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ONLINE STRATEGIES FOR SMALL BUSINESSES AFFECTED BY COVID-19: A SOCIAL MEDIA AND SOCIAL COMMERCE APPROACH

Julianne Itliong

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A Project

Presented to the

Faculty of

California State University,

San Bernardino

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In Partial Fulfillment

of the Requirements for the Degree

Master of Science

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by

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December 2020

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ABSTRACT

The Covid-19 pandemic has altered the way many US citizens work, live, and interact with one another. Many rules and regulations have been put in place by government officials to slow the spread of the virus because of how contagious it is in social settings. Because of these rules and regulations, many small businesses were forced to temporarily close their doors to the public in order to comply with the rules of social distancing and the ban on large gatherings. For some businesses, this shift from physical sales to digital sales has always been a part of their business models, leaving them unaffected by this pandemic. For other businesses with no digital strategy, the pandemic has put their business at risk for permanent closures.

This project explores the various ways small to medium-sized enterprises (SMEs) can avoid permanent business closures during the Coronavirus pandemic by adopting an online ordering strategy using social media and social commerce. The category of SME to be analyzed in this project is the small business restaurant. Online delivery systems, social media, and social commerce are the topics of research for this project in an attempt to shed some light on the value these strategies can bring to the struggling small business restaurant directly affected by Covid-19.

DEDICATION

This is dedicated to my daughter, Aleah. I cannot wait to see all the good you will do in this world.

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CHAPTER ONE

PROJECT BACKGROUND

Introduction

It is said that America is where dreams can come true. This cannot be a truer statement for the United States small business owner. According to the US Small Business Association, "Small businesses are the lifeblood of the US economy: they create two-thirds of net new jobs and drive US innovation and competitiveness" (Office Of Advocacy, 2019). A small business owner, also known as an entrepreneur, is someone who can create a new business, take on the risks of starting the new business and then reap the rewards, regardless if they are fruitful or futile. This is what the American dream is all about. Yet, in the wake of the Coronavirus pandemic, small businesses have suffered incredible losses and entrepreneurs all over the United States are having trouble keeping their businesses alive. According to a recent study, "Yelp data shows ~60% of business closures due to the coronavirus pandemic are now permanent" (Sundaram, 2020). These are the businesses that do not have the same resources as their larger competitors who are equipped with enough financial stability to survive the economic trials the pandemic has inflicted on them.

A small to medium-sized enterprise, or SME for short, can generally be defined as, "businesses that maintain revenues, assets, or a number of employees below a certain threshold" (Liberto, 2020). Some examples of these

small businesses can be the "mom-and-pop" neighborhood restaurant, local boutiques, small law offices, hair and nail salons, and small gyms. These small businesses mainly rely on the foot traffic of in-person customers to keep their businesses afloat. Not being able to open their doors to the public completely cuts off their financial resources, resulting in permanent or temporary closures of their businesses. These are the disheartening outcomes American small businesses must overcome during these trying times. These real-life scenarios invite the question, what should these small businesses do? It is important for small businesses to look beyond the idea that the world is looking like a bleak and solemn place at the moment. Instead, it is essential for small businesses to use their peripheral vision to focus on the resources that are in their arsenal right now and to learn from the businesses that are taking on the effects of this pandemic with great optimism.

Even though the world is going through a global crisis at the moment, the world is also going through a revolutionary period in time. This is the Fourth Industrial Revolution, a term coined by the Founder and Chairman of the World Economic Forum, Klaus Schwab. Schwab describes the revolution as, "the blurring of boundaries between the physical, digital, and biological worlds" (Schwab, 2016). If businesses, large or small, can harness the concept that business can still be conducted in both the physical and digital worlds, another disruption similar the pandemic will not have such a negative impact on the American small business sector.

During this pandemic, it is easy to observe there are several organizations thriving during this trying time. Large retailers such as Amazon, Target, and Wal-Mart are still prospering whereas "163,735 businesses have indicated on Yelp that they have closed" (Sundaram, 2020). Besides financial advantages, what are some of the strategies that is helping large businesses continue to weather the storm of this pandemic and what can smaller businesses learn from them? To take this question a step further, are these strategies even implementable in the context of small business? If so, can these strategies help an entrepreneur rebuild their business and save them from another disruption as hard-hitting as this global pandemic?

Problem Statement

This project will attempt to investigate how having an online presence can be beneficial to small or medium enterprises (SMEs). More specifically, how a digital strategy utilizing social media and social commerce can bring business sustainability to small business restaurants, a category of SME that has faced many difficulties during the pandemic.

Research Questions

There are three main questions this study will attempt to answer:

1. How beneficial is having a strong online presence, especially in the wake of the global pandemic, to business sustainability?

2. How can social media tools bring value to an SME's key business processes during a global pandemic?

3. Is social commerce a channel SMEs should consider implementing? If so, how valuable can it be for SMEs that have been hit the hardest, such as small business restaurant?

Purpose of Study

The purpose of this study is to illustrate the beneficial factors social media can have on SMEs and their business processes during the global pandemic. The focus of this project's scope will be the small business restaurant, as a general industry, and how to continue online orders and customer engagement using social media tools.

Methodologies

In Chapter 2, a literature review is used to gather academic evidence that can help support a proposed solution and answer the project's three main research questions. Chapter 3 is the collection of data from a recent consumer behavior survey and with the use of the Business Intelligence (BI) tool, Tableau, the summary of findings is presented as data visualization models and dashboards. These findings are then discussed to determine the possible effectiveness of a proposed solution. Chapter 4 is the explanation of the proposed solution, social media and social commerce. This is done by learning from a business case study and implementing a use case scenario. Lastly,

Chapter 5 concludes the study and discusses future work on how the

implementation of social media and social commerce may bring business

sustainability value to SMEs.

CHAPTER TWO

LITERATURE REVIEW

SMEs and Covid-19

A small business can be defined as, "a privately owned corporation, partnership, or sole proprietorship that has fewer employees and less annual revenue than a corporation or regular-sized business" (ASQ, 2020). These businesses count for many American jobs and are the drivers of innovation for this economy. A survey was conducted between March 28 and April 4, 2020 with 5,800 small businesses participating to determine the commonalities between SMEs and their businesses during the pandemic.

The survey findings were as follows: mass layoffs for SME employees occurred within only the first few weeks into the crisis, the expected length of the crisis had a positive relationship with the risk of closures, and lastly, "the median business with more than $10,000 in monthly expenses had only about two weeks of cash on hand" when this survey was conducted (Bartik, et al., 2020). This information presents that the average small business owner was not prepared to close their doors for such long periods of time and desperately need the cash flow from returning customers to keep their business alive and expenses paid.

Omnichannel Strategies in Both Retail and Food Service

In comparison to the struggling small business owner, why are there businesses that are performing incredibly well amid all of this uncertainty? For example, in August, "Target reported the greatest percentage increase in quarterly sales in the company's history" (Friedman, 2020). Large companies such as Wal-Mart, Home Depot, and Wayfair have reported surpassing historical revenue benchmarks in these last few months alone. Whereas retailers such as JC Penney, Pier 1 Imports, and Tuesday Morning had to file Chapter 11 bankruptcy during the summer months (Harrington & Stebbins, 2020). Where did these companies go wrong?

Target's chief executive, Brian Cornell, has stated, "Throughout this crisis, we have deepened our relationship with American customers and introduced millions of them to our digital fulfillment services" (Friedman, 2020). In terms of business strategy, Mr. Cornell was addressing Target's successful omnichannel strategy. Omnichannel is, "a synergetic management of the numerous available channels and customer touchpoints, in such a way that the customer experience across channels and the performance over channels are optimized" (Quach, Barari, Moudry, & Quach, 2020). Can any industry, not just retail, take this framework and implement it in their own business? Domino's Pizza, a large pizza delivery chain, was able to do just that.

"Domino's Pizza has built an impressive, and immersive, digital experience that rivals many e-commerce brands" (Wong, 2018). As a retail food

chain, Domino's Pizza was able to use the digital era to its advantage and invested heavily in the technology necessary to be in the e-commerce space. Similar to the big-box retailers like Wal-Mart and Target, Domino's knew they had to be available in all customer touchpoints. This strategy has helped them not only be a successful pizza delivery chain, but also a successful e-commerce platform. The Domino's digital transformation story will be discussed further in a later chapter.

What these large businesses like Target, Wal-Mart, and Domino's have in common is that they established an online presence and virtual relationships with their customers far before the pandemic hit in early March of 2020. These companies took advantage of the social commerce technologies that are out there and the customer shift towards online shopping at the outset. These companies paid attention to the customer trends, embraced technology, and adjusted their business models accordingly. This project will explore similar online strategies for SMEs.

<center>Social Media and SMEs</center>

In contrast to large corporations, SMEs do not have very much capital to make heavy investments in advanced information technologies, systems, and expanding their infrastructure. SMEs, especially those looking to recover from the Covid-19 crisis, must try to invest in affordable tools that are readily available to them. One tool that can bring great business value to an SME would be the use of social media. Generally, social media can be defined as, "A group of Internet-

based applications that build on the ideological and technological foundations of Web 2.0. and that allow the creation and exchange of User-Generated Content" (Stockdale, Ahmed, & Scheepers, 2012).

