IJAMS
INTERNATIONAL JOURNAL OF ADVANCED MULTIDISCIPLINARY STUDIES
Volume IV, Issue 5 May 2024, eISSN: 2799-0664

Status And Direction of Online Food Businesses During Covid-19 Pandemic

MARY LANE C. STA. MARIA-SIMBRE
Doctor of Business Administration
Tarlac State University

Abstract — This study described the status and direction of online food businesses during COVID-19 pandemic with the objective of boosting the sales and decreasing the cost of sales of online food businesses despite the presence of COVID-19 pandemic.

Through google survey form, relevant information was gathered from seventy one (71) respondents in Congressional District I, Tarlac Province which were analyzed using frequency and percentage statistical tool, multiple response with ranking statistical tool, t-test paired sample means statistical tool and Pearson Product Moment Correlation statistical tools through "IBM SPSS Statistics Data Editor" instrument.

Respondents of the study are from 71 online food businesses in Congressional district I covering a total of 10 municipalities.

Study revealed that Covid-19 pandemic resulted to significant decrease of online food businesses' amount of average sales, amount of average cost of sales and amount of average gross profit by 53%, 45% and 55% respectively. However, it is to be noted that for the same period, average online food businesses' cost of sales was increased by 4.04%, in contrast to percentage to sales of gross profit which was decreased by 4.04%.

This research also disclosed that the top four (4) challenges met by online food businesses in conducting their operations are "cash on delivery requires bigger amount of capital", "customer loyalty is tough to maintain", "unexpected price increase of supplier" and "stock-outs and inventory overload".

Acquisition of business loan and finding investors to work with who could contribute additional capital to the business can be a good source of money for the company. The researcher strongly recommends setting aside contingent fund for emergency which would help the entity to ensure the normal operation of the company and be ready for any business uncertainties.

Consistent innovation of products, packaging or processes help in attaining the loyalty of customers. Also, appreciation notes and other forms of communication addressed to the name of the customers make them feel more important. Lastly, preparation for seasonal demands can help in avoiding stock-outs and inventory overload.

Keywords — Challenges, Covid-19 Pandemic, Online Food Business, Pandemic, Sales Channel, Status

I. Introduction

The COVID-19 pandemic has sprawled its pervasive effects in various sectors of every nation. Madhav et al., (2017) asserts that the pandemic is indeed a doubtful time as it brings many disadvantages such as economic baggage, individual, and behavioral changes, remarkable social and economic disruption as well as increase of political stresses and tensions. Undoubtedly, one

distinguishable effect of the pandemic is in the operations of all types of businesses, specifically in the food industry. The Philippines massively absorbed stressors and constraints in the economic aspects of food industry as Philippines faced an unprecedented lockdown last March 17, 2020 (Duddu, 2020). This study was conducted because the aforementioned phenomenon has posed a relevant and new area of concern as food business sectors face the unprecedentedness of this event. Thus, to gain more understanding of this phenomenon that widely affected people globally, this paper looked into the status and direction of online food businesses with peri-pandemic as the economic backdrop.

With the viable threats of pandemic in the success of businesses, business owners are pressured to conduct certain measures to combat their losses such as loss in sales and earnings and inability to pay loans and leases. The measures include decreasing employees, constructing work-from-home set up, cutting expenses, and applying for government assistance. However, the measure that this paper specifically looked at is the utilization of e-commerce in coping with the uncertainties posed by the pandemic. Despite prior researches on food businesses going online, little to no research explains this phenomenon in contexts wherein e-commerce in food businesses is not greatly popular pre-pandemic, such as the Philippines.

Online business is becoming a major opportunity for many businesses to move from their brick-and-mortar stores to e-stores. For one thing, restaurants with sales other than dine-in sales during the pandemic are better than those that relied more on dine-in sales; for another, the presence of a strong online-ordering with resilient customer-relationship-management (CRM) systems has made the operations of food businesses steadily going through despite the situations.

