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# How Taiwanese Businesses Can Reduce Risk of Collapse Post-Coronavirus with Sales Strategies

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## Abstract

*The decline caused by COVID-19 in Taiwanese business revenue changed sales strategies in many businesses. This research will focus on how businesses can incite consumers to spend after the outbreak. Out of 400 returned questionnaires, there were 395 valid ones, a validity rate of 98.75%, conducted with methods such as descriptive statistical analysis, reliability analysis, factor analysis, variance analysis, and multiple regression analysis. The results show that businesses must increase the effectiveness of their advertising campaigns with things such as limited-time sales and stricter criteria for giveaways. Simply put, time limits must be imposed on sales, and consumers must be got more from participating in giveaways to improve sales after COVID-19..*

**Keywords:** COVID-19, Promotion strategy, Consumer behavior

## 1. Introduction

The number of cases of COVID-19 is increasing. Taiwanese companies are using remote offices to reduce the risk of group infections, while families use online shopping instead of physical shopping to reduce risk. This paper focuses on after the outbreak of COVID-19, Taiwanese companies' promotional strategies need to change to reduce the risk of loss.

This study analyses the sales strategies utilized by Taiwanese businesses, collected via questionnaire, to determine whether they are efficient and beneficial. The main goal of this study is to determine whether the sales strategies can improve the economy by increasing demand, thereby reducing the risk of loss for Taiwanese businesses.

During the pandemic, are old sales strategies still viable or not? How much change should be enacted? Therefore, this study focuses on reducing the risk of loss for Taiwanese businesses via a change in sales strategies.

1. What aspects of the current sales strategies affected sales after the outbreak of COVID-19?
2. What has to change post-COVID-19? By how much?
3. Which sales strategies successfully affect sales during the pandemic?
4. What are the spillover effects of the sales strategies enacted during the pandemic?

Due to COVID-19, the questionnaire was conducted by internet and used convenience sampling to avoid biases. Sampling was conducted with North Taiwan, Middle Taiwan, and South Taiwan as cores..

## 2. Literature review

This study focuses on how Taiwanese businesses can avoid loss during the COVID-19 pandemic, so it primarily analyzes literature on sales strategies and how they translate to consumers' behavior.

Consumers act differently online, so the explanation of the differences between consumers who shop physically and those that shop online is listed below.

Kyung & Whitney (2020) shows how social distancing more severely impacts businesses more vulnerable to COVID-19, which means that social distancing, a COVID-19 countermeasure, hits businesses that rely on large crowds in close proximity to each other, such as restaurants or retail stores, particularly hard. Government help has been proposed as a method of relief, especially for small businesses and frontline workers.

According to Bhattacharyya & Thakre (2021), findings indicate that companies adapted in response to the chaos of the COVID-19 crisis environment to fulfill changing consumer expectations. Remote working was widely implemented, supply networks were reconfigured, operations were modified to be run by skeleton crews, working

capital was more closely monitored, and the product portfolio was revamped to keep making a profit in a world where only essentials are bought.

Bhattacharyya & Thakre (2021) mentioned that the supplier generally has far more knowledge to work with than the consumer, so they can craft their sales strategies to this expectation. Due to the asymmetry in information, the suppliers have far more information than the consumer, and information exchange, too, is asymmetric.

When marketers tunnel vision on the physical appearance of their products, they tend to overlook the needs of the consumer and any upcoming shift in those needs. The COVID-19 pandemic was one such case: suppliers failed to increase supply in anticipation of panic buying and hoarding due to the irrationality of the consumer in response to the outbreak (Lewis, 2020).

The landscape of e-commerce in the post-pandemic world will change as those who bought online for the first time during the pandemic become more adept and accustomed to doing so. Only 5% of Americans in their 50s and older ordered groceries online in the pre-pandemic times (Gavin, 2020). After COVID-19, online shoppers older than 65 spend 35% more on these products than any other age group (Bhattarai, 2021).

The pandemic also sparked an explosion of demand for online entertainment among older adults. Many of them started using pay-per-view multimedia to alleviate the anxiety and stress of staying at home during lockdowns. In 2020, compared to the past year, those aged over 55 constituted more than a third of new subscribers for music streaming services in the UK (Loughran, 2020).