Social media has been a helpful tool in many businesses by allowing companies to understand their customer-base and make decisions using that informative knowledge. Business value "can be generated by recognizing that social media is a tool that must be incorporated into existing strategies and used to support existing business objectives" (Stockdale, Ahmed, & Scheepers, 2012). In a 2012 study titled, "Identifying Business Value from the Use of Social Media: An SME Perspective", five SMEs implemented a social media strategy and the results were analyzed to see if the use of social media brought value to their respective organizations. The five SMEs used in this study are as follows: AJ Bombers, River Pools and Spas, West Café, Emerson Salon, and Triumvirate Environmental (Stockdale, Ahmed, & Scheepers, 2012).

West Café, a Portland-based restaurant of <20 employees, implemented a social media strategy with positive results. The café had the following business problems: "price-sensitivity with clientele, poor results with traditional marketing, low organic search traffic, and time and budget restraints" (Stockdale, Ahmed, & Scheepers, 2012). The quantitative and qualitative business results with the use of social media are as follows: "web site traffic up 500% in 6 months, page views increased 300% in 6 months, time on site increased 25%, up to 34% increase in overall restaurant sales, creative promotions across multiple social media

platforms, and unsolicited press coverage" (Stockdale, Ahmed, & Scheepers, 2012).

Later research explored the value both big data analytics and social media analytics can bring to SMEs. In 2018, a study was done to "explain why the functional complementary between social media diversity (this is, the use of diverse social media channels) and analytics enables synergies that generate super-additive value" (Dong & Yang, 2018). By integrating social media and analytics, a business can generate customer insight that can be applied to the value chain beyond the scope of customer relations and low-cost marketing. Social media analytics can be a helpful tool in other areas of the value chain, such as order fulfillment and new product development stages.

Social Media and its Effects on Product and Service Lifecycles

"Social media big data offers insights that can be used to make predictions of products' future demand and add value to the supply chain performance" (Iftikhar & Khan, 2020). For the SMEs that choose to analyze their social media data and apply their findings towards their business processes, they are putting themselves in the position to compete with larger, more successful corporations. This is because "social media data contains emotions, opinions, and preferences which makes it potentially useful as a market sensing platform" (Iftikhar & Khan, 2020). In terms of key businesses processes, social media analytics can be useful not only in customer relationship management, but also in customer service management, order fulfillment, and product development.

For example, social media allows for transparent communication from the business to the consumer with the use of public comments, messages, likes, and posts. The data retrieved from these large pools of user-generated content can allow for a deeper understanding of what the target customer dislikes or wants to see more of. Large and small businesses realize the insights social media analytics can bring to all phases of a product or service lifecycle. This includes, "Insight into changing consumer interests and tastes, influential users, ad-campaign effectiveness, how to respond to crises, and competitive intelligence" (Fan & Gordon, 2014).

Social media is a tool to bring like-minded individuals together in a virtual space. By analyzing the large sources of data social media generates, organizations can make better predictions regarding business decisions. The ability to not only use social media as a platform for data collection and analytics but the ability to use social media as a platform to generate and execute sales may provide businesses an innovative way to continue their business, regardless of the current circumstances. This can be done with the use of social commerce.

Social Media and E-Commerce Becomes Social Commerce

Social commerce can generally be defined as, "commerce activities mediated by social media" (Poyry, Parvinen, & Malmivaara, 2013). Thanks to the increase in social media and user-generated content, customer behaviors are becoming easier to track over time. When social networking sites such as Facebook or Twitter came to market, many businesses used these channels as a

main advertising platform. Because of social media platforms, online advertisements increased from 8.09 billion in 2000 to 124.6 billion in 2019 (PwC & IAB, 2020). As time went on, there has been a noticeable shift in the way customers react to products or services on social media channels. Social media is shifting from a marketing channel to a sales channel because customers are shifting from "browsing behaviors to participatory behaviors" (Poyry, Parvinen, & Malmivaara, 2013).

In a 2013 study done at the University of Helsinki, researchers studied the growing trend of social commerce and the effective consumer behavior characteristics that support it. The study concludes,

Social commerce is predicted to be the next large and disruptive phenomenon in business in terms of redefining the customer relationship… Companies are integrating social shopping tools such as recommender and review systems into their online stores and are increasingly using social networking services for commerce-related activities, or are planning to do so in the near future (Poyry, Parvinen, & Malmivaara, 2013).

Fast forwarding to 2020, social media usage and influence on consumers have increased dramatically and so has the adoption of social commerce strategies in businesses. In a more recent survey published on the business data platform, Statista.com, social commerce reached 22 billion in US dollars in the year 2019, resulting in the prediction that "US social commerce is projected to

reach 84.2 billion US dollars in 2024 and accounting for 7.8 percent of US retail e-commerce sales" (Statista Research Department, 2019).

It is important to note the differentiator of social commerce to its predecessor, e-commerce. Social commerce uses the social networking platform to initiate a purchasing behavior and completes the purchase transaction right on the social media platform itself, without the need for external links. This process is successful because a "stimulus-orgasm-response model" is applied and "customers' virtual experiences and their intentions to purchase products" are increased (Li, 2019). The social commerce channel takes advantage of user-generated content in terms of: comments and reviews, ratings, recommendation lists, tags, and user profiles (Li, 2019). These features enhance user participation and "facilitates word-of-mouth communication, social interaction, and social sharing" (Li, 2019).

The social commerce channel is a step beyond target advertising and e-commerce strategies because the user is no longer asked to click on a hyperlink that will re-direct him or her to the business website to complete their online purchase. Instead, the sales cycle is shortened significantly because the user can now make their purchase right from the social media platform with a simple "Buy Now" button. Because of the algorithms already embedded in social media platforms to create the most personalized content experience for the user, social commerce allows for a similar experience with personalized shopping content.

This is done because the user's interest and purchasing decisions are made by reading comments and reviews from other users as well as the helpful nudge of Artificial Intelligence (AI) recommendation systems in these social media platforms. This experience is similar to asking a friend or family member their opinion about a product before making the purchase or seeking the professional advice of a salesperson who asks a series of discovery questions before making a recommendation. Social commerce is likely to be the key to small business survival in the era of stay-at-home orders, social distancing, and the rise of virtual platforms. The next chapter will look at how all of these factors have affected consumers' spending and online behaviors.

CHAPTER THREE

DATA COLLECTION AND ANALYSIS

Introduction

The Proclamation of COVID-19 as a State of National Emergency was issued by the White House on March 13, 2020 (Trump, 2020). Since March, the country has been doing their best to slow the spread of this deadly virus. Many states have issued stay-at-home orders that encourage citizens to stay home and leave only when necessary. Many businesses closed temporarily because large gatherings are no longer permitted, keeping only the essential businesses open. Schools and places of employment had to shift all their processes to digital platforms in order to continue educating and serving their consumers. Most states have issued a mask-mandate, requiring everyone to use a facial covering in public spaces and urging everyone to maintain a six-foot distance from one another. Today, seven months after the Proclamation, the virus is still infecting many US citizens, the number of deaths is still on the rise, and the country is still not able to find a sense of "normalcy" during these difficult months.

Data Source: COVID-19 Barometer 2020

In the first few months of the Proclamation, many people were trying to adjust to the pandemic's "new normal". This statement is explored with the use of a study published on the online business data platform, Statista, titled, "COVID-19 Barometer 2020", by Jack Spearman. In this online survey, a total of 25,675

online respondents, ages 18 and older, spanning four regions: China, Germany, United Kingdom (UK), and the United States (US) were asked a series of questions related to the effects the pandemic had on different aspects of their lives. This data was collected over a 10-week period, spanning from March 23 to May 31, 2020 (Spearman, 2020). Some of these aspects include: the impact on everyday life, information behavior, financial impact, and attitudes.

Querying the Data

For the purpose of this project, specific survey questions were queried to answer questions related to changes in lifestyle, spending, and online usage. Key words used to narrow down the survey results are as follows: "online shopping", "social media", "social distancing", "restaurants", "food", "delivery services", and "going out". The data was extracted from specific questions and responses pertaining to the United States survey respondents that help support the objectives of this project. The survey questions and displayed choices taken from the Spearman survey and used to develop the Tableau models can be found in Appendix A, Exhibit 1.

Data Visualizations in Tableau

After extracting the survey questions and the US respondent results that support the objectives of this project, graphs and charts were created using the Business Intelligence tool, Tableau. The version used for this chapter was Tableau Desktop Professional Edition Version 2020.3.0. The graphs and charts are put together in an interactive dashboard to allow visual representation of the

data. The following data visualization models, Figures 3.1 to 3.5, help explain consumer behaviors during the pandemic and how these results can be used to bring value to SMEs. The models will also be used to revisit the research questions discussed in the earlier chapters.

The results of each of the survey questions are represented as percentages to normalize the data. Each week is represented in ascending numerical order, with "Week 1" representing the first day data was collected on March 23, 2020 and "Week 10" representing the last day the data was collected on May 31, 2020. The number of US respondents for each week can be referred to in Appendix A, Tables 3.1 – 3.5, as Microsoft Excel Spreadsheets.

Survey Results

In Chapter 1, research questions were presented to help drive the scope and motivation of this project to determine the possible effectiveness of a proposed solution for SMEs affected by the coronavirus pandemic. In the following sections of this chapter, Figures 3.1 – 3.5 will be used to revisit these research questions to provide the most current statistics on the topics of online ordering systems, social media strategies, and discussions on the proposed solution of a social commerce system for small business restaurants.