However, despite the conveniences offered by the shift to online transactions, it is still imperative to look at the current state and direction of online food businesses, specifically in Congressional District I, Province of Tarlac. The researchers have observed occurrences in this locale wherein there are conflicts in the implementation of online food selling such as conflicts in payments and delivery and potential misunderstanding in the orders. Thus, this leads to the purpose of this paper which is to look at the current state and direction of online food businesses in the said locale. Through the data gathered in this study, projections for food business endeavors may be based on them, as well as proposing strategies. Development of data-driven business approaches in attaining online food businesses' sustainability will contribute, in particular, to the economic development of Congressional District 1 in Tarlac and, in general, to the Philippine economy with or without pandemic.

For this paper to attain its purpose, the researchers answered the following questions:

1. *How is the difference between online business before and during the pandemic described along the areas of:*

   1.1 number of sales,

1.2 amount of cost of sales and percentage to sales, and

1.3. amount of gross profit and percentage to sales?

2. *What are the challenges met by the online food businesses that affect their gross profit during the COVID-19 pandemic?*

Hypotheses of the Study

1. There is no significant difference in the amount of sales, amount of cost of sales, and amount of gross profit of online food businesses before and during the pandemic.

2. There is no significant relationship between the profile of online food businesses and their gross profits before and during the pandemic.

Related Literature and Studies

The economic effect of the COVID-19 pandemic has been particularly brutal compared to past pandemic issues that global economy conquered. This "worldwide spread of a new disease" as defined by World Health Organization (Healthline, 2020), aside from the demoralizing loss of life and the complete disruption to normal life, pandemics have long been forecasted to hurt the economy. Gavi (2020) also asserts that no other pandemic is expected to have had such a negative effect in the economy as COVID-19, which has prompted a near-total shut down of social and economic movement.

The growth of digital marketing is due to the proliferation of social media and online platforms. More or less 76 million Filipinos are internet users and stable growth trends go on. Aside from a wider reach of potential customers, payment transactions of different categories of businesses were also affected by the COVID-19 pandemic. Whether consumers are engaged in cash or electronic payments is the main thing in online business, be it in advertising, selling, or buying. The enlarged online purchaser activity is comparable to the SARS episode in 2003, which was an opportunity for China's e-commerce giants Alibaba and JD.com (De Vera, 2020).

There is a good reason to be positive about online business development in the Philippines, though the country faces challenges such as the low broadband penetration, infrastructure gap, security concerns, and low digital fee penetration (E-commerce, 2020). The coming out of latest payment methods is also a key factor which boosted online businesses. According to Vice President at PayMaya Philippines, Lawrence Ferrer, without a way to pay online, people will not be able to take part in the digital market. The alternative mode of payment called Cash on Delivery or COD is one of the main reasons why online shoppers in the Philippines have made two Singapore-based platforms—Shopee and Lazada—the most popular sites for purchases. In addition, with the nonstop improvement of e-commerce, online shopping has become an expanding trend today in the Philippines. Using platform shops like Lazada to buy and sell goods directly from the factory can also be beneficial. Top companies may have an impact on Internet

and Communication Technology (ICT) and incorporate Intranet, social media, and online communication channels into daily operations (Mobo, 2020).

The shift to e-commerce during the pandemic emphasized the value of agility, flexibility, and creativity for small businesses to survive and prosper. This is also demonstrated in report which indicates that in the midst of a crisis and thereafter Micro, Small, and Medium Enterprises (MSMEs) must have the following characteristics. MSMEs, according to Isenberg et al. (2020), must possess the characteristics of resilience in the face of the COVID-19 pandemic (Navarro, 2020). These characteristics are further evidenced in Dvorak et al.'s (2021) findings which indicate that crisis, like a pandemic, appears to have shifted both groups' interest in e-commerce, but it did not reduce the disparity in their viewpoints. This shows that despite the abrupt shift to e-commerce, it is imperative for business owners to possess agility and flexibility in navigating the situation.

Moreover, the shift to online is fuelled by individual's fear to catch the virus. Jung et al. (2016) state that consumers alter their buying behaviors to decrease the risk of infection. In line with this, the shift is also influenced by consumer eating habits. These eating habits significantly contribute to the purchase behavior of consumers when it comes to food. This is emphasized in Marincovik et al.'s (2021) study stating that consumers' perceptions of the COVID-19 virus's risk and precautions have a statistically significant impact on their eating habits, which have changed during the pandemic, ultimately resulting in significant effects on consumers' food purchase behavior. Consequently, in the findings of Guney and Sagun (2021), price increases, stockpiling, awareness of food waste, safety and excessive food access concerns, organic food preferences, and food packaging were all linked to changes in food consumption behavior and habits as a result of the pandemic.

