 and closed on April 16, 2020. Approximately $340 billion of funds were approved by the congress. The distribution of the fund is listed in Table. 1 [5].

Table 1. PPP First Round Industry Distribution

NAICS Subsector Description	Approved Loans	Approved Dollars	% of Amount
Construction	177,905	$44,906,538,010	13.12%
Professional, Scientific, and Technical Services	208,360	$43,294,713,938	12.65%
Manufacturing	108,863	$40,922,240,021	11.96%
Health Care and Social Assistance	183,542	$39,892,493,481	11.65%
Accommodation and Food Services	161,876	$30,500,417,573	8.91%
Retail Trade	186,429	$29,418,369,063	8.59%
Wholesale Trade	65,078	$19,489,410,472	5.69%
Other Services (except Public Administration)	155,319	$17,707,077,167	5.17%
Administrative and Support	72,439	$15,285,814,286	4.47%
Real Estate and Rental and Leasing	79,784	$10,743,430,227	3.14%
Transportation and Warehouse	44,415	$10,598,076,231	3.10%
Finance and Insurance	60,134	$8,177,041,995	2.39%
Educational Services	25,198	$8,062,652,288	2.36%
Information	22,825	$6,675,630,276	1.95%
Arts, Entertainment, and Recreation	39,670	$4,939,280,138	1.44%
Agriculture, Forestry, Fishing and Hunting	46,334	$4,374,343,877	1.28%
Mining	11,168	$3,894,793,207	1.14%
Public Administration	5,570	$1,197,353,586	0.35%
Management of Companies and Enterprises	3,211	$1,170,748,130	0.34%
Utilities	3,247	$1,027,575,137	0.30%

As of the end of the second round on August 8, 2020, available loans in the pool approved by the congress have raised to over $525 billion and with the same TOP 5 industry receiving over 50% of the loans as in Round 1. PPP ended on May 31, 2021, with a total of $800 billion congress approved loans and the distribution status [8]. By the end of the PPP, the restaurant sector received the largest share of loans far exceeding its share in the first and second rounds, which was only around 9%. A portion of all loans received by the restaurant industry were not to small businesses, i.e., those with fewer than 500 employees, but to restaurant chains with well-established business models.

Researches have shown that the Paycheck Protection Program loans have inherent limitations. Therefore, these factors should be taken into account when analyzing their effectiveness in helping small businesses. Based on observations, a company's connection to a bank has a positive relationship with its loan application rate. In this case, it means that a company with less liquidity is less likely to get approved for a loan than a company with in a better financial situation, but the former situation is obviously more urgent and are the one in need [6]. Even so, since about 75% of small businesses are not able to run funds on short notice to pay for emergencies such as the COVID-19 epidemic. Therefore, even though some companies have presented a higher passing rate in their loan applications, PPP loans have helped most small businesses by giving them the funds to help cover expenses and reduce layoffs [9].

4. The Impact of the Paycheck Protection Program on the Restaurant Industry

The restaurant industry encountered the hardest hit by the epidemic in the entire service sector and received the most help from loans during the PPP implementation. Therefore, a comparative analysis of the recovery of the restaurant industry during the PPP implementation period can be a good indicator of the effectiveness of the PPP and the resumption of work for small companies. A study comparing the economic situation of companies that met the PPP criteria and those that did not during the implementation of the PPP found that the employment rate of companies that met the criteria was 2% higher than those that did not meet the application criteria.