Online Ordering Systems
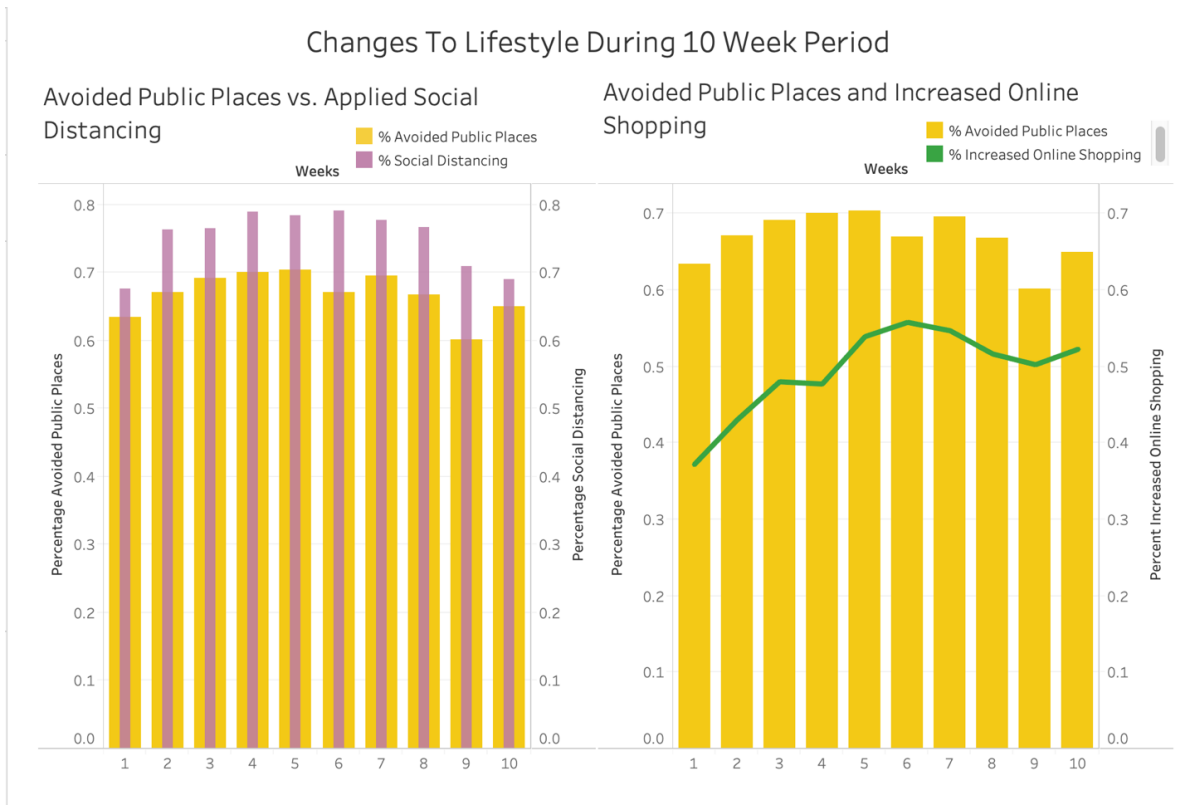
Figure 3.1 Changes to Lifestyle During 10-Week Period

The model, Figure 3.1, interprets the survey question, "Thinking about your everyday life, since the Covid-19/Coronavirus pandemic, have you made any changes to your general lifestyle?" (Spearman, 2020). Only the choices: Applied Social Distancing, Avoided Public Places Like Bars/Restaurants, and Shopped Online More were used in this model. The results of this model will be used to revisit the first research question mentioned in Chapter 1 of the project.

The first research question to be discussed is, how beneficial is having a strong online presence, especially in the wake of the global pandemic, to

business sustainability? In the US, it is easy for consumers to avoid public places

because many businesses have temporarily closed their doors to promote social

distancing and to help slow the spread of Covid-19. If consumers are not allowed

into public places of business, they have no other choice than to order products

and services online. The SMEs that do not have an online ordering system or are

lacking an e-commerce system are risking permanent business closures

because they are limiting themselves to the various ways customers, like the

respondents who stated they are avoiding public places in Figure 3.1, can obtain

their products or services.
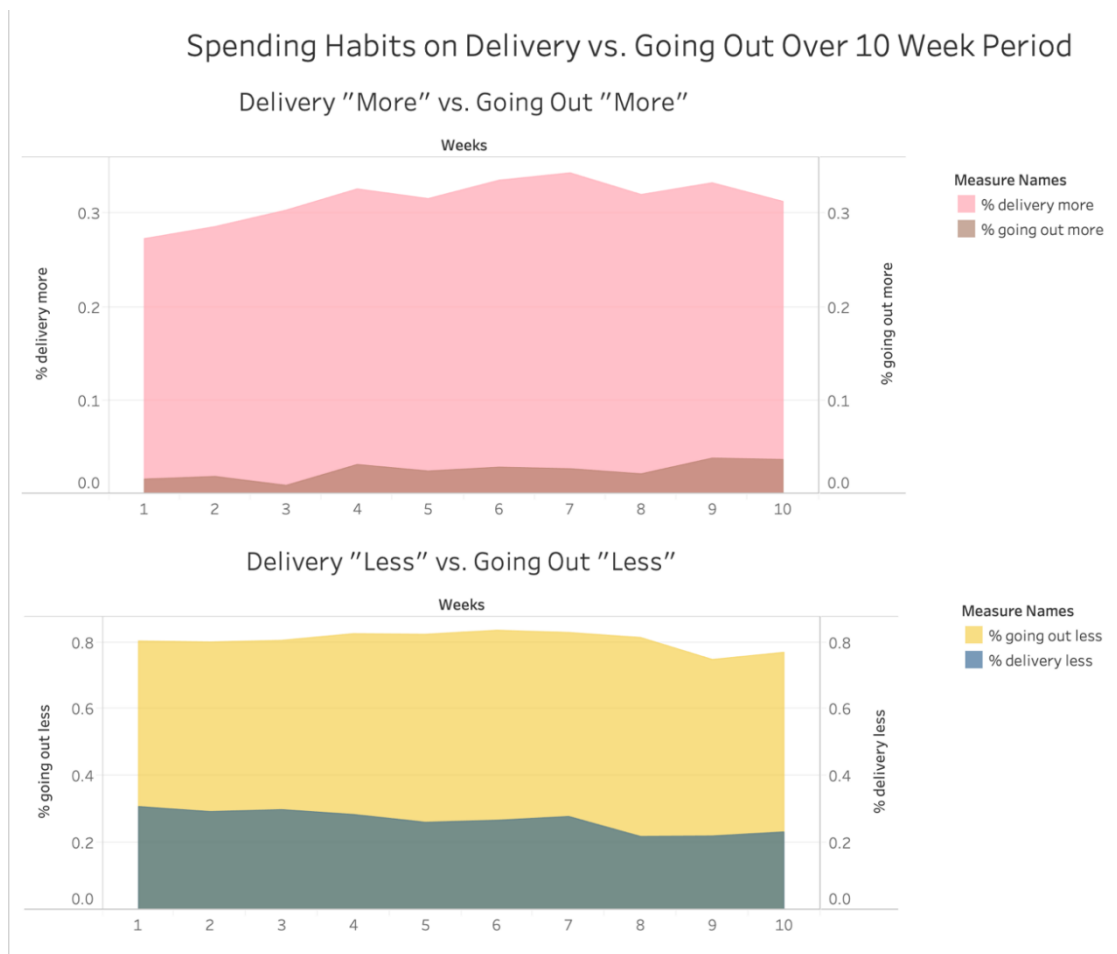
Figure 3.2 Spending Habits on Delivery vs. Going Out Over 10 Week Period

The next model, Figure 3.2, is a dashboard containing two layered graphs displaying the results of two survey questions, "Since the Covid-19 pandemic, have you spent more or less on the following, Food and Drinks? (e.g. Shopping, Takeaways, Delivery)" and "Since the Covid-19 pandemic, have you spent more or less on the following, Going Out? (e.g. Restaurants, Cinemas, Pubs/Bars)"

(Spearman, 2020). Similar to Figure 3.1, the results of each week are represented in percentages because of the varied sample sizes for each week.

The dashboard of Figure 3.2 was created by layering the two survey questions and only the two choices, "More" and "Less" are presented. The comparison of these results was done to explore how US respondents have altered their spending habits due to the pandemic. The two layered area graphs are used to display the inverse relationships between spending money on going out "more/less" and spending money on food delivery/takeaway "more/less".