Consumers who seldom shopped online before the pandemic was predicted to buy online less often as soon as physical shops reopen (Watanabe & Omori, 2020). However, Kovalenko (2021) claims that COVID-19 irreversibly changed the shopping habits of older adults. The current interest of older adults in online shopping can be made to stay by building up their trust in this type of retail. Improving the shopping experience is the key to building and maintaining such trust.

Whether a consumer purchase in a physical shop is a phenomenon that can be predicted based on the characteristics of their personality, but during the COVID-19 pandemic, for consumers behave differently due to having considered COVID-19, this model is no longer reliable and classic sales strategies may no longer work.

According to the literature, a conclusion can be made： sales strategies must immediately increase sales during the COVID-19 pandemic, for every company's survival is a day-to-day struggle, and they must be executed with the expectation that there is no foreseeable end.

In summary, after the outbreak of COVID-19, consumers consider their choices more carefully, so Taiwanese businesses have to come up with stronger sales strategies to stay afloat. This study evaluates several strategies that companies have put to use in the COVID-19 pandemic and studies the strategies which are useful for companies.

## 3. Methodology

According to the relevant literature, this study looks to find out how COVID-19 affects sales strategies, which affects the likelihood of loss. The methodology is constructed according to the information provided by the literature.

### *3.1 Research structure*

The structure of this study has the sales strategy as the input, and it is analyzed with its effectiveness, efficacy, and spillover rate as the criteria. The methodology is shown below in Figure 3.1.

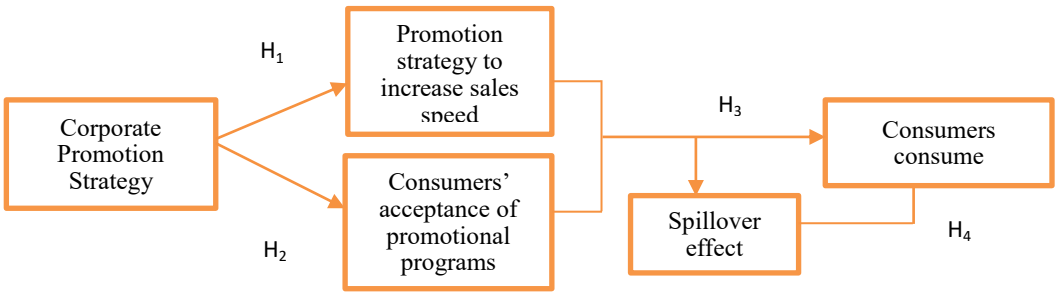


**Figure 3.1 Research structure**

### *3.2 Research hypothesis*

This study makes the following assumptions：

H1：New sales strategies can increase sales after the COVID-19 outbreak.
H2：Consumers receive sales events positively during the COVID-19 pandemic.
H3：Sales strategies increase revenue during COVID-19.
H4：Due to the effect of sales strategies on consumers, spillover happens significantly during COVID-19.

### *3.3 Methods*

This study gathered data with questionnaires, and descriptive statistics, reliability analysis, factor analysis, variance analysis, and multiple regression analysis was run using SPSS 22.0 software.

This study uses statistics to illustrate the data primarily through averages and standard deviations between

data points to understand what consumers think. The higher the average, the more the consumers agree with the proposal, and the lower the standard deviation, the more conformity there is in a general opinion. Therefore, this study will talk about the extremes of either category.

To know how reliable and effective the questionnaire was, Guilford's (1965) Cronbach α was used as the grading system. If the value is higher than 0.7, then it is trustworthy. If it is between 0.5 and 0.6, then it is acceptable, and if it is less than 0.5, then it is untrustworthy. To increase conformity, questions that did not meet the criteria were removed. This was done until all remaining questions have a value greater than 0.5.

This study uses factor analysis to simplify graphs into several variable zones and looks into how variables interact with each other. Therefore, factor analysis was used to separate variables, with the extraction factor being whether the Eigenvalue is greater than 1. For the same factor, the greater the "factor load", the better. This study uses 0.3 as the watershed, with greater values being good and lower values being bad. Kaiser's KMO (1970) and Bartlett's test (1950, 1951) were used to testing it. If the KMO value is greater than 0.9, then the data is very fit for factor analysis. If it is less than 0.5, then the data is unsuitable. Kaiser first proposed using KMO and Bartlett's Test of Sphericity to determine whether the data is fit for factor analysis. The higher the KMO value, the lower the relation between two variables, and the more suited it is for factor analysis. Then it is tested for factor load. The value of factor one must be greater than the value of factor 2 in its category.