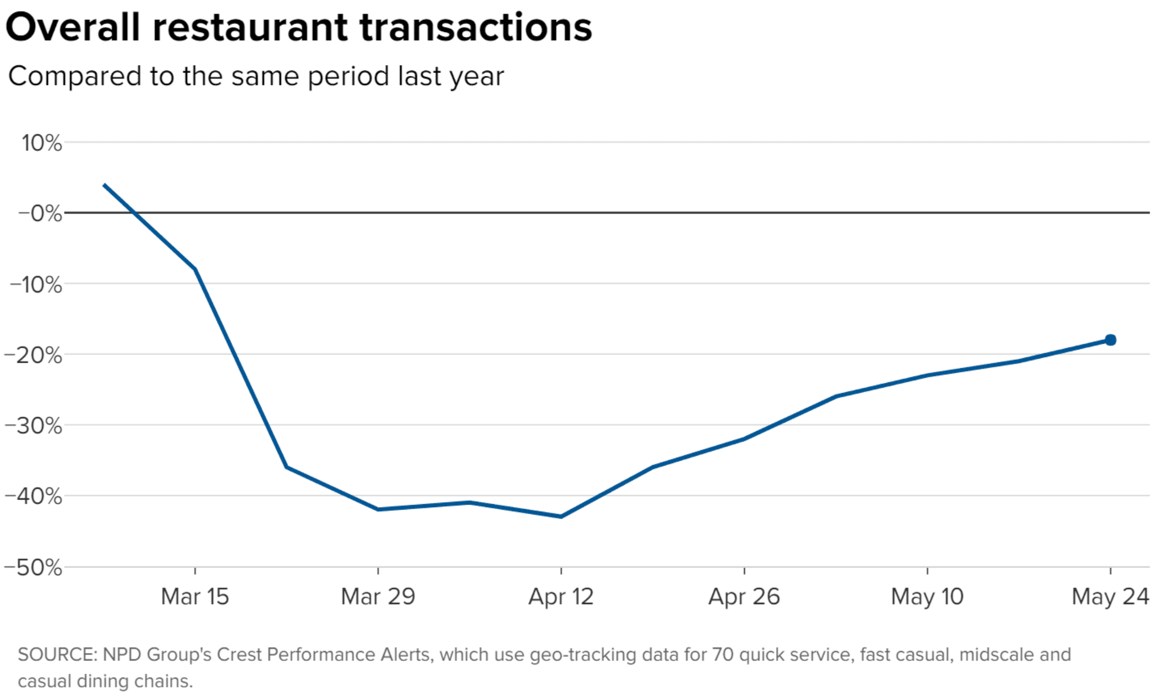

Fig. 2 Overall Restaurant Transactions.

The overall restaurant industry in Figure 2 presented a similar rebound after bottoming out in mid-April as shown in Figure 3 and this period is around the enactment of the first round of PPP [7]. Therefore, based on a preliminary comparative analysis, the implementation of PPP loans has helped the restaurant industry's return to work in the form of a decrease in unemployment and a rebound in transaction rates.

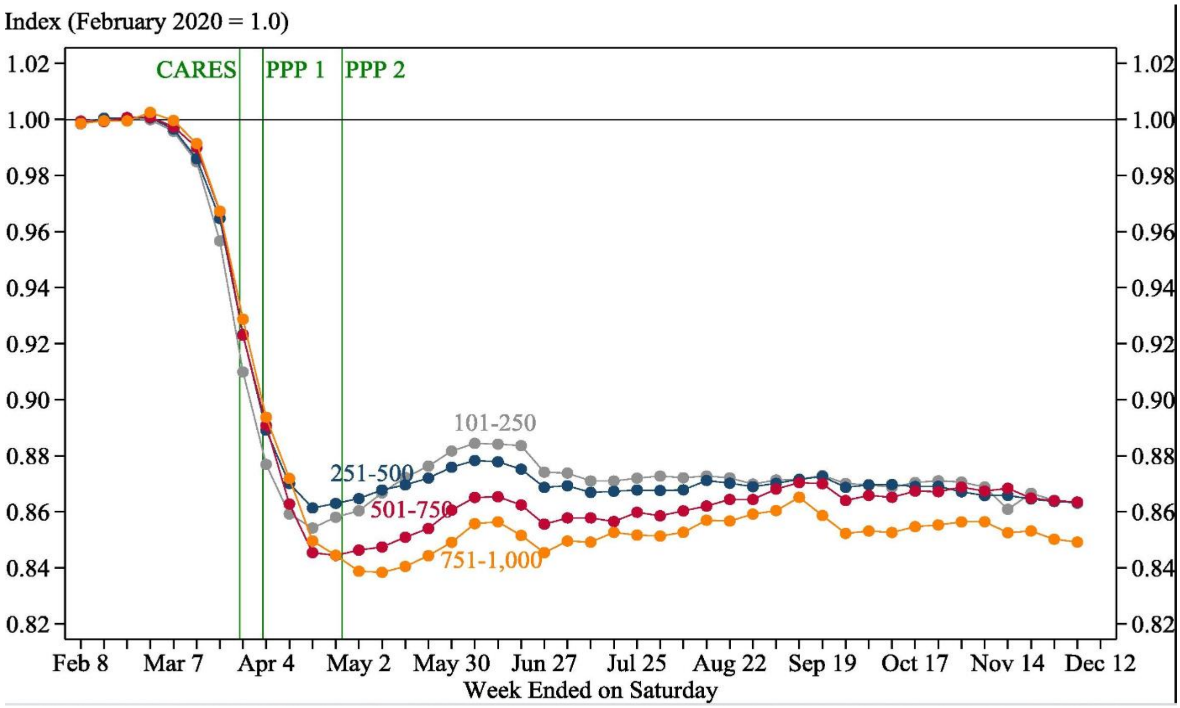

Fig. 3 Employment Rate by Firm Size.