Moreover, Shareef et al. (2021) in his study, the researcher revealed that "stock-outs and inventory overload" as one of the main challenges of online food businesses during the COVID-19 pandemic. The researcher recommended that "real-time record tracking" will help in the elimination of the problem associated with the inventory of perishable goods of online food businesses during the COVID-19 pandemic.

Due to these pressing challenges in the shift to online, Bhatti et al. (2020) figured out that COVID-19 has had a tremendous impact on global e-commerce, both positive and negative, but overall, e-commerce is increasing rapidly as a result of the virus.

II. Methodology

This study used descriptive method to determine the status and direction of online food businesses during the COVID-19 pandemic in Congressional District I, Tarlac Province. This study involved seventy-one (71) purposively sampled online food businesses from 10 different municipalities in Congressional District I of Tarlac Province who are in operation as of December

31, 2020 based on the records obtained from the Business Permit and Licensing Office (BPLO) of each municipality

The study used primarily questionnaire and unstructured interview through Google survey forms. This study utilized the questionnaire which was personally created by the researcher with the support of the CBA Faculty Members of Tarlac State University (TSU); Dr. Elizabeth A. Amurao, together with the Vice President of Tarlac Agricultural University (TAU), Dr. Arnold E. Velasco. Pilot testing with 25 respondents was also carried out through Google survey form, though it does not require Cronbach's Alpha measurement as per judgment of the researcher's statistician. The content and face validity of the research instrument was evaluated by three (3)experts, namely: Dr. Arnold E. Velasco, Dr. Jonathan A. Gabriel and Dr. Melchor Cayabyab. All the accomplished evaluation sheets contained answers rating the instrument as "very highly valid" (Appendices I-K).

The following statistical tools were used to interpret the data gathered from the answers of the respondents in the questionnaire:

a) The T-test for paired sample means was used to obtain the effect of the COVID-19 pandemic on the online food businesses as to the average amount of gross profit for each category of food before and during the Covid-19 pandemic (Winks, 2013).

b) The Pearson-Product Moment Correlation was used to correlate the profile of online food businesses with the gross profit of online food businesses before and during the COVID-19 pandemic.

All the statistical tests of this study were performed using the IBM SPSS Statistics Data Editor tool.

III. Results and Discussion

1. Difference of Online Food Businesses Before and During Pandemic

1.1 Number of Sales before and during the COVID-19 Pandemic

Tables 1 and 2 present the number of average sales of online food businesses before and during the COVID-19 pandemic from the period January 1, 2019 to December 31, 2019 and January 1, 2020 to December 31, 2020, respectively.

TABLE 1 Difference in the number of average sales of online food businesses before and during the pandemic

Variables	Before Pandemic	During Pandemic	Probability	Difference
Average online food business sale	934,915	443,178.82	.0067	-491,736.18 (Highly Significant)

TABLE 2 Number of average sales of online food businesses before and during the pandemic

Variables	Before Pandemic	During Pandemic	Difference	% of difference to sales
Average online food business sales	934,915	443,178.82	-491,736.18	-0.53

A high significant difference is found in the average online food business sales, as shown in Table 1 and Table 2. Deducting the number of average sales during the pandemic (P443,178.82) from the number of average sales before the pandemic (P934,915) gives a figure showing a significant decrease of -491,736.18. The difference is equivalent to a decrease by 53% of the average sales before the pandemic. This result rejects the null hypothesis that there is no significant difference in the number of sales of online food businesses before and during the pandemic. A detailed examination of the average sales of online food businesses was conducted, checking it by the type of food shown in table 3.