Then this study analyzes the variables for differences. Total Sum of Squares (TSS) is $\sum_{i=1}^{n}\sum_{j=1}^{n}\left(Y_{ij}-\bar{Y}_{total}\right)^2$, In the above equation, i is the number of groups in the sample, and j is the amount of samples. Yij is the ith group of the jth sample. Y total is the average of all the samples. The variance, BSS, is $\sum_{i=1}^{n} n_i\left(\bar{Y}_i-\bar{Y}_{total}\right)^2$, with $n_i$ as the sample count of the ith group. $\bar{Y}_i$ is the variance of the ith group, or WSS, which is $\sum_{i=1}^{n}\sum_{j=1}^{n}\left(Y_{ij}-\bar{Y}_i\right)^2$. This study has grouped consumers into several groups, and the significance of their difference can be demonstrated with variable analysis.

Lastly, multiple regression analysis separates the variable sectors of this study into dependent and independent variables and constructs relevant models and graphs. It also uses the sample data to predict the relationship between the model and the variables, and gauges fluctuation levels, constructing a hypothesis testing core from that. This study puts sales event decisions that consumers participate in the "dependent variable" section, and factor analysis results in the "independent variable" section to calculate whether they affect the dependent variables.

## 4. Results

This chapter will review the 400 questionnaires collected. There are 395 valid questionnaires, so the validity rate is 98.75%. The questionnaire items in this study use Li (2021) and Yeh (2020), then were added to the marketing strategy which is currently used for organization. So it is necessary to carry out a reliability analysis and delete inappropriate questionnaire items.

The questionnaire scale is measured using a Likert five-point scale. Set "Strongly Agree" to 5, ...and "Strongly Disagree" to 1, respectively. After questionnaire completion, narrative statistical analysis, reliability analysis, factor analysis, variance analysis, and meta-regression analysis are carried out. This questionnaire was issued from January 15 to August 30, 2021. The questionnaire was distributed on the Internet, divided into three regions： North Taiwan, Central Taiwan, and South Taiwan. However, consumers in North Taiwan are the majority of the questionnaires, and the large sample size does not affect the questionnaire's validity.

### *4.1 Descriptive statistics*

The descriptive statistics in table 4.1 show that (the number of samples is 395) the minimum average value is 3.724 at item 42. In other words, the recognition of free trials is low on average. The highest average value is item 1 its value is 4.205. This shows that more diverse choices and preferential measures produced by cross-border cooperation can increase consumers' willingness to spend. In terms of standard deviation, the lowest value is item 6, which is 1.0062, indicating that consumers generally will plan how to use promotional coupons. The maximum standard deviation of 1.2854 can be ascribed to item 50, this shows that consumers are concerned about the situation. There is a big gap in the recognition of the rescuing behavior of Taiwanese companies facing loss. (Note： above description shown as in Table 4.1, * is the minimum value, ** is the maximum value)

| Items | Mean | standard deviation |
|---|---|---|
| 1. Due to the impact of COVID-19, through brand collaboration, there would be more product. Would you be willing to buy more collaboration products? | 4.205** | 1.1058 |
| 6. During the (COVID-19) epidemic, how would you use the promotion coupons issued by the government? | 4.182 | 1.0062* |
| 42. Due to the impact of the (COVID-19) epidemic, e-commerce has proposed a free trial. Have you ever placed an order for consumption because of such a plan? | 3.724* | 1.3127 |
| 50. The (COVID-19) epidemic continues, and Taiwanese companies are facing loss. Will you join in on the rescue of companies that are about to fail? | 3.833 | 1.2854** |

**Table 4.1 Descriptive statistics**

### *4.2 Reliability analysis*

According to the reliability analysis, as shown in Table 4.2, out of the 58 questionnaire items, the reliability is 0.949. This study checks whether any questionnaire items need to be deleted, so that reliability can be achieved. Item 57 was deleted.

| Cronbach's α | item |
|---|---|
| .949 | 58 |

**Table 4.2 First reliability Cronbach alpha statistics check**

| items | Scale mean | Scale variance | Cronba-ch's α |
|---|---|---|---|
| 57. Due to the impact of the (COVID-19) epidemic, will you buy more necessities? | 227.286 | 1198.651 | .950** |

