

Article

Case Study: Impact of Regulatory Restrictions and Tax Policy on Breakeven Analysis and Risk Management

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Abstract: The objective of this case study is to enable students to analyze the financial impact of an unexpected catastrophic event on a retail business and how the strategic operational decisions made in response to regulatory restrictions and changes in tax policy impact the business's risk tolerance and breakeven analysis. To provide students with a context for comparison, this case study provides students with the opportunity to analyze the financial statements of a retail business prior to the occurrence of an unexpected catastrophic event, how the catastrophic event impacted revenue and profitability, and how the risk reduction strategies the business employed contained the adverse impact of the factors brought on by that catastrophic event on breakeven. This case study addresses a core gap in the body of knowledge by analyzing a business in three distinct stages of the business life cycle: (1) in the start-up phase; (2) in pre-crisis operations mode; and (3) in crisis mode confronted with an unexpected catastrophic event amidst governmental shutdowns, state and federal regulatory restrictions, and emergency changes to the tax policy. Examining a fictitious restaurant (a composite of the sales statistics of three actual restaurants located in Long Island, New York from 2019 to 2021) in operation for one year prior to the COVID-19 pandemic, students are given the opportunity to think critically about how strategic operational decisions made to generate sales, to minimize risk, to comply with mandated state government policy, and to take advantage of federal tax relief policy, collectively changed the financial projections and impacted the breakeven analysis of that business. Students are able to evaluate business start-up costs, first year (pre-pandemic) sales and costs, and second year (during pandemic) sales and costs of a retail business. Students then evaluate how the United States' federal PPP relief loan program, along with other pandemic relief programs for businesses and individuals, impacted profitability and business strategy. Students also assess risk, risk tolerance, and how the strategies employed to minimize risk impact a business. The motivation for this case study is to provide students with an illustrative example of an entity at various stages of the business life cycle, to explore the surrounding context of the impact of external environmental events, and to identify the effects of strategic operational responses to the various regulatory changes that were brought on by a catastrophic event. This case study is designed for use in courses that study revenue projection, tax, internal controls, breakeven analysis, and risk management. **Teaching Note:** While this case study uses a restaurant as a model, prior understanding of the restaurant industry is not necessary. Any student or instructor can use their practical knowledge and experience as a consumer to adequately analyze the issues presented.

Keywords: breakeven analysis; risk management; COVID-19

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1. Introduction

Increased exposure to risk due to the COVID-19 pandemic presented an unforeseen challenge previously unimaginable in the business landscape. The pandemic forced businesses around the globe to reassess their risk management tolerance, preparedness for catastrophic events, and readiness to quickly respond to government mandates and forced changes to customer demands (Zhu et al. 2020). The profound impact of the COVID-19

pandemic resulted in debt and bankruptcy for countless businesses due to their inability to effectively respond to excessive and unpredictable legislative intrusion (Boratyńska 2021).

The COVID-19 crisis was catastrophic and unprecedented, making it impossible for businesses to plan for the market conditions that occurred. This challenge forced businesses to respond to changes in market conditions and forced shutdowns by the government in unprecedented ways (Boratyńska 2021). While the shutdowns associated with the pandemic have come to an end, the solutions to pandemic-related problems employed by the businesses that survived the crisis are important lessons all businesses can apply to contend with unforeseen risks that they may face in the future (Polinkevych et al. 2021).

This case study is intended to enable students to analyze the financial impact of an unexpected catastrophic event on a retail business and how the strategic operational decisions made in response to regulatory restrictions and changes in tax policy impact the risk tolerance and breakeven analysis. This case study provides students with the opportunity to analyze the financial statements of a retail business prior to the occurrence of an unexpected catastrophic event, how the catastrophic event impacted revenue and profitability, and how the risk reduction strategies the business employed contained the adverse impact of the factors brought on by that catastrophic event on breakeven.

Students will evaluate the business start-up costs, first year (pre-pandemic) sales (Table 1) and costs (Table 2), and second year (during pandemic) sales (Table 1) and costs (Table 3) of a retail business. Students will then evaluate how the United States' federal PPP relief loan program, along with other pandemic relief programs for businesses and individuals, impacted profitability. Students will also assess risk, risk tolerance, and how the strategies employed to minimize risk impact a business.

This case study provides an analysis and detailed exercise to demonstrate how a previously thriving business suffered due to the risks and vulnerabilities businesses were confronted with amidst a global health crisis. Students will analyze whether a business that is confronted with catastrophic events and governmental restrictions and responds to changing marketplace conditions by altering their operational practices and applying for the funds made available through legislative relief programs increases the likelihood of its longevity.