TABLE 3 Number of average sales of online food businesses before and during the pandemic

Type of food	Before pandemic	During pandemic	Difference	% to sales
Vitamins and dietary supplements (UVA, Intra, USANA, Nature Made, etc.)	1,000,000	150,000	-850,000	-85.00
Desserts (ice cream, leche flan, halu-halo, etc.)	1,386,667	220,000	-1,166,667	-84.13
Condiments and spices (soy sauce, vinegar, cooking oil, fish sauce, oyster sauce, etc.)	160,000	32,000	-128,000	-80.00
Finger foods (french fries, nachos, peanuts, cornick, fried chicken, etc.)	1,700,833	423,000	-1,277,833	-75.13

Meal set (rice & viand and silog meals such as tapsilog, longsilog, porksilog, chickensilog, etc.)	1,129,167	316,133	-813,034	-72.00
Bread, pastry and cake (pizza, pandesal, cupcake)	931,176	315,412	-615,764	-66.13
Exotic foods (balut, frog, woodworm, abuos (ant eggs), cricket, bettle larvae, salagubang, sawa, salawali, etc.)	400,000	180,000	-220,000	-55.00
Native delicacies (biko, suman, bibingka, latik, palitaw, iniruban, patupat, puto bumbong, atbp.)	700,000	350,000	-350,000	-50.00
Fresh meat, fruits and vegetables (pork, beef, chicken, fish, egg, apple, watermelon, strawberry, mangosteen, mushroom, etc.)	804,000	726,200	-77,800	-9.68
Coffee, tea, milk tea, shake	1,288,889	1,312,222	23,333	1.81
Frozen meat (pork, beef, chicken, fish, etc.)	783,333	850,000	66,667	8.51

Table 3 discloses that the overall decrease of 53% in the average online food businesses sales results from a decline in the average sales of numerous categories of food during the COVID-19 pandemic. Analysis of gathered data revealed that the COVID-19 pandemic decreased the number of average sales of online food businesses selling “vitamins and dietary supplements (UVA, Intra, USANA, Nature Made, etc.)”, “desserts (ice cream, leche flan, halu-halo, etc.)” and “condiments and spices (soy sauce, vinegar, cooking oil, fish sauce, oyster sauce, etc.)” types of food by a deficit of as high as 85%, 84.13%, and 80%, respectively. The following food categories may not be considered as daily necessity, hence the decrease in sales. On the other hand, Table 12 shows that “coffee, tea, milk tea, shake” and “frozen meat (pork, beef, chicken, fish, etc.)” types of food increase the average amount of sales by 1.81% and 8.51%, respectively, during the pandemic.

It can be observed that the percentage of decrease and increase in the average gross profit of each type of food mentioned, 85% and 8.51%, respectively, are very extreme, highlighting the massive decline in the overall performance of online food businesses.

1.2. Amount of Cost of Sales and its Percentage to Sales before and during the COVID-19 Pandemic

Table 13 and Table 14 present the amount of average cost of sales of online food businesses before and during the COVID-19 pandemic from January 1, 2019 to December 31, 2019 and January 1, 2020 to December 31, 2020, respectively, as well as its percentage to sales.

TABLE 4 Difference in the amount of average cost of sales of online food businesses before and during the pandemic

Variables	Before Pandemic	During Pandemic	Probability	Difference
Average online food business cost of sale	231,962.64	127,845.18	.0072	-104,117.46 (Highly Significant)

TABLE 5 Amount of average cost of sales of online food businesses before and during the pandemic

Variables	Before Pandemic	During Pandemic	Difference	% of difference to sales
Average online food business cost of sales	231,962.64	127,845.18	-104,117.46	-0.45

As can be seen in Table 4, there is a significantly high difference in the average online food business cost of sales during the pandemic. Deducting the amount of average cost of sales during the pandemic (P127,845.18) from the amount of average cost of sales before the pandemic (P231,962.64) results in a significant decrease of -104,117.46, equivalent to 45% of the average cost of sales before the pandemic. The null hypothesis is rejected since there is a high significant difference between the amount of cost of sales of online food businesses before and during the pandemic.

Looking at Table 6, the data reveals an overall increase of 4.04% of the cost of sales to sales during the pandemic.

TABLE 6 Percentage of cost of sales to sales before and during the pandemic

Cost of Sales' Percentage to Sales		
Before pandemic	During pandemic	Difference
24.81%	28.85%	4.04%

It is to be noted that although the amount of cost of sales during the pandemic resulted to a huge decline, its percentage to sales brought an increase of 4.04% during the pandemic. According to owners of online food businesses, an increase in the percentage of cost of sales to sales is the result of additional expenses of the online food businesses during the pandemic like advertising expense, delivery expenses, and other miscellaneous expenses associated with the business operation.