Figure 3.2 also provides some insight to the first research question because the data in the model displays there is about 80% of US respondents who are spending "less" on going out. The SMEs that invested in their online strategies earlier than March 2020 have an existing risk strategy in place because they are allowed to continue their business in the virtual shopping marketplace if need be. The SMEs that did not, many small business restaurants for example, may be struggling during these trying times because of the lack of an online ordering strategy. Implementing an online ordering strategy now may serve as a risk mitigation strategy for another disruption similar to the pandemic at a later point in time. It will also promote business sustainability by avoiding customer purchasing limitations.
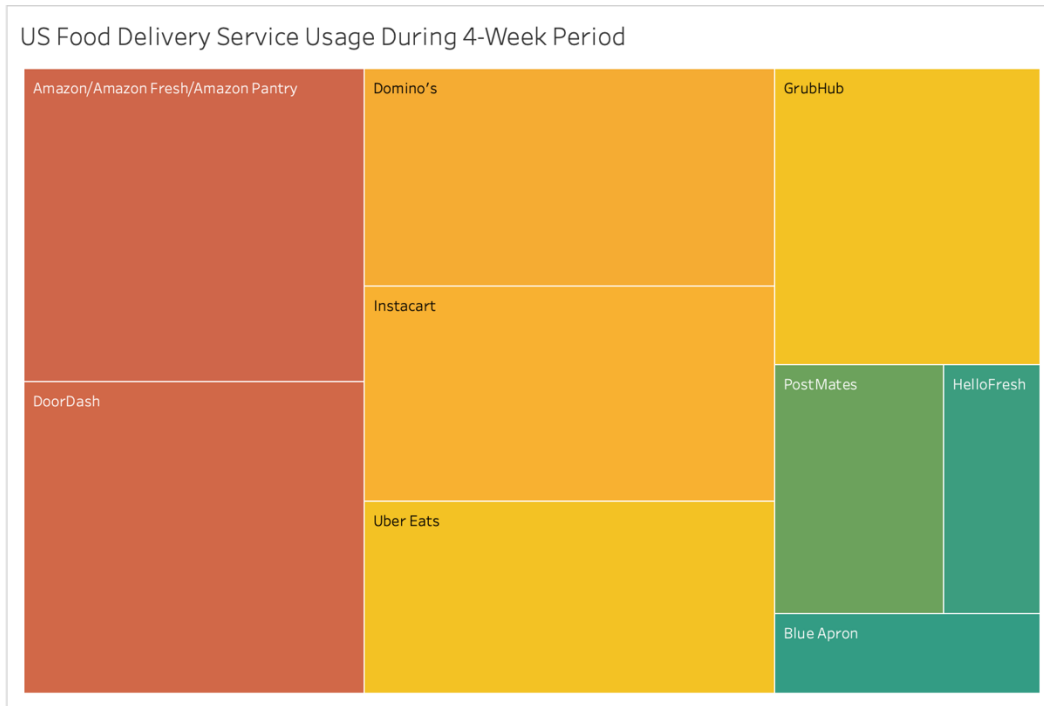
Figure 3.3 US Food Delivery Service Usage During 4-Week Period

Figure 3.3 displays the US respondent results for the question, "Are you using any of the following food/grocery delivery services during the lockdown in your country?" (Spearman, 2020). Because the data was collected for four regions: China, Germany, UK, and US, only the popular US-based food and grocery delivery services were used for this model. This question was not added to the survey until Week 7. The data collected for this model displays only four-week totals of US responses, Week 7 to Week 10. The data is also represented in percentages to normalize the data. Table 3.3, found in Appendix A, displays the weekly sample sizes for this figure.

The summary of this model presents what food delivery services respondents are using during the "lockdown" in their country. In the United States, the term "lockdown" during this ten-week period can mean stay-at-home orders or temporary closures for many businesses. In this model, Amazon is a company many are using but coming a close second is DoorDash, the third-party delivery service many restaurants partner with to fulfill the deliveries of to-go orders. In addition, many respondents have stated they are using Domino's, Uber Eats, GrubHub, and PostMates.

Using the model of Figure 3.3, it can be concluded that more respondents state they are using restaurant delivery services versus grocery and meal prep delivery services. This may mean more respondents choose to get their food prepared beforehand, delivered, and ready to be eaten instead of the meal prep delivery services such as HelloFresh and BlueApron, which require the customer to prepare their meal in their own kitchen. This result can be helpful to small restaurant businesses to know that customers are utilizing third-party delivery services during this time frame. This can mean a strategic partnership with any of these delivery services may be beneficial to regaining customers and to the restaurant's bottom line by allowing customers the choice to order meals from these small business restaurants with the use of any of these popular delivery fulfillment platforms.

Social Media Strategies
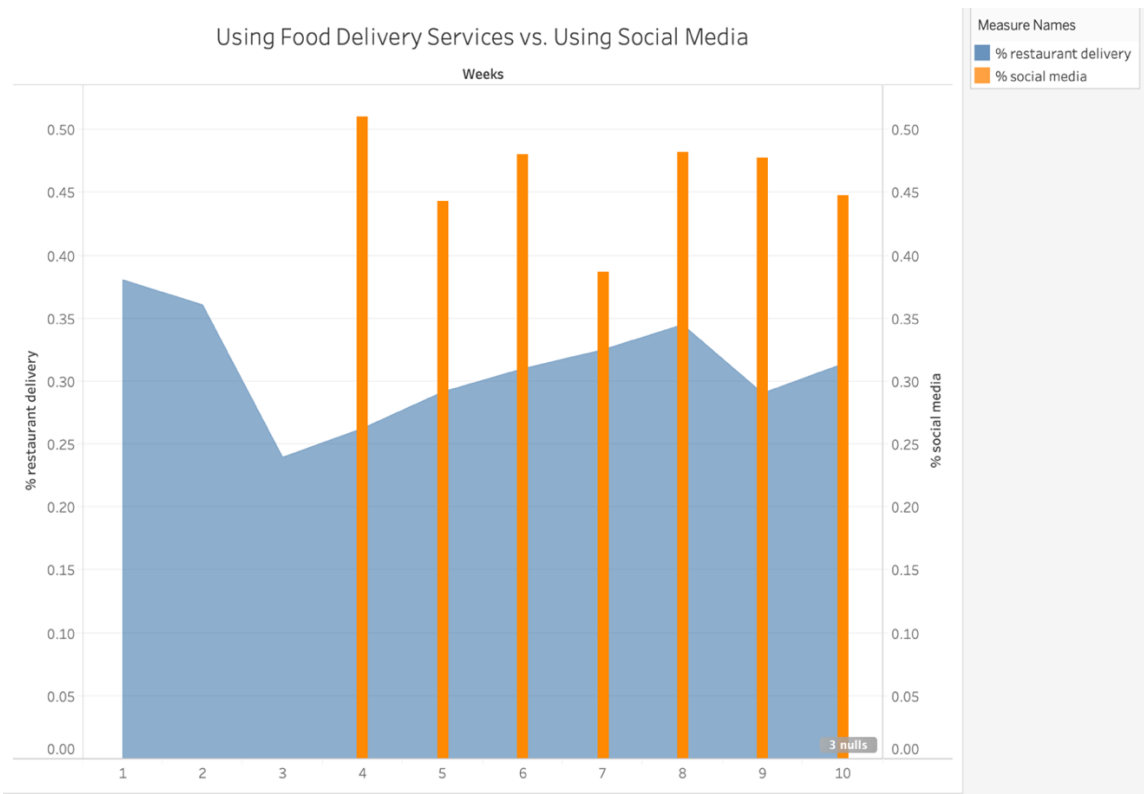
Figure 3.4 Using Food Delivery Services vs. Using Social Media

Figure 3.4 is a layered chart exhibiting the results of the following

questions, "Have you deliberately purchased any of these products or services

online instead of offline because of the Covid-19 pandemic: Restaurant

Delivery/Takeaway?" and "Since staying at home, which of the following have

you done more of: Using Social Media?" (Spearman, 2020). In the first question,

survey respondents are asked to think about their change in purchasing habits.

In particular, a behavior they find themselves doing more often now than

compared to the weeks before. These results are represented in the blue area graph.

The second question asks respondents about another online behavior they find themselves doing more often because of the pandemic. This question asks respondents about their social media usage as it relates to staying at home more due to the pandemic. The results of this question are depicted using the orange bar chart. The two charts are layered on top of one another to compare the difference between the number of respondents who are ordering from restaurants online, as opposed to offline, and the number of those respondents that stated they are using social media more often because of the social distancing and/or stay-at-home orders. In Spearman's survey, the question relating to social media was added in the fourth week, leaving the first three weeks as null. Table 3.4, found in Appendix A, is used to display this information.

This model is used to revisit the second research question, how can social media tools bring value to an SME's key business processes during a global pandemic? Looking at the results, the percentage of social media users, represented as a bar chart, is larger than the percentage of the respondents who are using online food delivery services. Though this can be because a variety of reasons, it can also be an opportunity for SMEs to take advantage of this "new" and visibly larger social media audience.

In addition, there could be an increase in the amount of social media usage the longer stay-at-home and business closures are in place. By referring

to Figure 3.4, the assumption can be made that when US respondents are online via their mobile device or other medium, they are likely to be using a social media app versus ordering food online. Exploring ways social media usage can lead to more customers, more customer engagement, and consequently, more delivery orders can be a beneficial use of resources for the small business restaurants that are still open but must solely rely on their delivery sales to get them by.