Examining a fictitious restaurant (a composite of the sales statistics of three actual restaurants located in Long Island, New York from 2019 to 2021) in operation for one year prior to the COVID-19 pandemic as a model, this case study demonstrates how strategic operational decisions made to generate sales, to minimize risk, to comply with mandated state government policy, to take advantage of federal tax relief policy, and to take advantage of state relief, collectively changed the financial projections and impacted the breakeven analysis of that business (Table 4), solving the threat of pending business closure (OECD 2020a, 2020b).

The fact pattern presented, designed for classroom use in graduate and upper-level undergraduate managerial accounting, cost accounting, revenue management, and risk management courses, contributes to the field by enabling students to evaluate the real business start-up costs, first year (pre-crisis) sales and costs, and second year (amidst crisis) sales and costs of a retail business. Students are also able to assess risk, to assess risk tolerance, and to observe how strategic changes due to increased risk enabled a business to survive the pandemic.

This case study is organized as follows: Section 2 provides a literature review of the risk management landscape prior to COVID-19 and the emerging literature since the pandemic; Section 3 describes the case study objective and intended audience for classroom implementation; Section 4 outlines the case focus, including a brief summary of the case facts presented, the primary question the case seeks to address, and the environments to be analyzed; Section 5 outlines the case facts, providing the foundation for student analysis and discussion; Section 6 presents the state and federal legislation that influenced the operational decision making; Section 7 outlines the risk concepts for introductory discussion with the students and shows how they apply to this particular set of facts; Section 8

outlines the learning objectives of this case study; Section 9 provides case questions and model answers for the student assignments; Section 10 outlines implementation guidance, motivation, and a classroom activity providing faculty guidance; and, finally, Section 11 presents the authors' discussion of the case, its theoretical and practical implications, its limitations, suggestions for future research, and the conclusions.

2. Literature Review

The literature on risk management and breakeven analysis was reviewed. The literature review was not limited to any one industry since the goal of the authors was to provide the student with an effective model of analysis for any retail business. A new body of literature on operations during the pandemic and projections on how this pandemic will change business operations has emerged (Zhu et al. 2020). This review examines these emerging theories, along with the literature published prior to COVID-19, to contemplate the future of risk management and financial planning in a post-COVID-19 business environment.

2.1. Risk Management

The understanding of the risk management process is the foundation for the analysis of this case. The risk management process encompasses the systematic identification of, analysis of, strategizing about, and response to the various factors that impact the sustainability of a business (Dunne and Harris 2021; Durst et al. 2019). Ideally, effective risk management strategies attempt to foresee and manipulate future outcomes by proactively, rather than reactively, addressing variables that may adversely impact the profitability of an organization (Machova 2019). COVID-19 was more extreme than any foreseeable risk possibility. The duration of the pandemic, and the sustained adverse impact on so many small businesses, forced operators to develop previously unimaginable contingencies and action plans to mitigate loss. The pandemic forced many industries to confront the reality that, no matter how effective an organization was at identifying potential risk factors that could adversely impact a business or industry, the impact of long-term governmental restrictions and sharp shifts in consumer behavior that were unimaginable through any previous reasonable risk lens became an immediate threat and a long-term reality (Liguori and Pittz 2020).

This case study introduces students to risk management theory as an integrated approach with other business planning tools. Risk management has always been critical in corporate decision making. Risk management is applicable to organizations of all sizes, and the implementation of risk management systems must reflect the needs of the organization (Ferreira de Araújo Lima et al. 2021). The literature on risk management contemplates an internal response to the perceived threats to an operation. In the start-up and continuity phases of a business, there are some predictable risk factors and indicators that management plans for in their operational strategies. Business responses to these risk factors and additional environmental changes are often based on using existing information to project optimal responses (Dunne and Harris 2021; Durst et al. 2019; Leech 2013).

The Committee of Sponsoring Organizations of the Treadway Commission provides a framework for risk management as a normal part of business operations and in which a business can evaluate and set its risk appetite (Committee of Sponsoring Organizations (COSO) 2014). The level of risk a business is willing to accept, known as its risk tolerance, is shaped at the discretion of the management (Kaplan and Mikes 2012). A business's commitment, innovativeness, strategy, and managerial complexity, along with its access to public incentives, influence its degree of tolerance, adoption of risk management strategies, and ability to respond to catastrophic events (Ferreira de Araújo Lima et al. 2021).