**Table 4.3 Questionnaire item data of the first check reliability analysis**

Based on the first reliability analysis, this study deleted item "57 Due to the impact of the (COVID-19) epidemic, will you buy more necessities?" After that, all 57 questionnaire items were again run through Cronbach's α test, and the results show that none of the questionnaire items exceed 0.950, and that there are no more inconsistent reliability questionnaire items, which indicates that the questionnaire items have reached reliability. As shown in Table 4.4.

| Cronbach's α | items |
|---|---|
| .950 | 57 |

**Table 4.4 Cronbach's α statistics for the second reliability check**

### *4.3 Factor analysis*

This research is based on the KMO (Kaiser-Meyer-Olkin) statistical decision criterion proposed by the scholar Kaiser and Bartlett's spherical test with a significant p-value of 0.000 (as shown in Table 4.5).

| | | |
|---|---|---|
| Kaiser-Meyer-Olkin measures the adequacy of sampling | | .878 |
| Bartlett's Test of Sphericity | Chi-Square Test | 15093.909 |
| | df | 1596 |
| | Significance | .000** |

**Table 4.5 KMO and Bartlett test**

Note: ** in the table indicates the 95% confidence interval, and the p value is 0.000, which is significant.

The results of the factor analysis are shown in Table 4.6. It is found that there are 4 types of factors, and the questionnaire item characteristics of each factor are named. This characteristic is still named with the content of each questionnaire item as the main axis. Factor 1：active consumption type, factor 2：demand consumption type, factor 3：planned consumption type, factor 4：habitual consumption type. Consumers have been grouped, and there is a significant difference between groups.

| Items | Factor | | | |
|---|---|---|---|---|
| | Active consumption type | Demand c. type | Planning c. type | Custom c. type |
| 25. Will you reduce the number of visits to the hospital due to the impact of the (COVID-19) epidemic? | 0.679 | | | |
| 14. Due to the impact of the (COVID-19) epidemic, buffet restaurants have reduced food choice. Would you not go to a restaurant with fewer options? | 0.651 | | | |
| 26. Due to the (COVID-19) epidemic, will you travel domestically if you cannot travel abroad? | 0.645 | | | |
| 12. Due to the impact of the (COVID-19) epidemic, will you buy more necessities? | 0.64 | | | |
| 13. During the (COVID-19) pandemic, will you join a paid online video member? | 0.639 | | | |
| 21. Will you use the government-issued promotion voucher to buy products that you don't usually buy? | 0.617 | | | |
| 11. Will the impact of the (COVID-19) epidemic reduce your desire to buy things because of mask wearing? | 0.605 | | | |
| 24. Due to the impact of the (COVID-19) epidemic, a large number of restaurants have begun to use self-service ordering machines. Are you afraid of the risk of infection because you have to touch the tablet? | 0.594 | | | |
| 28. Will you reduce indoor leisure and entertainment time due to the (COVID-19) epidemic? Example：(cinema, concert, Internet cafe, etc.) | 0.589 | | | |
| 30. Will the (COVID-19) epidemic reduce the number of times you go to the supermarket or tradition market for shopping? | 0.587 | | | |
| 27. Will your willingness to eat out go down due to the (COVID-19) epidemic? | 0.567 | | | |
| 8. If the restaurant has implemented anti-epidemic measures, you will eat inside, regardless of whether there is a promotion? | 0.562 | | | |