In order to understand the overall increase of the percentage of cost of sales to sales, a comprehensive examination was conducted by the researcher. The data are consolidated in Table 7.

TABLE 7 Amount of average cost of sales of online food businesses and its percentage to sales before and during the pandemic

Type of food	Before pandemic		During pandemic		Difference	
	cost of sales	% to sales	cost of sales	% to sales	cost of sales	% to sales
Bread, pastry and cake (pizza, pandesal, cupcake)	290,235	31.17	164,706	52.22	-125,529	21.05
Vitamins and dietary supplements (UVA, Intra, USANA, Nature Made, etc.)	200,000	20.00	50,000	33.33	-150,000	13.33
Exotic foods (balut, frog, woodworm, abuos (ant eggs), cricket, bettle larvae, salagubang, sawa, salawali, etc.)	200,000	50.00	100,000	55.56	-100,000	5.56
Finger foods (french fries, nachos, peanuts, cornick, fried chicken, etc.)	435,417	25.60	130,250	30.79	-305,167	5.19
Native delicacies (biko, suman, bibingka, latik, palitaw, iniruban, patupat, puto bumbong, atbp.)	315,000	45.00	174,000	49.71	-141,000	4.71
Coffee, tea, milk tea, shake	257,778	20.00	313,333	23.88	-55,555	3.88
Desserts (ice cream, leche flan, halu-halo, etc.)	226,667	16.35	43,333	19.70	-183,334	3.35
Meal set (rice & viand and silog meals such as tapsilog, longsilog, porksilog, chickensilog, etc.)	234,625	20.78	73,542	23.26	-161,083	2.48
Condiments and spices (soy sauce, vinegar, cooking oil, fish sauce, oyster sauce, etc.)	16,000	10.00	3,500	10.94	-12,500	0.94
Frozen meat (pork, beef, chicken, fish, etc.)	176,667	22.55	183,333	21.57	6,666	-0.98
Fresh meat, fruits and vegetables (pork, beef, chicken, fish, egg, apple, watermelon, strawberry, mangosteen, mushroom, etc.)	199,200	24.78	170,300	23.45	-28,900	-1.33

The increase in the percentage to sales of cost of sales in this study denotes negative performance of the company as opposed to the expected lower ratio which would indicate whether the business will remain profitable even though revenue declines (Leonard, 2019).

Table 7 shows that the COVID-19 pandemic resulted in an increase of the percentage of cost of sales to sales for online food businesses that are selling "bread, pastry and cake (pizza, pandesal, cupcake)" and "vitamins and dietary supplements (UVA, Intra, USANA, Nature Made, etc.)" types of food by 21.05% and 13.33%, respectively. The increase in percentage of cost of sales to sales is explained by the additional expenses that online food businesses have to endure during the COVID-19 pandemic, such as: advertising expense, shipping expenses, and other miscellaneous spending in order to cope up with the current situation.

Consequently, Table 7 also discloses that "frozen meat (pork, beef, chicken, fish, etc.)" and "fresh meat, fruits and vegetables (pork, beef, chicken, fish, egg, apple, watermelon, strawberry, mangosteen, mushroom, etc.)" types of food's percentage of cost of sales to sales results in a decrease of -0.98% and -1.33%, respectively. The cost of products sold fluctuates due to a variety of factors. Raw material rates, maintenance costs, shipping costs, and the consistency of revenue or business operations are all factors to consider. (Complete Controller, 2019).

1.3. Amount of Gross Profit and its Percentage to Sales before and during the COVID-19 Pandemic

Table 8 and 9 present the amount of average gross profit of online food businesses before and during the COVID-19 pandemic from January 1, 2019 to December 31, 2019 and January 1, 2020 to December 31, 2020, respectively, as well as its percentage to sales.

TABLE 8 Difference in the amount of average gross profit of online food businesses before and during the pandemic

Variables	Before Pandemic	During Pandemic	Probability	Difference
Average online food business gross profit	702,952	315,334	= .000	- 387,618 (highly significant)

A high significant difference in the average online food business gross profit is shown by the data. Deducting the amount of average gross profit during the pandemic (315,334) from the amount of average gross profit before the pandemic (702,952) results in a significant decrease of -387,618. This result rejects the null hypothesis since a high significant difference in the number of sales of online food businesses before and during the pandemic was observed.