Risk factors are weighed to determine the appropriate planning (Machova 2019). Risk management implementation is dependent on leadership commitment. The scope of the commitment and participation by the leadership will likely determine the effectiveness of a risk management approach (Ghazieh and Chebana 2021).

To avoid the risks associated with the COVID-19 pandemic, companies of all sizes and from various industries changed employee work schedules, operational locations, the goods and services offered, and the technology utilized. Some businesses required employees to work from home to avoid the risk of virus exposure in the workplace. Most businesses relied heavily on IT and broadband services to continue providing customer services, sales, support, and more (Weil and Murugesan 2020). The business analyzed in this case study was, for the most part, unable to operate taking advantage of these strategies employed by other industries during the pandemic, since it was a restaurant in the business of serving food and beverage to consumers on site. As a result, JD Corp. was forced to tolerate more risk than businesses in many other hospitality sectors and industries. Unlike restaurants, event companies, for example, were better able to adapt by moving events from in-person to hybrid or virtual to pivot away from in-person services. Restaurants were not able to replicate that model (Norris et al. 2021).

Risk mitigation, also known as optimizing risk, occurs when an organization seeks to reduce potential losses due to an activity they are engaged in and wish to remain engaged in. In risk mitigation, businesses seek to limit the impact of a risk such that, if a problem occurs, it will be managed in a way that reduces the impact on their bottom line. Various articles offer insight as to how companies mitigated risk during the pandemic. These articles indicate that businesses must review their potential exposures, the breadth of their insurance policy coverage, and potential supply chain issues to create a revised plan of action (Bera et al. 2020; Dunne et al. 2021).

Many examples of risk mitigation around the pandemic exist. Mask wearing, social distancing, avoiding crowds, avoiding poorly ventilated areas, and hand washing are all considered cornerstones of COVID-19 risk mitigation (Center for Disease Control and Prevention (CDC) 2021). However, more drastic measures have been necessitated in some industries. Restaurant owners, as outlined in this case study, explored various alternatives to traditional sales channels amidst the COVID-19 crisis, including expanding outdoor dining, concentrating on food delivery, expanding curbside pick-up, and selling food packaged as groceries, rather than closing their operations altogether. Other risk mitigating plans included taking the temperatures of employees and customers, changing the layouts of the businesses to enable social distancing, and limiting foot traffic (Norris et al. 2021; Dunne et al. 2021).

The pandemic presented challenges to the insurance industry that are considered in this case study in relation to their impact on JD Corp. Does business interruption insurance coverage extend to the COVID-19 pandemic? Most business interruption policies contain conditions that a claim must meet to be successful: “physical damage, to insured property, caused by a covered peril, resulting in quantifiable business interruption loss, during the period of time it takes to restore the damaged property” (Nevins and Lewin 2020). How these five conditions are interpreted directly impacts how recoverable a business interruption claim is. In addition, insurance payouts depend on the language used in a policies’ Force Majeure clause, and it is uncommon for insurers to honor business disruption claims due to human infectious illnesses (Bagger 2021; Dunne and Harris 2021; Januarita and Sumiyati 2021; Nevins and Lewin 2020).

Risk acceptance, also known as risk retention, occurs when a business recognizes and identifies a potential risk, but acknowledges that exposure and assumes the risk. This commonly occurs when a company believes that, should an adverse event occur, it would not be detrimental to the company. It is a passive approach, different from risk tolerance, where no action is taken because a business feels that the probability of the risk occurring and/or its impact on the business are not significant. Moreover, the potential loss is not significant enough to justify taking action to eliminate the risk or investing the resources necessary to avoid it (Meyer 2017). In other instances, businesses may identify the risk as being so unlikely or so small that it should not be prioritized in planning or budgeting. In these instances, businesses simply opt to accept the risk rather than taking steps to hedge, indemnify, or avoid it (Dunne et al. 2021).

Businesses seek to strike a balance between the potential costs of remediating a risk if it were to arise versus the expense of the preventative measures to avoid it altogether in relation to the statistical likelihood of it even occurring. Maintaining smaller inventories, reducing staffing, agreeing to shorter lease terms for real property, clarifying whether pandemics and government shutdowns are covered by insurance, investing in IT to expand on work-from-home protocols, expanding customer access options for goods and services, diversifying supply chains, and leasing rather than buying equipment are just some of the considerations that may become more prevalent and be more attractive to a business that accepts such risks (Dunne and Harris 2021; Wijaya 2021).