In a survey of small and medium-sized restaurants, or restaurants that meet the PPP application criteria. In South Carolina, the second largest representation state in the restaurant industry in the U.S., more than 80% of respondents said they were able to continue operating in large part because they received funding from CARES Act. Of these, 70% of respondents said that if similar financial help were to follow, their restaurant would likely be back to its pre-epidemic state in 18-24 months [10]. Since this survey is directly aimed at small restaurant companies that are eligible to apply or have applied for government loan assistance, this result greatly corroborates the preliminary judgment results mentioned before.

5. Case analysis

A portion of all loans distributed are also given to businesses that are not considered small companies. P.F. Chang’s, one of the largest restaurant chains in the restaurant industry received a loan which is 99 percent greater than the average loans for the rest of the restaurant industry. According to SBA, P.F. Chang's successfully applied for a $10 million loan subsidy on April 4, 2020 [11]. From The Washington Post, P.F. Chang's officials responded to a successful PPP loan application, stating that the loan directly helped the company retain more than 12,000 key employees and largely supported the restaurant's paradigm shift from traditional dine-in service to delivery or take-outs during lockdown [12]. Whereas in the second round of PPP loan applications, P.F. Chang's did not submit a follow-up application. According to Worker Adjustment and Retraining Notification filings P.F. Chang's indicated that by October 2020 it would lay off up to 5,800 employees to maintain normal restaurant operations. The reason for this may be attributed to the company's decision to transform to a new business model. It is reported that P.F. Chang's had a to-go-only restaurant in Chicago before the outbreak of the epidemic. During the COVID-19, P.F. Chang's is planning to increase the number of this type of restaurant. The trend is that a to-go-only restaurant is cheaper to operate and more profitable than a traditional dine-in service which requires high rent and overhead costs. Adding to-go-only restaurants means that some of the existing staff will have to be laid off [13]. The decision by P.F. Chang's to lay off employees in October is most likely related to the results of the second survey discussed in Sec. 4. The results indicate that most companies would favor the government to implement follow-up subsidies to help them run their businesses. Since P.F. Chang's did not apply for other government loans after the first round of the PPP, one can reasonably conclude that the PPP assistance is phased and not sustainable as a source of funding for the company's survival in long term.

6. Limitation & Future outlooks

The limitations in this study mainly stem from the incomplete information of the studied cohort. The PPPs studied in this paper are mainly loan subsidies opened for small businesses while most small businesses lack comprehensive public information. In the restaurant industry studied in this paper, many small restaurants do not even have their own websites. Therefore, some of the data and analysis in the research process rely on comparing the stage restaurant industry transactions with the recovery of all industries to arrive at the results. The second limitation comes from other grant programs in the same period. The impact of other sectors in The CAREs Act that may have had an impact on restaurant recovery was not analyzed. For instance, the Economic Impact Payments given by the government to individuals that may have boosted customer spending psychology and thus attendance at restaurants. Since these grants occurred over almost the same period, it is not possible to compare the degree of impact of either one in isolation. A final limitation comes from the volatility of the epidemic. There was a steady rebound in the restaurant industry during the PPP implementation period but some of this may be due to the initial control of the epidemic coupled with the increased number of vaccinations resulting in the relief of controls thus making customers feel that the safety of dine-in dining has been ensured.

Considering that the restaurant industry accounts for a relatively large proportion of the loans disbursed by the PPP, it may be more representative to judge the effective situation of PPP by analyzing the recovery of the restaurant industry. Moreover, the restaurant industry as a key to drive the economy of a region to understand its operation status and help its important source to resume production will have no small impact on the economic recovery of the whole region. Therefore, feature studies can be conducted to compare the Economic Impact Payment and the PPP on the restoration of the restaurant industry to provide a contingency plan to achieve economic stability in emergency situations similar to this epidemic.