During the pandemic, it is not questionable anymore to obtain a decrease in gross profit of suppliers as the gross profit will not exist if there are no sales completed. Hence, the decrease of gross profit is indeed acceptable when the amount of sales mainly drops. Moreover, the percentage to sales of the decrease in gross profit was examined by the researcher in order for her to ascertain the degree to which the improvements be made by the online food owners for them to continue with the operation industry despite the pandemic that the Congressional District I has experienced.

Table 9 Amount of average gross profit of online food businesses before and during the pandemic

Variables	Before Pandemic	During Pandemic	Difference	% of difference to sales
Average online food business gross profit	702,952	315,334	- 387,618	-0.55-

As can be seen in Table 9, there is a highly significant difference in the average online food business gross profit during the pandemic. Deducting the amount of average gross profit during the pandemic (P315,334) from the amount of average cost of sales before the pandemic (P702,952) brings a significant decrease of -387,618, equivalent to -55% of the average gross profit before pandemic. The null hypothesis is rejected since there is a high significant difference in the amount of gross profit of online food businesses before and during the pandemic.

Table 10 below reveals an overall decrease of 4.04% of percentage of gross profit to sales during pandemic.

TABLE 10 Percentage of gross profit to sales before and during the pandemic

Gross Profit's Percentage to Sales		
Before pandemic	During pandemic	difference
75.19%	71.15%	-4.04%

It can be observed that the decline in the amount of gross profit of online food businesses also resulted in a decrease in the percentage to sales of average amount of gross profit during the pandemic.

In order to understand the overall decrease of the percentage of gross profit to sales, a detailed examination with the amount of gross profit and percentage to sales was carried out by the researcher and combined the data in Table 11.

TABLE 11 Amount of average gross profit and its percentage to sales before and during the pandemic

Type of food	Before pandemic		During pandemic		Difference	
	gross profit	% to sales	gross profit	% to sales	gross profit	% to sales
Bread, pastry and cake (pizza, pandesal, cupcake)	640,941	68.83	150,706	47.78	-490,235	-21.05
Vitamins and dietary supplements (UVA, Intra, USANA, Nature Made, etc.)	800,000	80.00	100,000	66.67	-700,000	-13.33
Exotic foods (balut, frog, woodworm, abuos (ant eggs), cricket, bettle larvae, salagubang, sawa, salawali, etc.)	200,000	50.00	80,000	44.44	-120,000	-5.56
Finger foods (french fries, nachos, peanuts, cornick, fried chicken, etc.)	1,265,416	74.40	292,750	69.21	-972,666	-5.19
Native delicacies (biko, suman, bibingka, latik, palitaw, iniruban, patupat, puto bumbong, atbp.)	385,000	55.00	176,000	50.29	-209,000	-4.71
Coffee, tea, milk tea, shake	1,031,111	80.00	998,889	76.12	-32,222	-3.88
Desserts (ice cream, leche flan, halu-halo, etc.)	1,160,000	83.65	176,667	80.30	-983,333	-3.35
Meal set (rice & viand and silog meals such as tapsilog, longsilog, porksilog, chicke nsilog, etc.)	894,542	79.22	242,591	76.74	-651,951	-2.48
Condiments and spices (soy sauce, vinegar, cooking oil, fish sauce, oyster sauce, etc.)	144,000	90.00	28,500	89.06	-115,500	-0.94
Frozen meat (pork, beef, chicken, fish, etc.)	606,666	77.45	666,667	78.43	60,001	0.98
Fresh meat, fruits and vegetables (pork, beef, chicken, fish, egg, apple, watermelon, strawberry, mangosteen, mushroom, etc.)	604,800	75.22	555,900	76.55	-48,900	1.33

The gross profit margin is an indicator of a company's production quality. A decent or higher percentage gross profit margin indicates that a business is more effective in manufacturing its product. The financial manager can compare the gross profit margin of a company to that of other companies in the same sector or to that of other companies over time (Carlson, 2020).

Table 11 reveals that “bread, pastry and cake (pizza, pandesal, cupcake)”, “vitamins and dietary supplements (UVA, Intra, USANA, Nature Made, etc.)” types of food register a decrease in the amount of average gross profit as well as its percentage to sales by -21.05% and 13.33%, respectively, during the COVID-19 pandemic.