Social Commerce Discussion
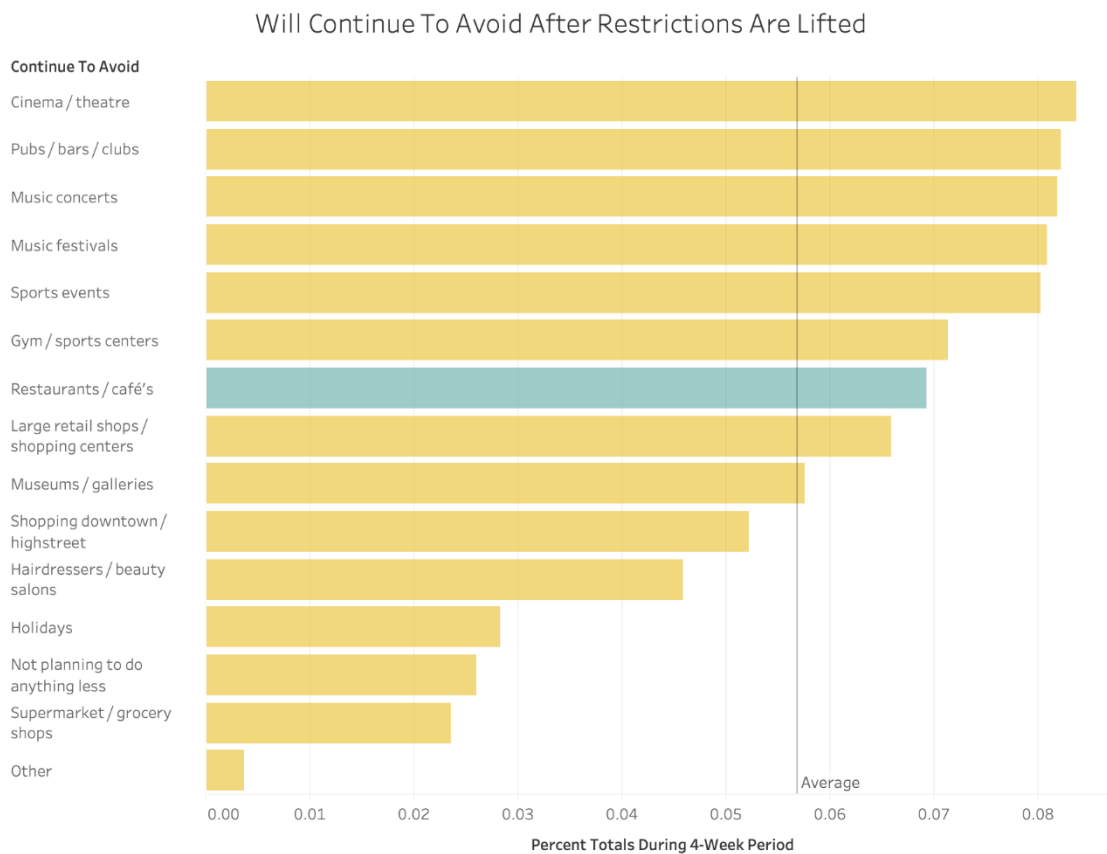
Figure 3.5 Will Continue to Avoid After Restrictions are Lifted

The last graph to be discussed is Figure 3.5. The question from the

Spearman survey used for this model asks, "Thinking about once the restrictions

are lifted, which of the following are you likely to try and avoid for the time being,

because of Coronavirus/Covid-19?" (Spearman, 2020). This question was

answered by a total of 19,448 US respondents during a 4-week period and

displayed using percent totals, with an average reference line included.

The horizontal bar chart of Figure 3.5 was created to display what places

of business US respondents are planning to continue avoiding. This question is

an important one to analyze because it sheds a little bit of light on consumer

behaviors beyond the ten-week timeline this survey was conducted. This project

focuses on a proposed solution for small business restaurants, so

restaurants/cafés are highlighted in blue to display the above average amount of

respondents who made this choice.

The last research question yet to be revisited, is social commerce a

channel SMEs should consider implementing? If so, how valuable can it be for

SMEs that have been hit the hardest, such as small restaurant businesses? By

taking a look at all the models, Figures 3.1 to 3.5, it seems that having an online

ordering system is a beneficial strategy that small business restaurants should

implement sooner rather than later. Whether that system includes a partnership

with a third-party food delivery service such as DoorDash or an in-house delivery

fulfillment system, the sample of respondents in this chapter stated they have been spending their money digitally instead of physically spending their money at restaurant locations. In addition, many have incorporated social distancing into their lives and have stated they are planning to continue to do so, even if stay-at-home orders and restrictions are lifted.

Because of the displayed changes in online consumer behaviors and plans to continue those behaviors, the area of opportunity to look into as a proposed solution could be a social media and commerce strategy. If small business restaurants are active in social media, they are able to capture the growing audience that is beginning to use social media more often as an outcome of stay-at-home orders. Not only that, if these small business restaurants have a social commerce system embedded in their social media business profiles, users may be more likely to place an order for delivery because of how easy the process of placing an order can be. Social commerce is a way to convert these social media users into buying customers through social selling and ease of use.

Summary of Survey Results

Though the figures of this project do not provide a definite answer to question three, it shares some insight on an area of opportunity small business restaurants should consider. The models of this chapter display an audience of consumers whose spending and online habits are changing as a result of the pandemic's rules and restrictions. Social commerce has already been an

emerging sales channel for businesses prior to the pandemic. In a 2018 survey, respondents were asked how they felt about using mobile devices and social networks for shopping. In 2015, 29 percent of survey respondents stated, "My social networks have become as important as my other information sources for me to make best product choices" (Growth From Knowledge, 2018). In 2018, this statistic increased to 45 percent. This uptick in social commerce usage displays the importance of social media and social commerce strategies even before the global pandemic of 2020.

Taking this chapter's models into consideration, implementing an online ordering system and social media strategy may deem beneficial to small business restaurants looking to sustain their business during this time of a global pandemic and business restrictions. Social commerce is the blending of these two worlds, social media and e-commerce, to create an online ordering system to be used in a social media platform such as Facebook, Instagram, or Pinterest. Similar to the existing technologies of social media such as social networks, user-generated content, and AI algorithms for personalized content, social commerce is a developed feature for social media business profiles and are already enabled in the three social media platforms previously mentioned. Chapter 4 will discuss social commerce in more detail and provide an example of a system that will help take advantage of the changing consumer behaviors modeled in this chapter's figures.

CHAPTER FOUR

PROPOSED SOLUTION

Chapter Overview

According to a recent survey, "Online users in the United States revealed that 49 percent of respondents felt that social media and messaging apps were among the three types of apps that they spend the most time on" (Werliin, 2019). This statistic is important for SMEs to understand and act upon in order to get their products or services in front of this social media crowd. This section of the project will address the proposed solution that small business restaurants should implement a social media strategy in order to keep their business from permanent closure by continuing to invite customers to support their business, even if they are unable to step foot in their physical locations.

One strategy to be explored is applying a social commerce system within the restaurant's social media page. This exploration is done by learning from a similar business case, constructing a Use Case Diagram, and designing a social commerce system for a small business restaurant. This chapter introduces a social commerce system in context of a small business restaurant but does not go further in the Systems Development Life Cycle (SDLC). Because the proposed solution's purpose is to introduce the concept of a social commerce system as a method of sustaining business by increasing online orders during a time when small restaurants need it the most, the scope of this chapter is

focused on understanding the value the system can bring to a business and does not expand into the technical design and implementation of such a system.

<center>Case Study: Domino's Pizza</center>

There is an abundance of text to support digital transformation success for large retailers such as Target, Wal-Mart, and Best Buy. Not too often is there a headline about a restaurant company that can compete with these big box stores, except when it comes to Domino's Pizza and their digital transformation of 2010. After falling behind in the pizza industry for many years, Domino's CEO, J. Patrick Doyle, decided that the company "needed to appeal to a new generation of customers who thrive on smartphones and social media – and who demand ultra-fast service, online and off" (Cisco, 2017). In order to reach these objectives, the company developed the strategy, "Harness technology to make Domino's the easiest pizza chain to do business with" (Cisco, 2017). The Domino's transformation aligns with this project's proposed solution because this is a restaurant business that understood the importance of keeping the customer ordering process as simple as possible.

Domino's first step to their transformation was to listen to the "groundswell of customer criticism on social media [which] initially spurred the overhaul and focused all eyes on the customer" (Gillin, 2016). The social media feedback, regardless if compliments or criticism, helped Domino's awareness of their products (Gillin, 2016). Nowadays, there are a number of digital features Domino's offers their customers that make ordering a pizza incredibly easy. On

<center>31</center>

the Domino's app, customers can save their favorite orders, payment information, and delivery address to their Pizza Profile, which saves time with the use of autofill when placing an order. The Domino's app also features an ordering assistant bot named, Dom, who can assist the customer in placing their order through Artificial Intelligence (AI). Lastly, one of Domino's newest propriety innovations include the ability for a customer to order a pizza from any platform: Google Home, Facebook Messenger, text, and even through Twitter (Domino's Pizza, 2020). These are only a few of the many connected devices and outlets a customer can order a pizza from.

Domino's is focused on their constant customer feedback on social media to make improvements to their digital services. Domino's Chief Digital Officer, Dennis Maloney, stated, "Customers give you a never-ending litany of thoughts and behaviors any time they click" (Gillin, 2016). The upgrades in their technologies is the reason why the company was able to quickly increase their share price by 2000% and even outpaced "the most successful tech companies in the world, including Netflix, Tesla, Amazon, and Apple" (Cisco, 2017). There is something to learn about the Domino's transformation that is applicable to the small business restaurant on a smaller scale. Small business restaurants can take this same framework and apply it to their business in order to bring their customers back.

Designing a Social Commerce System for Restaurants

Existing Social Media Technologies

It was mentioned in the literature review of Chapter 2 that social media can be a helpful tool used to bring business sustainability value to SMEs. In the case study about Domino's Pizza, the company transformed their business by listening to their customers via social media platforms. These are examples of how businesses utilize social media to understand their target audience. This next section will provide some information on what technologies are behind these social media platforms that make them so popular with users all over the world, especially in terms of shopping and shopping experiences.

One feature of social media platforms that has made them so popular amongst users are the social media algorithms that "are a way of sorting posts in a users' feed based on relevancy instead of publish time" (Barnhart, 2019). Before such technology existed, social media feeds displayed posts simply from newest to oldest. Now, most of the social media platforms automatically curate content by displaying news feed posts based on relevancy and likelihood the user would be interested in seeing them. For example, when using Facebook or Twitter, a user can see prioritized posts from close friends and family, irrelevant of their publish time. These personalized content and recommender systems found on e-commerce and social media platforms are popularly used by online marketers and target advertisements. These systems look at user behaviors,

past purchases, and other factors to display an image or post of a product or service that the user may likely find valuable and purchase.