| | | | | |
|---|---|---|---|---|
| 23. Because of the (COVID-19) epidemic, restaurants adopt quincunx seating. Will you still eat meal? | 0.562 | | | |
| 29. Will you take less public transportation than usual because of fear of COVID-19? | 0.559 | | | |
| 22. During the (COVID-19) epidemic, the government uses the real-name system for logging in and out of public places. Will you accept the real-name system and this policy will not affect your consumption? | 0.553 | | | |
| 45. Due to the impact of the COVID-19 epidemic, Taiwanese companies have launched a discount of 200NTD for new members. Have you ever become a new member because of this program? | 0.55 | | | |
| 10. Will you use the service of the delivery platform because of the (COVID-19) epidemic? | 0.543 | | | |
| 20. Due to the (COVID-19) epidemic, delivery companies have launched contactless meal delivery. Would you place an order for delivery companies to deliver meals? | 0.539 | | | |
| 32. The (COVID-19) epidemic has caused a change in your work style? | 0.536 | | | |
| 34. Due to the impact of the (COVID-19) epidemic, merchants have imposed limits and discount sales activities during the epidemic. Will you go to get discounts? | 0.531 | | | |
| 16. During the (COVID-19) pandemic, restaurant operators are not open for dine-ins. Will it be inconvenient for you? | 0.529 | | | |
| 15. Due to the impact of the (COVID-19) epidemic, robots have replaced humans. Will you accept this service and increase your consumption? | 0.527 | | | |
| 38. Under the influence of the (COVID-19) epidemic, department stores have enacted a plan that gives gifts for spending over 3,000NTD. Have you ever visited this department store because of such a plan? | 0.526 | | | |
| 4. During the (COVID-19) epidemic, sales activities will be held outdoors. Will you participate in outdoor sales activities? | 0.525 | | | |
| 33. Due to the impact of the (COVID-19) epidemic, online shopping platforms provide free shipping discounts. Have you ever bought products because of such a thing? | 0.521 | | | |
| 36. During the COVID-19 pandemic period, concerts or sports events are not open to people, and they will be watched online. With a 20% discount on ticket prices, would you buy tickets? | 0.518 | | | |
| 9. Due to the (COVID-19) epidemic situation, you often place an order on the e-commerce platform to reduce the frequency at which you leave the house. If the e-commerce platform does not give discounts, you will also place an order? | 0.516 | | | |
| 31. Has the (COVID-19) epidemic caused a change in your consumption habits? | 0.512 | | | |
| 39. Under the influence of the (COVID-19) epidemic, department stores have launched plan that, if you swipe a bank credit card for 3,000NTD, you can get a 300NTD coupon from the department store. Have you ever used a credit card to make purchases because of such a program? | 0.5 | | | |
| 19. The current delivery service is quite convenient. You can buy daily necessities instantly by using your mobile phone, reducing your visits to crowded places. Will it increase your willingness to use it? | 0.492 | | | |
| 2. The government has launched a tourism subsidy policy. Would you use this program to travel in the country? | 0.483 | | | |
| 44. Under the influence of the (COVID-19) epidemic, merchants have launched a 30% off inventory clearance activity because they are closing their business. Have you ever spent money because of such a plan? | 0.48 | | | |
| 25. Will you reduce the number of visits to the hospital due to the impact of the (COVID-19) epidemic? | 0.477 | | | |
| 1. Due to the impact of COVID-19, through brand collaboration, more choices and preferential measures will be generated. Would you be willing to buy more collaboration products? | 0.472 | | | |
| 7. Due to the impact of the (COVID-19) epidemic, Taiwanese companies have changed to direct marketing to reduce infection. Will you accept direct marketing? | 0.471 | | | |
| 53. Due to the (COVID-19) epidemic, you use antibacterial products. After the epidemic, will you not change the use of antibacterial products? | 0.467 | | | |
| 40. Under the influence of the (COVID-19) epidemic, merchants have launched 3-day sales promotion plans. Have you ever bought this product because of such a plan? | 0.464 | | | |
| 41. Due to the impact of the (COVID-19) epidemic, department stores give twice the number of collection points. Have you ever spent money because of such a plan? | 0.462 | | | |
| 17. There have been 0 cases in the local area. Would you like the merchants to introduce more preferential programs to increase purchasing quantity? | 0.46 | | | |
| 35. Affected by the (COVID-19) epidemic, hoteliers have launched a promotional plan : stay one night and get one night free. Would you be willing to buy this plan? | 0.457 | | | |
| 18. Due to the (COVID-19) epidemic, cram schools have launched online video teaching. Will you sign up? | 0.456 | | | |