In reference with the drop in sales and cost of sales of online food businesses during the pandemic, it is not questionable anymore to account the decrease of gross profit of suppliers as the

gross profit will not exist if there are no sales completed. Hence, it is indeed understandable to experience decrease of gross profit when the amount of sales mainly dropped.

In addition, Table 11 reveals that "frozen meat (pork, beef, chicken, fish, etc.)" and "fresh meat, fruits and vegetables (pork, beef, chicken, fish, egg, apple, watermelon, strawberry, mangosteen, mushroom, etc.)" types of food's gross profit percentage to sales increased by 0.98% and 1.33%, respectively, during the COVID-19 pandemic.

It can be observed from the results of the study that although, generally, gross profit of online food businesses as well its percentage to sales massively declined, the gross profit amount of online food businesses in "Frozen meat (pork, beef, chicken, fish, etc.)" and "Fresh meat, fruits and vegetables (pork, beef, chicken, fish, egg, apple, watermelon, strawberry, mangosteen, mushroom, etc.)" types of food increased.

2. Challenges Met by Online Food Businesses

Table 25 presents the challenges met by online food businesses in conducting their operations during pandemic.

TABLE 12 Challenges met by online food businesses

Challenges	Frequency	Rank
Cash on Delivery requires bigger amount of capital	65	1
Customer loyalty is tough to maintain	63	2
Unexpected price increase of supplier	59	3
Stock-outs and inventory overload	40	4
Bogus buyers	12	5
Finding a reliable supplier	11	6
Slow/long time delivery	4	7
Unstable/slow internet connection	6	8
Fake payments of the buyers	4	9
Invoice generation	3	10
Shipment tracking	2	12
Fake refund demands from the consumer	2	12
Wrong recipient of delivery	2	12

* multiple response

Table 12 discloses that "cash on delivery requires bigger amount of capital" challenge of online food businesses ranked 1, achieving a frequency count of 65; followed by "customer loyalty is tough to maintain" challenge obtaining a frequency count of 63. "Unexpected price increase of supplier" challenge is 3rd, gaining a frequency count of 59. The "stock-outs and inventory overload" challenge has a frequency count of 40, placing the said type in the fourth ran.

IV. Conclusion

It is evident that because of the constraints posed by the pandemic to food business owners, there is a highly significant decrease in sales, increase of cost of sales' percentage to sales, and decrease of gross profit percentage. More specifically, the decrease in sales is more noticeable in categories such as vitamins and dietary supplements, desserts, and spices. This data implies that consumer purchase activity is probably driven by the perceived necessity of the food categories they purchase. Furthermore, the findings also imply the need for intense development in marketing, financial and operation planning in order to boost the sales of online food businesses once again despite the changes in consumer purchase activity and preferences they experience. Constant product innovation advertised through multiple channels, extensive financial management and re-visitation of operational processes, followed by appropriate changes, would be beneficial in sustaining the company's existence in the market through constant increase of sales during business operations.

In addition, it is important to acknowledge the preferences of the target market. Based on the gathered data, the following are the most preferred food "bread, pastry and cake (pizza, pandesal, cupcake)", "coffee, tea, milk tea, shake", "desserts (ice cream, leche flan, halu-halo, etc.)", "finger foods (french fries, nachos, peanuts, cornick, fried chicken, etc.)", "meal set (rice & viand and silog meals such as tapsilog, longsilog, porksilog, chickensilog, etc.)" and "pasta (spaghetti, carbonara, lasagne, macaroni, etc.)". Thus, this emphasizes that it is important to identify the current food preferences of the target market.

Aside from aligning sold products to usual customer preferences, it is also important to consider the preferences of consumers regarding their modes of payment. However, it is also important to mention that the popular Cash on Delivery (COD) mode of payment which most of consumers prefer require bigger amount of capital. Thus, this leads to another recommendation that, in the process of coping with these demands, it is important for food business owners to set up a contingency money for emergencies which may allow the company to maintain operations and prepare for any business uncertainties.

In the process of coping with the challenges posed by the pandemic, the results also put emphasis on the needed customer loyalty needed despite the shift to e-commerce. Despite customer loyalty being tough to maintain, business owners can still strengthen this aspect of their business through sending appreciation notes customers patronizing their products and allowing their customers to evaluate their services. Through these measures, their buyers would feel more involved, hence making them trust the seller and products more.