Even though there are a lot of current debates about the ethical nature of these social media technologies, these systems are mentioned in this project because of the humble purpose of bringing customer awareness to support local small business restaurants during the pandemic. These existing social media technologies can be beneficial to small business restaurants by allowing users to share and review with the use of posts and the system automatically recommending these posts to the users who would find them most valuable and likely to place an order. For those users who are most likely to place an order, a social commerce system would make that process easy and possible.

Existing Social Commerce Systems

Observed in Chapter 3, respondents have expressed the changes in their lifestyle and spending behaviors because of all the rules and regulations associated with slowing the spread of Coronavirus. Many are going out less, using food delivery services more, and find themselves using social media more often. If a small business restaurant can use social media to not only attract and maintain customer relationships, but also use it to execute a delivery order through a social commerce system, this would align with the Domino's strategy mentioned in the earlier case study making it as easy as possible for customers to order their food.

Many social media applications such as Facebook, Instagram, and Pinterest, have a social commerce feature that many brands are already utilizing. For example, Instagram is stated to be "one of the most promising platforms when it comes to creating a social selling strategy" (Boyle, 2020). This can be attributed to the large number of young users and the application's focus on image and video posts. Instagram's introduction to social commerce started in 2015 when the app first introduced their "Shop Now" button. Improvements were made and in March 2018, Instagram's "Shoppable Posts" were made available to the public. This feature gives brands the ability to "tag items in organic posts which, when tapped, brings up a new page which leads to a checkout" (Boyle, 2020). Figure 4.1 is an example of an Instagram shoppable page with numbers 1-3 included to denote the icons that differentiate a social commerce-enabled post from a traditional post.
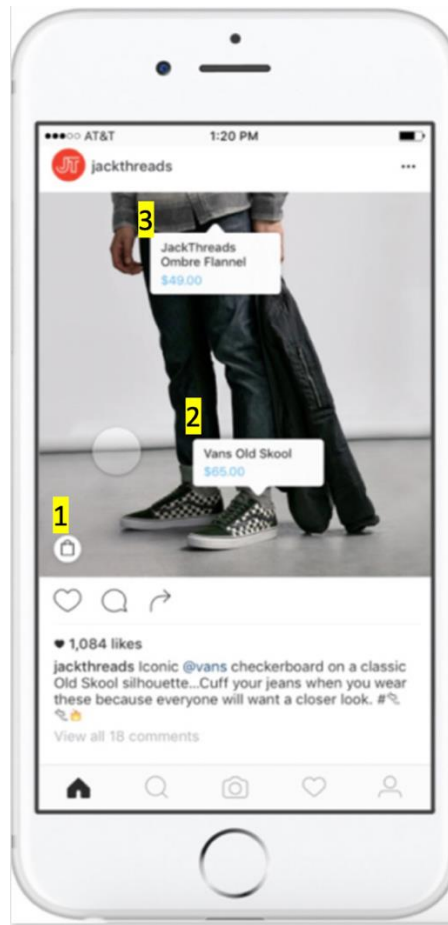
Figure 4.1 An Altered Screenshot of an Instagram Social Commerce Page from the Company, Jackthreads (Boyle, 2020).

The Instagram post in Figure 4.1 includes the following notations to signify a user's ability to purchase direct from the Instagram app: 1) The shopping bag icon shows the user that he or she can order from this specific post, 2) The white caption box includes the product name and price, 3) The user can click or tap the price of the product and that action will immediately open their Instagram shopping cart.

The next image, Figure 4.2, is an altered Instagram post used to model the user-interface (UI) of a social commerce system for a local restaurant. The lower shopping bag icon and the white caption boxes were added into the image using a Photoshop tool. This was done to mimic Figure 4.1, in the context of a small business restaurant. Similar to Figure 4.1, the customer is able to clearly see that the post is a Shoppable Post and is able to place an order directly from the app itself.

Figure 4.2 An Altered Screenshot of a Local Restaurant Instagram Page to Illustrate Social Commerce Features on the Instagram App (dhatcreolegrill, 2020).

Imagine a situation where a social media user posts a picture of a meal from a local restaurant and recommends a signature dish to all the friends on his or her social network, enticing them to try the item. Immediately after seeing the post, another user visits the restaurant's social media page and orders the dish

for delivery without ever being re-directed from the social media platform. This is an example of the power of social commerce. Figure 4.1 is a representation of what an existing social commerce-enabled page looks like on the social media platform, Instagram. Whereas Figure 4.2 is a fictional illustration of what a social commerce-enabled Instagram page would look like for a local restaurant.

Stated in the previous sections, social commerce would be beneficial to small business restaurants with the objective of business sustainability during this global pandemic because it allows them to not only market their dishes to a large audience, but invites customers to order a meal from the restaurant when their interests about the item is at its highest. Not only that, the process to order has been simplified immensely, allowing the customer to place the order without any hassle or remorse. Because there is little to no evidence of social commerce-enabled pages for small business restaurants, the rest of the chapter expands on this theoretical system a little further by providing a List of Functional Requirements and a Use Case Diagram.

Use Case Background

Before social distancing and the limiting of large gatherings in public places, small restaurants were flourishing with long lines of customers for Sunday brunch, late night dinner dates with significant others, or happy hours with friends after work. These small business owners heavily relied on the foot traffic of the customers who came from near and far that have heard about their restaurant through word-of-mouth, Yelp reviews, recommendations, or social

media. Even though restaurants are still allowed to remain open so long as there are no dine-in customers and only takeout or delivery orders are executed, customers can no longer feel the same social experiences or explore new restaurants and their popular dishes due to all these restrictions.

Implementing a social commerce system on a restaurant's existing social media page can provide a way for customers to use technology to recommend restaurants and their signature dishes to one another similar to word-of-mouth marketing. This can be done because of user-generated content (UCG) and the ability for users to influence one another based on the information they post on these sites. For example, in 2017, a survey was conducted asking respondents what some of the influences are that make a customer more likely to "buy a retail product through a brand's social media channels" (OnePoll, 2017). Fifty percent of the respondents stated that "UGC like images from customers who previously bought the product" plays a major role in their purchasing decisions (OnePoll, 2017). Social media is a way for friends and families to socialize and share their interests with one another in the virtual world. This includes recommending products or services, posting pictures, and leaving significantly useful reviews of places and products. Social commerce uses the same influential factors of social media but provides the business the measurable output of generating sales.

<u>Main Flow of Events and Relevant Figures</u>

The following models, Table 1 and Figure 4.3, were constructed to demonstrate the social media strategy, social commerce, and how the actors:

Customer, Restaurant User, and Third-Party Delivery Service (3PDS) would

interact with the system. The basic course of events starts when the customer

places an order using the system. In order for the customer to place a delivery

order for any meals, two preconditions must take place. One, the customer must

have a social media account already registered and two, the customer must have

either ApplePay enabled on their device or a profile must already exist on a third-

party delivery service app such as DoorDash, GrubHub, or Uber Eats. The

customer profile on the third-party delivery service app is used for saved

payment and delivery address information. If those preconditions are met, the

customer can simply click or tap on one of the white caption boxes when they

see a dish they would like to order, depicted earlier in Figure 4.2, and that action

would automatically trigger an order for delivery.

When the customer is ready to check out a chatbot window will appear

and with the use of AI, asks the customer what method of payment should be

used, ApplePay or the payment information saved on the 3PDS profile. The

delivery address is also confirmed using the 3PDS profile. Once the customer

successfully places an order for delivery, the system automatically sends the

order out to the restaurant to begin preparing the meal for delivery. The system

also automatically notifies the third-party delivery service about the order to

prepare for delivery fulfillment. The customer will then be sent an order

confirmation and may use the 3PDS app to track their order. A Use Case story is

used to model this scenario. The Use Case can be found in Appendix B, Exhibit

2. Table 1 contains the functional requirements of the system and Figure 4.3 is

used to model the UML Use Case diagram.