| | | | | |
|---|---|---|---|---|
| 42. Due to the impact of the (COVID-19) epidemic, e-commerce has proposed a free trial. Have you ever placed an order for consumption because of such a plan? | 0.443 | | | |
| 56. During the (COVID-19) epidemic, avoid person-to-person contact. Will you increase the amount of frozen food you buy and increase the frequency of self-cooking? | 0.441 | | | |
| 46. American-style stores originally required membership fees, but due to the impact of the COVID-19 epidemic, membership became free. Have you ever become a new member because of this plan? | 0.429 | | | |
| 55. During the (COVID-19) epidemic, companies use live webcasts to increase traffic. Do you watch webcast sales often? | 0.337 | | | |
| 49. If the COVID-19 epidemic slows down, will the company you work for retain the preferential plan introduced due to the epidemic? | | 0.512 | | |
| 50. The (COVID-19) epidemic continues, and Taiwanese companies are facing loss. Will you join in on the rescue of companies that are about to fail? | | 0.496 | | |
| 48. Affected by the (COVID-19) epidemic, the company adopts the long-distance method. You can work from home. This will increase your work efficiency? | | 0.481 | | |
| 51. After the outbreak of the COVID-19 epidemic, many companies have adopted a policy of unpaid leave. Will this affect your future employment choices? | | 0.469 | | |
| 47. Under the influence of the (COVID-19) epidemic, department stores are selling for 2,000NTD super value lucky bag sets worth over 4000NTD. Have you ever spent money because of such a program? | | 0.448 | | |
| 52. Do you think that the outbreak of the (COVID-19) will have an impact on housing prices. Do you continue to wait for a lower price? | | 0.425 | | |
| 58. After the outbreak of the (COVID-19), consumers' shopping patterns were severely affected. Do you think Taiwanese companies will adopt new sales patterns? | | 0.402 | | |
| 5. During the (COVID-19) epidemic, department stores held anniversary sales events as in previous years. Will you participate in department store activities? | | | 0.569 | |
| 6. During the (COVID-19) epidemic, how would you use the promotion coupons issued by the government? | | | 0.537 | |
| 3. Affected by the new crown pneumonia (COVID-19) epidemic, closed places (such as movie theaters) have price concessions. Have you ever entered and spent? | | | 0.462 | |
| 37. Under the influence of the (COVID-19) epidemic, merchants have launched a "plus 1 yuan to get one free" plan. Have you ever purchased a product plan because of such a plan? | | | | 0.528 |
| 54. Due to the impact of the COVID-19 epidemic, will you maintain social distancing during a face-to-face interaction during a purchase? | | | | 0.465 |

**Table 4.6 Factor analysis**

### *4.4 ANOVA*

First, this study determines the value of the variable in the regression analysis, where the F statistic value is 11.757. And the significance p-value = 0.000<0.05, which means that the null hypothesis is rejected. This means that the regression model of the hypothesis can be proven, with prediction abilities (as shown in Table 4.7).

| Model | | Sum of squares | df | Mean squared | F | Significance |
|---|---|---|---|---|---|---|
| 1 | regression | 416.769 | 56 | 7.442 | 11.757 | .000** |
| | residual | 213.950 | 338 | .633 | | |
| | total | 630.719 | 394 | | | |

**Table 4.7 Analysis of variance of regression model**

Note 1：(Response) 58. After the outbreak of COVID, consumers' shopping patterns were affected. Do you think Taiwanese companies will have to adopt new sales models?

Note 2：The mark ** in the table is the 95% confidence interval, and the p value is 0, which is significant

### *4.5 Regression analysis*

This study uses the results of multiple regression analysis. It can be known from Table 4.8 that "After the outbreak of COVID-19, consumers' shopping patterns were affected. Do you think Taiwanese companies will have to adopt new sales models?" is the dependent variable. Notably, 3, 14, 29, 40, 41, 51, 52, and 53 are notably affected.

From the regression model it can be known that, during the COVID-19 pandemic, consumers are more likely to purchase as a result of sales strategies. H3 shows that the effect is positive and significant. As for assumption H1, the effect of sales strategies on sale speed, it can be known from regression analysis and factor 1 analysis that consumers are more likely to buy things when there is a limited-time sale. The same occurs for H2, which concerns "quest programs" that offer a reward in exchange for purchases.

This study has found that, after the outbreak of COVID-19, consumers' receptiveness to sales strategies is affected by time-limited (item 40) sales and multiplicative returns (item 41).