7. Summary

In conclusion, this paper investigates the effectiveness of the implementation of the PPP on the recovery of the restaurant industry based on data comparison of period based general industry along with a case analysis of P.F. Chang’s as a representation of the business in the restaurant industry. According to the analysis, the trend of the recovery of all industries at the time of the first round of the PPP loan disbursement has a high coincidence with the trend of transactions in the restaurant industry during the same period. It can be reasonably assumed that the first round of the PPP loan had positively impacted the recovery of the restaurant industry. The extent of the impact of the first round was further confirmed in the case analysis. However, since P.F. Chang’s announced its decision to lay off employees about 6 months after the first round. Considering the former discussion, most of the companies felt that a follow-up PPP-like subsidy would be of great help to operations and maintenance. On this basis, P. F. Chang's decision may be related to the non-receipt of a follow-up government subsidy. Moreover, this indicates that the help provided by PPP is likely to be of a phased and maintaining it is undoubtedly a huge investment.

This study utilizes the restaurant industry, which received the largest amount of PPP loans, as a good proxy for the impact of the effectiveness of the program and provides reasonable suggestions for improving similar emergency policies in the future. However, due to the degree of information incompleteness of small businesses and the degree of impact of other policies during the same period, the inferences in this paper do not reach a high degree of precision. Further research is needed to determine specific effective strength of different policies through analyzing and comparing the data of other policies in the same period. Overall, these results offer a guideline for determining a more reasonable and effective emergency response policies to ensure that the community has the ability and experience to respond to an emergency (e.g., COVID-19 epidemic) while maintaining a relatively stable economic level.

References

[1] Yang Y, et al. COVID-19 and restaurant demand: early effects of the pandemic and stay-at-home orders. International Journal of Contemporary Hospitality Management, 2020.

[2] Dube K, et al. COVID-19 cripples global restaurant and hospitality industry. Current Issues in Tourism, 2021, 24(11): 1487-1490.

[3] Song H J, et al. Impact of the COVID-19 pandemic: Evidence from the US restaurant industry. International Journal of Hospitality Management, 2021, 92: 102702.

[4] Lee S, Ham S. Food service industry in the era of COVID-19: trends and research implications. Nutrition Research and Practice, 2021, 15(Suppl 1): S22-S31.

[5] SBA. Paycheck Protection Program. Paycheck Protection Program, Mar. 2020, Retrieved from: https://www.sba.gov/funding-programs/loans/covid-19-relief-options/paycheck-protection-program.

[6] Alexander W. Bartik, et al. The Targeting and Impact of Paycheck Protection Program Loans to Small Businesses. NBER, 3 Aug. 2020, Retrieved from: https://www.nber.org/papers/w27623.

[7] Autor D, et al. An evaluation of the paycheck protection program using administrative payroll microdata. Journal of Public Economics, 2022, 211: 104664.

[8] Paycheck Protection Program. U.S. Department of the Treasury, 14 July 2022, Retrieved from: https://home.treasury.gov/policy-issues/coronavirus/assistance-for-small-businesses/paycheck-protection- program.

[9] Faulkender M W, Jackman R, Miran S. The job preservation effects of paycheck protection program loans. Available at SSRN 3767509, 2020.

[10] Brizek M G, et al. Independent restaurant operator perspectives in the wake of the COVID-19 pandemic. International Journal of Hospitality Management, 2021, 93: 102766.

[11] PPP Loan Data - P.F. Chang's China Bistro, Inc, Scottsdale, AZ. FederalPay, June 2020, Retrieved from: https://www.federalpay.org/paycheck-protection-program/pf-changs-china-bistro-inc-scottsdale-az.

[12] O'Connell J, Gregg A. Treasury, SBA Data Show Small-Business Loans Went to Private-Equity BACKED Chains, Members of Congress. Washington Post. Retrieved from: https://www. washingtonpost. com/business/2020/07/06/sba-ppp-loans-data, 2020.

[13] Beckett, Emma Liem. P.F. Chang's Extends Temporary Layoffs for up to 5,800 Workers. Restaurant Dive, 2 Oct. 2020, Retrieved from: https://www.restaurantdive.com/news/pf-changs-extends-temporary-layoffs-for-up-to-5800-workers/586304/.