Due to the unprecedented stress on businesses across the globe, the COVID-19 pandemic caused businesses to react to a previously unforeseen variable that crippled profitability for many organizations. Consumer behavior underwent a profound change. The altered consumer behavior in a post-COVID-19 world will need to be factored into risk management strategies and operational planning (Kim et al. 2022; KJT et al. 2021). Businesses were challenged by multiple factors, including restrictions on the number of patrons permitted to enter their establishment, limitations on their hours of operation, and even government mandated lockdowns where little or no business could be transacted. Profitability was often no longer the goal. Instead, the goal became outlasting the pandemic by operating in a cost-effective manner and approaching breakeven (Dunne et al. 2021).

2.2. Breakeven Analysis

Breakeven analysis is a way of understanding the volume and cost for an entity and is relevant to businesses of all types and sizes (Weinwurm 1958; Sintha 2020). Breakeven is effective in the analysis of business financials because it contemplates changes in the operating environment and the factors that determine the impact of the specified risks and requirements of an operation and is essential for the ongoing operation of a business as a startup and through sustained business operations (Gallo 2014).

The recent literature reflecting on the pandemic and its impact on a business consistently reiterates the importance of a breakeven analysis. Fixed costs are constant expenses that a business must continue to incur regardless of business revenue. Variable costs are only incurred by a business when carrying out the production of goods or services. They are the calculations that must still be monitored when running a business and the considerations that should be given the most weight when developing strategy and evaluating whether the business can survive (Utami and Mubarak 2021).

The COVID-19 pandemic exposed the vulnerabilities of many businesses with high capital costs and overheads. This catastrophic event and the ensuing governmental shutdowns resulted in revenues sharply declining across a multitude of industries, while fixed liabilities still had to be met. The recent literature has begun to investigate and analyze this challenge and the relation between these previously unforeseen risks and how a detailed breakeven analysis can inform a business strategy for survival (Rivera et al. 2021).

This case study adds to the existing literature by providing a comparative view of the operations of a business at the start-up and pre-crisis stages of the business life cycle before COVID-19 in comparison to the operations of that same business amidst a catastrophic event (the COVID-19 pandemic). It outlines the specific relief and legislation designed to ease market conditions during the pandemic. Students are called on to calculate breakeven incorporating the relief and legislation that were available in relation to the specific facts of the business outlined in this case study (Table 5). Students are asked to analyze and apply risk strategies to the case under analysis and to calculate the impact of market related changes on the breakeven of that business (Table 4).

3. Case Study Objective and Intended Audience

3.1. Case Study Objective

The objective of this case study is to provide students with the opportunity to critically analyze an entity in three unique stages of the business life cycle: (1) in the start-up phase

(Table 1); (2) in the pre-crisis operations mode (Table 2); and (3) in crisis mode (Table 3) confronted with an unexpected catastrophic event amidst governmental shutdowns, state and federal regulatory restrictions, and changes to tax policy.

By analyzing these three stages of the business life cycle, students will be able to consider the start-up costs (Tables 2 and 3), breakeven analysis (Table 4), and ongoing costs of operations before and during a catastrophic event. Students will also be able to analyze tax and regulatory and labor issues, and to analyze the financial impact of a disruption caused by a global pandemic (Table 5). Finally, students are able to formulate and discuss their own ideas as to how JD Corp. responded to a catastrophic event, and how any business could have taken additional measures to mitigate risk and increase their likelihood of surviving the effects of the pandemic and the government restrictions that impeded their ability to operate.

3.2. *Intended Audience*

This case is suitable as a course activity in the following graduate and upper-level undergraduate academic paths of study.

- Managerial Accounting
- Cost Accounting
- Revenue Management
- Risk Management

Before presenting this case to a class, it is important that the students already have knowledge of general managerial accounting and breakeven analysis. While the accounting and risk management concepts may have been covered in the same course prior to this activity, or covered in a prior course, a review of basic accounting concepts and the risk management process will be helpful to the students who will be working on this case study.

4. Case Focus

4.1. *Synopsis of Case Facts*

The restaurant, JD Corp., opened operations one year before the start of the COVID-19 pandemic. The restaurant incurred start-up expenses and had a favorable first year of operations (Table 2). After the pandemic caused the restaurant to change its operations based on governmental regulations and changes in consumer patterns, the restaurant sought governmental aid through relief programs designed to help businesses adversely impacted by the COVID-19 pandemic (Table 5). The emergency of the pandemic also caused the restaurant owners to re-examine their perspectives on risk.