Table 1 List of Functional Requirements for Social Commerce System

ID	Details	Type	Priority
R1	The Social Commerce System shall use the customer's login credentials for the social media website to utilize the Social Commerce System.	• User Account • Functional	Must Have
R2	The Social Commerce System shall display available meals offered by restaurant on social media post.	• User Interface • Functional	Must Have
R3	The Social Commerce System shall display image of meal, price, and description.	• User Interface • Functional	Must Have
R4	The Social Commerce System shall allow customer to place meal order by tapping on the item's name and price.	• User Interface • Functional	Must Have
R5	The Social Commerce System shall display number of items currently in the order shopping basket.	• Orders • Functional	Could Have
R6	The Social Commerce System shall allow customer to customize order in shopping basket.	• Orders • Functional	Could Have
R7	The Social Commerce System shall allow the customer to place items into shopping basket.	• User Interface • Functional	Must Have
R8	The Social Commerce System shall allow the customer to remove items from their shopping basket.	• User Interface • Functional	Must Have
R9	The Social Commerce System shall allow the customer to "check out" and place an order for delivery.	• User Interface • Functional	Must Have
R10	The Social Commerce System shall automatically validate payment information using saved information on Third-Party Delivery Service profile.	• Payment • Functional	Must Have
R11	The Social Commerce System shall automatically validate delivery address using saved information on Third-Party Delivery Service profile.	• Orders • Functional	Must Have
R12	The Social Commerce System shall use a chatbot to automatically initiate and complete order delivery information.	• User Interface • Functional	Could Have
R13	The Social Commerce System shall notify the restaurant of a new customer order at point of payment.	• Orders • Functional	Must Have
R14	The Social Commerce System shall notify the Third-Party Delivery Service for order fulfillment once the order has been paid for.	• Orders • Functional	Must Have
R15	The Social Commerce System shall send a copy of the current order to the customer when payment is accepted and the order confirmed.	• Orders • Functional	Must Have
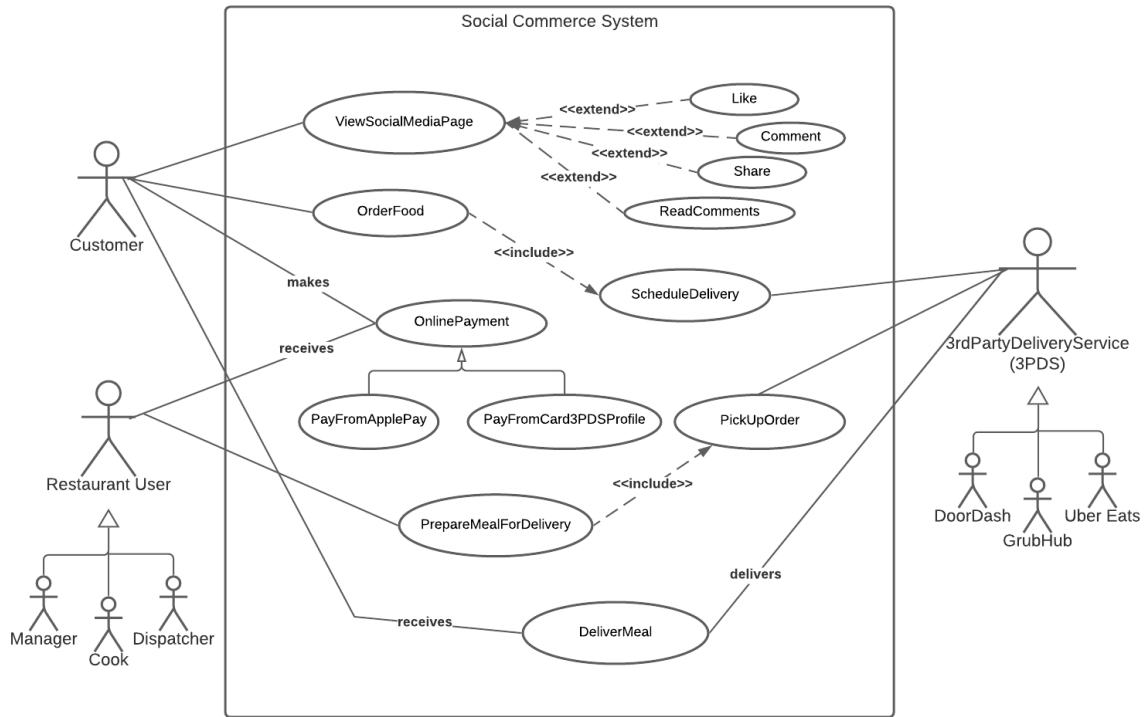
Figure 4.3 Use Case Diagram of a Social Commerce System for a Restaurant on a Social Media Platform

Summary and Limitations

Solution Summary

Reinventing both the digital ordering system as well as harnessing customer data is the recipe to success Domino's shared with the world that allowed them to rank as "one of the top 10 US e-commerce sites in dollar volume" (Cisco, 2017). SMEs do not need to invest heavily in rebuilding their entire technical infrastructure in order to reach these levels of success. Instead, social media is a free tool many small business restaurants, their owners, and

their customers already use. Social commerce, a tool embedded in social media sites such as Facebook, Instagram, and Pinterest have already been helpful in the retail industry and may be helpful to other industries looking to take advantage of the increasing social media user population.

In summary, social commerce is an avenue to further study to support the proposed solution that small business restaurants can implement during this global pandemic. This solution may help them take advantage of new virtual consumers and mitigate the risks of permanent closures of their business due to the pandemic and lack of foot traffic. Social commerce differs from social media marketing because users are not redirected to an online store after clicking or tapping on a link. Instead, social commerce streamlines the purchase journey for users by allowing them to checkout directly on the social media site with the use of chatbots and autofill for payment and delivery details. This strategy is "about capitalizing on the point when a user's purchase intent and excitement about your product is the highest" (Boyle, 2020).

System Limitations

Unfortunately, there are some limitations to this proposed solution. Though the social commerce technologies previously addressed already exist, depicted in Figure 4.1, they are still in its very early stages of development. Many social commerce-enabled pages allow for the ordering of products and delivery fulfillment via USPS, FedEx, or UPS, but there is little-to-no evidence that these social media sites offer the same services for restaurant businesses and third-

party delivery service partnerships. Additionally, the overall costs of implementing a social commerce system is not discussed in this paper. This chapter proposes a system but does not discuss any business costs in detail. Instead, this chapter makes the suggestion that the best a local restaurant can do is partner with the many third-party delivery services such as DoorDash, Uber Eats, GrubHub and follow in the footsteps of Domino's by making the ordering process as easy as possible and accessible for the consumer.

Until the technology becomes available for restaurants to use social commerce to streamline their ordering and delivery processes, it would be best practice for SMEs to be active in social media and continue uploading relevant content which include videos and images, having real two-way conversations via direct messages and comments with followers in contrast to the one-directional email methods, and eliciting customer feedback through reviews and ratings in order to make real-time improvements to business processes where necessary. Aforementioned are social media strategies that exist in the present day and because of this global pandemic, there is no better time for an SME such as the struggling small restaurant to start implementing these existing strategies than today.

CHAPTER FIVE

FUTURE WORK AND CONCLUSION

Industry 4.0

The beginning of the project opened with a brief mention of the fourth

industrial revolution, also known as Industry 4.0, the world is currently

experiencing due to digitization and modern technology (McGinnis, 2020). This

year's global pandemic has been an opportunity for many organizations to test

their technologies, systems, and processes in order to determine if they have

what it takes to survive, not only the hardships that come along with the

pandemic, but also the survival of this digital era. Technologies that are driving

change during Industry 4.0 are Artificial Intelligence (AI), Blockchain, Cloud

Computing, Virtual and Augmented Realities, Big Data, and the Internet of

Things (IoT) (McGinnis, 2020). Even though there are many negatives

associated with the Coronavirus, there may still be some positive outcomes as

well. The global pandemic has put immense pressure on organizations to

develop their Industry 4.0 technologies and successfully implement them into

their value chains in order to have business sustainability during these times.

These are actions that may not have happened in some industries prior to the

standstill the pandemic has caused many businesses.

The focus of this project was the struggling small business and the owners

who are experiencing hardships because of closures. The rules and regulations

of the pandemic has put the small business sector at a disadvantage by

completely halting their way of profiting from their goods and services. SMEs needed to quickly re-strategize their way of doing business by incorporating digital sales and communication since they could no longer reach their customer base in the physical world. Industry 4.0 calls for new operating models that are consumer-obsessed and requires "a relentless focus on creating growth through holistic consumer value, delivered across the lifecycle of consumer engagement" (World Economic Forum, 2020). This statement is a possible objective for small businesses to achieve and may be the only way to sustain their business.

The struggling small business restaurant can participate in Industry 4.0 by reaching the customer in both the physical and digital worlds with the use of technology. This pandemic is a chance for small businesses to innovate and create ways to carry on with everyday life, regardless if it is through the Internet or at their brick-and-mortar locations. This can be done because of the increase in mobile device usage through the years, the user-generated content and big data through social media, and the business' ability to act upon those findings in a timely manner. Digitization has made the communication between business and buyer a seamless process that allows for synergy across all customer touchpoints. The contents of this project explore only a few digital strategies that allow an SME to re-think their business methods, but there may be more out there that is specific to the various many types of SMEs that exist in the United States small business sector.

Future Work Discussion

The chapters of this project were compiled to understand how social media can be a helpful tool for small restaurant businesses that are experiencing a major decrease in customer orders due to the rules and restrictions of the pandemic. With the use of a literature review, data collection and analysis, and a business case study, a Use Case Diagram was developed to model a social commerce system for a small restaurant business. The limitations of the system were mentioned at the end of the previous chapter. This section will discuss future work and conclude the study.

Spearman's "COVID-19 Barometer 2020" was useful in gauging how participants were feeling during the ten-week period when pandemic restrictions were first implemented, but data from a previous year or a similar survey from a different frame of time was not included as comparison. This means it is not possible to conclude a positive or negative change in online and spending behaviors compared to a pre-pandemic point in time, such as around this time one year ago. The survey also only displays results for a maximum of ten weeks, limiting the amount of data used to create trends and see patterns. If the survey were to expand to more weeks, a true depiction of changes in consumer behavior during the span of the pandemic would be easier to conclude.

Historical data from third-party delivery service companies would be helpful in understanding how many small restaurant businesses already partner with these companies and if these platforms have brought profits to the

restaurant industry beyond the scope of the pandemic time frame. Additionally, a deeper dive into historical data of social commerce revenue, as an industry, could provide further understanding of how it is doing as a sales channel compared to traditional social media marketing and e-commerce tactics.

Lastly, because social commerce utilizes AI through chatbots, recommendation systems, and personalized content and advertising, further exploration in social commerce and Industry 4.0 would help in understanding what improvements need to be made in order for the platform to be utilized by the vast spectrum of industries. Most importantly, what improvements to the system should be made in order to benefit the self-employed small business owner, such as an at-home baker, at-home jewelry maker, or similar sole proprietorships that lack both a digital marketing and sales strategy. Allowing self-employed individuals the ability to utilize and profit from a social commerce system on popular social media sites gives them the opportunity to expand their business, increase capital, and reach their American dreams.