Unexpected price increase from suppliers is also seen as one of the challenges in navigating food business during the pandemic. Therefore, if the price cannot be decreased, the price increase can be used to negotiate something of value to the business, such as, better credit terms, early settlement discounts or faster delivery of products. Otherwise, getting quotes from alternative

suppliers can also be done. On the other hand, stock-outs and inventory overload is also seen as a challenge for food business owners in this study. So, if the company has the capability to buy a "Real-Time Inventory Tracking" that is reliable and helps the business to avoid stock-outs and inventory overload, the researcher strongly recommends to the entity to invest on it.

The current state of online food businesses in the Philippines is still a challenge. Business owners are still figuring out how to effectively deal with the challenges mentioned above. The changes imposed by the pandemic has demanded these owners to navigate the unfamiliarity of the underlying factors of online selling such as customer loyalty, deliveries, mode of payments, and customer satisfaction, and many more. Despite the challenges evident in the current state of online food sellers, with the right amount of innovation, resilience, and improved entrepreneurial decisions, the direction of food businesses going online is not impossible to be successful.

In conclusion, the abrupt shift to e-commerce have provided certain opportunities for business owners. However, despite these advantages, this phenomenon has also reminded every business owner the importance of being able to adapt and innovate, most especially in times wherein unprecedented events like the COVID-19 pandemic is inevitable.

REFERENCES

[1] Bhatti1, A. et al., (2020). E- Commerce Trends during Covid-19 Pandemic. (Faculty of Business Administration Ilma University Karachi1 Faculty of Business Management University of Sialkot) Superior University Lahore3,4,5,6. Research Gate
[2] De Vera, B. (2020). 'Economy':PH e-commerce gains during COVID-19 lockdown.Inquirer.net. https://business.inquirer.net/295234/ph-e-commerce-gains- during-covid-19-lockdown
[3] Duddu, P. (2020). Coronavirus in Philippines: The COVID-19 risk, impact and measures. Pharmaceutical Technology. https://www.pharmaceutical-technology.com/features/coronavirus-affected-countries-philippines-measures- impact-tourism-economy/
[4] Dvorak et al., (2021). The effect of the COVID-19 crisis on the perception of digitisation in the purchasing process: customers and retailers perspective. Emerald Insight.
[5] E-commerce. (2020). International Trade Administration. https://www.trade.gov/knowledge-product/philippines-ecommerce
[6] Guney, O. & Sangun, L. (2021). How COVID-19 affects individuals' food consumption behaviour: a consumer survey on attitudes and habits in Turkey. Emerald Publishing Limited
[7] Jung, H. et al., (2016). The Impact of an Epidemic Outbreak on Consumer Expenditures:An Empirical Assessment for MERS Korea. https://www.researchgate.net/publication/302061028_The_Impact_of_an_Epidemic_Outbreak_on_Consumer_ExpendituresAn_Empirical_Assessment_for_MERS_Korea
[8] Lazarevic, J. & Marincovik, V. (2021). Eating habits and consumer food shopping behaviour during COVID-19 virus pandemic: insights from Serbia. Emerald Publishing Limited.
[9] Madhav et al., (2017). Pandemics: Risks, Impacts, and Mitigation. NCBI Resources. https://www.ncbi.nlm.nih.gov/books/NBK525302/

[10] Mobo, F. D. (2020). The Impact of Covid-19 in the economic sector of Olongapo and Zambales, Philippines. Research Gate. 122 https://www.researchgate.net/publication/346578811_THE_IMPACT_OF_COVID-19_IN_THE_ECONOMIC_SECTOR_OF_OLONGAPO_AND_ZAMBALES_P HILI PPINES

[11] Navarro, R. (2020). A better normal under covid-19: Digitalizing the philippine economy now. Philippines Digital Economy. https://openknowledge.worldbank.org/bitstream/handle/10986/34606/Philippines-Digital-Economy-Report-2020-A-Better-Normal-Under-COVID-19-Digitalizing-the- Philippine-Economy-Now.txt?sequence=2&isAllowed=y

[12] Shareef, et al., (2021). Stakeholders conflict and private–public partnership chain (PPPC): supply chain of perishable product. Emerald Insight.