Analyzing the spillover effect shows that spillover did not happen to delivery platforms during the COVID-19 pandemic, as evidenced by question 10. (H4)

| Model | N. S. C. | | S. C. | T | Sig. | C. S. | |
|---|---|---|---|---|---|---|---|
| | B | S. E. | Beta | | | Tol. | VIF |
| （constant） | 0.667 | 0.32 | | 2.079 | .038** | | |
| 3. Affected by the new crown pneumonia (COVID-19) epidemic, closed places (such as movie theaters) have price concessions. Have you ever entered and spent? | 0.131 | 0.06 | 0.121 | 2.177 | .030** | 0.33 | 3.07 |
| 14. Due to the impact of the (COVID-19) epidemic, buffet restaurants have reduced food choice. Would you not go to a restaurant with fewer options? | 0.146 | 0.06 | 0.132 | 2.299 | .022** | 0.31 | 3.27 |
| 29. Will you take less public transportation than usual because of fear of COVID-19? | -0.14 | 0.07 | -0.13 | -1.992 | .047** | 0.23 | 4.44 |
| 40. Under the influence of the (COVID-19) epidemic, merchants have launched 3-day sales promotion plans. Have you ever bought this product because of such a plan? | -0.1 | 0.05 | -0.1 | -1.968 | .050** | 0.38 | 2.65 |
| 41. Due to the impact of the (COVID-19) epidemic, department stores give twice the number of collection points. Have you ever spent money because of such a plan? | 0.104 | 0.05 | 0.105 | 2.104 | .036** | 0.4 | 2.5 |
| 51. After the outbreak of the COVID-19 epidemic, many companies have adopted a policy of unpaid leave. Will this affect your future employment choices? | -0.24 | 0.06 | -0.25 | -4.132 | .000** | 0.28 | 3.6 |
| 52. Do you think that the outbreak of the (COVID-19) will have an impact on housing prices. Do you continue to wait for a lower price? | 0.517 | 0.05 | 0.532 | 9.898 | .000** | 0.35 | 2.88 |
| 53. Due to the (COVID-19) epidemic, you use antibacterial products. After the epidemic, will you not change the use of antibacterial products? | 0.541 | 0.05 | 0.522 | 11.56 | .000** | 0.49 | 2.03 |

Note 1：(Response) 58. After the outbreak of COVID-19, consumers' shopping patterns were affected. Do you think Taiwanese companies will have to adopt new sales models?
Note 2：The mark ** in the table is the 95% confidence interval, and the p value is 0, which is significant.
S. C.：Standardized coefficient
N. S. C.：Non-Standardized coefficient
Tol.：Tolerance
Sig.：Significance
C. S.：Collinearity statistics

## 5. Conclusion and Suggestions

### *5.1 Conclusion*

This study focuses on how Taiwanese businesses can avoid loss by adopting new sales strategies. Factor analysis is used to build a four-category factor model： the first is proactive consumption, the second is consumption according to needs, the third is planned consumption, and the fourth is habitual consumption. These four categories differ from each other; some are less “milkable”, such as those who plan their consumption and those who consume as needed, than others for the supplier.

Although COVID-19 hangs like a specter, Taiwanese businesses have proposed sales strategies that invite the customer to buy, and that is what they want, for those consumers are easy to generate revenue from, especially when there are limited-time sales events and “quest programs”.

**The results of the study show that**：

H1：Time limitations on sales events can increase revenue. From regression models, it can be known that consumers buy more when there are time constraints.

H2：Consumers are more receptive to sales events because of COVID-19, and it can be known from regression models that consumers are affected by “quest programs” that give back to the consumer.

H3：New sales strategies positively affect consumption rates, and after analyzing the questionnaire replies, it was found that rewarding the consumer for purchases can increase sales for all consumer types.

H4：During the COVID-19 pandemic, consumers do not go outside due to fear, so it is expected that spillover happens on delivery platforms, but this study has found that it does not occur.

In summary, the thought process of the consumer is complex, so it is hard for sales strategies to hit just the right things. This study has found that to increase sales, sales events must have a time limit and giveaways must be double or more. Those two things reduce Taiwanese businesses' risk of collapse post-coronavirus.

### *5.2 Suggestions*

Consumers' behaviors and requirements are not as expected, so suppliers must adapt. This study hopes that it can serve as valuable insight, but in some ways, it is insufficient. Suggestions are listed below：

In the future, if scholars can compare strategies employed in a level two lockdown with strategies employed in a level 3 lockdown (you just can take out, you can't eat something stay in the restaurant), then academia will benefit, but COVID-19 is constantly changing, so studies are encouraged to be continuous over a long period of time.

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