Conclusion

This project's purpose was to illustrate the benefits of social media to business sustainability during a global pandemic and how to implement a social commerce system in the context of a small business restaurant. Research was done to explore academic literature on the topics of digital and social media strategies and the value they can bring to SMEs. Data from a recent survey was extracted and analyzed to understand the changes consumers have made to

their lives because of the pandemic and how the survey results can help support the proposed solution of a social media and social commerce strategy. Learning from a business case and current social media and social commerce technologies, a social commerce system was drafted to explain how such a system would function in context of a small business restaurant. All the components of this project were compiled to bring awareness to the small businesses that are struggling during this time and who may need some additional guidance on how to get back on track to prevent their business from becoming another statistic.

The year 2020 has been a turbulent one for most. Many in the United States have experienced changes, large and small, in their lives due to the pandemic. From the way they work and live to the way they are allowed to interact with friends and family. The global pandemic is a period in time that is continuing to cause stress to many, especially those who have experienced a loss because of the virus. This can be the loss of a loved one, income, a home, or a business. Though these losses cannot be prevented by simply reading this paper, this project's main objective is to lessen the risk of some of these losses, such as the negative snowball effect the loss of a business can have on one's income, home, and overall livelihood. Even though this outcome is a reality for many in the US, this project hopes to empower the small business owner, especially those hurting the most during the pandemic, to keep up the

entrepreneurial spirit and know that these challenges will always lead to triumph

with the use of resilience, innovation, and grit.

APPENDIX A

COVID-19 BAROMETER 2020 US RESPONDENT RESULTS

Exhibit 1 Questions Used From COVID-19 Barometer 2020 Survey

1. Thinking about your everyday life, since Covid-19, have you made any
   changes to your general lifestyle?
   - Applied Social Distancing
   - Avoided Public Places Like Bars and Restaurants
   - Shopped Online More

2. Since the Covid-19 pandemic, have you spent more or less than usual on
   any of the following:
   - Food and Drinks (e.g. Shopping, Takeaways, Delivery)
   - Going Out (e.g. Restaurants, Cinemas, Pubs/Bars)

3. Have you deliberately purchased any of these products or services online
   instead of offline because of the Covid-19 pandemic?
   - Restaurant Delivery/Takeaway

4. Since staying at home, which of the following have you done more of:
   - Using Social Media

5. Are you using any of the following food/grocery delivery services during
   the lockdown in your country?
   - DoorDash
   - GrubHub
   - Domino's
   - Uber Eats
   - PostMates
   - Amazon/Amazon Fresh/Amazon Pantry
   - Instacart
   - HelloFresh
   - Blue Apron

6. Thinking about once the restrictions are lifted, which of the following are
   you likely to try and avoid for the time being, because of Coronavirus?

- Cinemas / Theaters
- Gyms / Sports Centers
- Hairdressers / Beauty Salons
- Holidays
- Large Retail Shops / Shopping Centers
- Museums / Galleries
- Music Concerts
- Music Festivals
- Pubs / Bars / Clubs
- Restaurants / Café's
- Shopping Downtown / Highstreet
- Sports Events
- Supermarket / Grocery Stores
- Other
- Not Planning to Do Anything Less

Table 3.1 Changes to Lifestyle During 10-Week Period

Weeks	Total US	Applied Social Distancing	% Social Distancing
1	720	487	68%
2	718	548	76%
3	818	626	77%
4	712	562	79%
5	710	557	78%
6	713	564	79%
7	720	559	78%
8	716	549	77%
9	716	507	71%
10	717	494	69%
Total	7260	5453	751%
Weeks	Total US	Avoided Public Places	% Avoided
1	720	457	63%
2	718	482	67%
3	818	566	69%
4	712	499	70%
5	710	500	70%
6	713	478	67%
7	720	501	70%
8	716	478	67%
9	716	431	60%
10	717	466	65%
Total	7260	4858	669%
Weeks	Total US	Increased Online Shopping	% Increased Online Shopping
1	720	268	37%
2	718	309	43%
3	818	393	48%
4	712	340	48%
5	710	383	54%
6	713	398	56%
7	720	394	55%
8	716	370	52%
9	716	360	50%
10	717	375	52%
Total	7260	3590	495%

Table 3.2 Spending Habits on Delivery vs. Going Out Over 10-Week Period

Weeks	Total US	Delivery More	% Delivery More	Delivery Less	% Delivery Less
1	719	196	27%	221	31%
2	718	205	29%	210	29%
3	818	248	30%	244	30%
4	712	232	33%	202	28%
5	710	224	32%	185	26%
6	713	239	34%	190	27%
7	720	247	34%	200	28%
8	716	229	32%	156	22%
9	716	238	33%	157	22%
10	717	224	31%	166	23%
Totals	7259	2282	315%	1931	266%
Weeks	Total US	Going Out more	% Going Out More	Going Out Less	% Going Out Less
1	719	11	2%	577	80%
2	718	13	2%	574	80%
3	818	7	1%	658	80%
4	712	22	3%	587	82%
5	710	17	2%	584	82%
6	713	20	3%	595	83%
7	720	19	3%	596	83%
8	716	15	2%	582	81%
9	716	27	4%	535	75%
10	717	26	4%	551	77%
Totals	7259	177	25%	5839	804%

Table 3.3 US Food Delivery Service Usage During 4-Week Period

Food Delivery Service	Week 7	Week 8	Week 9	Week 10	4-Wk Totals	% 4-Wk Totals
DoorDash	98	115	109	91	413	17%
GrubHub	76	76	83	71	306	12%
Domino's	83	90	96	78	347	14%
Uber Eats	61	75	85	86	307	12%
PostMates	31	46	43	44	164	7%
Amazon/Amazon Fresh/Amazon Pantry	105	104	101	105	415	17%
Instacart	96	78	98	70	342	14%
HelloFresh	13	17	37	27	94	4%
Blue Apron	14	16	30	23	83	3%
Weekly Totals	577	617	682	595	2471	100%

Table 3.4 Using Food Delivery Services vs. Using Social Media

Weeks	US Total Delivery	More Delivery/Takeaway	% More Delivery/Takeaway
1	720	274	38%
2	718	259	36%
3	818	196	24%
4	712	187	26%
5	710	207	29%
6	713	221	31%
7	720	234	33%
8	716	247	34%
9	716	208	29%
10	717	225	31%
Totals	7260	2258	312%
Weeks	US Total Social Media	More Social Media	% More Social Media
1	*null*	*null*	*null*
2	*null*	*null*	*null*
3	*null*	*null*	*null*
4	592	302	51%
5	594	263	44%
6	577	277	48%
7	592	229	39%
8	583	281	48%
9	532	254	48%
10	554	248	45%
Totals	4024	1854	323%

Table 3.5 Will Continue to Avoid After Restrictions are Lifted

Continue to Avoid	Week 1	Week 2	Week 3	Week 4	Totals	Percentage
Base	720	716	716	717	2,869	14.75%
Cinema / theatre	399	420	391	417	1,627	8.37%
Gym / sports centers	352	337	341	357	1,387	7.13%
Hairdressers / beauty salons	215	229	226	222	892	4.59%
Holidays	125	137	144	145	551	2.83%
Large retail shops / shopping centers	325	326	309	321	1,281	6.59%
Museums / galleries	266	273	270	312	1,121	5.76%
Music concerts	381	400	401	409	1,591	8.18%
Music festivals	389	397	369	417	1,572	8.08%
Pubs / bars / clubs	396	411	388	404	1,599	8.22%
Restaurants / café's	333	346	341	327	1,347	6.93%
Shopping downtown / highstreet	244	254	253	264	1,015	5.22%
Sports events	383	403	376	400	1,562	8.03%
Supermarket / grocery shops	121	102	126	109	458	2.35%
Other	13	18	19	20	70	0.36%
Not planning to do anything less	131	131	129	115	506	2.60%

APPENDIX B

SOCIAL COMMERCE USE CASE

Exhibit 2 Use Case Story for Social Commerce System

Name	Use Case: Order Meal for Delivery
Summary	Customer is able to order meal for delivery directly on social media application without being redirected to an external website.
Rationale	Since restaurants are currently not allowed to take dine-in customers at their physical locations, many customers have switched to ordering their favorite meals online for delivery or takeout options. Due to the increase in usage of social media and the growing popularity of social commerce in other industries, creating a social commerce system for restaurants will allow customers to consider ratings, recommendations, reviews, pictures, and videos when making a decision to order a meal from a small restaurant business. Using this system will turn the customer's social media engagement directly into sales for the restaurant.
Users	• Customer • Restaurant • Third-Party Delivery Service
Preconditions	• Customer must be logged into social media platform • Customer must have ApplePay enabled or payment information saved in Third-Party Delivery Service profile • Customer must have address information saved in Third-Party Delivery Service profile
Basic Course of Events	1. Customer visits social media profile of restaurant 2. Customer sees a meal he or she would like to place an order for 3. Customer clicks on white caption box and chatbot window appears 4. Chatbot confirms the following: Payment Method and Delivery Address 5. Customer confirms and completes order 6. Restaurant receives order 7. Third-Party Delivery Service fulfills order
Alternative Paths	1. In Step 4, Customer indicates they would like to change Payment Method. In this case, the system redirects the customer to their Third-Party Delivery Service Profile to Update Payment Method. Once updated, the order can be placed. 2. In Step 4, Customer indicates they would like to change Delivery Address. In this case, the system redirects the customer to their Third-Party Delivery Service Profile to Update Address. Once updated, the order can be placed.
Post Conditions	Customer has successfully placed order directly on social media application and receives food in a timely manner.

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