4.2. *Case Question*

If JD Corp. quickly responds to the changing marketplace conditions due to governmental restrictions by altering their operational practices and utilizing the funds made available through legislative relief programs, it will increase the likelihood of business survival during a global pandemic.

4.3. *Environments Analyzed*

1. Business startup in a non-crisis environment (Tables 1 and 2);
2. Ongoing business operations in a non-crisis environment (Tables 1 and 2); and
3. Business response in a crisis environment (Tables 3 and 5).

Teaching Note: Since this is a case study designed for classroom implementation, providing students with the opportunity to evaluate and analyze the financial impact of an economic crisis on a hypothetical business (composite of three actual businesses), no formal hypothesis is included.

5. Case Facts

On 1 December 2018, JD Corp., a privately held company, signed a lease agreement to occupy retail space on Main Street in Huntington, New York. The community was thriving, and space was at a premium. JD negotiated the terms for 2000 square feet at \$30 per square foot per year (\$5000 per month), with a 2.5% increase annually, for a 5-year term. Due to the positive economic outlook in the region and the existence of others interested in leasing the space at that time, the landlord was not willing to offer reduced or free rent during the necessary renovations. JD Corp. began renovations and was able to make capital improvements to the facility so that it was ready for a grand opening on 1 January 2019, as planned.

JD Corp. opened for business on 1 March 2019. JD enjoyed an immediate positive response from the community. The business volume exceeded expectations, and word of mouth spread quickly (Table 1). JD took a traditional approach to operations and felt that a ‘personal touch’ with exceptional customer service and a quality product would cultivate business and build goodwill in the community. For the months of March 2019 through February 2020, JD Corp. had twelve months where its revenue far exceeded the initial forecasts. Even the colder and snowier than expected winter months, which were forecasted to show declines in revenue, far exceeded expectations. With this success in mind, at the start of 2020, JD Corp. purchased inventory in larger quantities, since the company felt, based on the initial sales history, that they would easily be able to repay their creditors, while enjoying bulk discounts on purchases (Table 2).

In the early days of March 2020, the global COVID-19 pandemic began to profoundly impact traffic to JD Corp. Shortly thereafter, in mid-March, the governor of New York began to institute emergency measures to minimize the risk of COVID-19 transfer. These measures included reductions in the hours of operations, reduction in the number of patrons permitted to enter the establishment (75% reduction), social distancing rules, and mask mandates for the staff and customers (Table 3). While JD Corp. (a restaurant) was designated an “essential business,” an immediate decline in foot traffic had a profound negative impact on its sales and revenue (Table 1). JD Corp. did not have an outdoor private parking area where outdoor dining space could be added (in compliance with state mandated COVID-19 guidelines) but did have a large sidewalk, enabling them to place two “igloo” dining tents near the front entrance for customers to sit in and dine. Due to COVID-19, New York State lifted the ban on the takeout and delivery of alcohol from on-premise restaurant retailers, enabling restaurants to offer the takeout and delivery of alcohol for home consumption. Many of JD Corp.’s hourly employees were unwilling to come to work due to fear for their personal health and safety, along with the fact that they were given unemployment benefits that state and federal legislation expanded, subsequently increased, and then extended due to the ongoing pandemic. Overall, guests and employees were hesitant about being inside of a restaurant to consume food and beverages.

Variables for Consideration

- (1) Open seven days per week
 - 5 pm to 1 am (pre COVID-19)
 - 5 pm to 10 pm (during COVID-19)
- (2) 2000 square feet
 - (a) 60% dining space
 - 1200 square feet
 - 15 square feet per seat
 - 80 seats (pre COVID-19)
 - 20 seats—25% max seating capacity (during COVID-19)
 - (b) 40% kitchen, storage, food preparation space
 - 800 square feet

Start-up/Pre-opening Costs

\$8500	Legal Fees
\$5500	Staff Training
\$6000	NYS Liquor Authority Liquor License (state fees + attorney)
\$2750	Permits: Business certificate, board of health, occupancy, signage, food protection, food service, plumbing, gas, fire, grease.
\$4500	Website Development + Online Customer Ordering System
\$8000	Signage and Advertising
\$55,000	Construction Contractor, Improvements, ADA Compliance
\$24,000	Furnishings and Décor
\$36,500	Kitchen and Bar Equipment
\$6000	Computer Hardware
\$1950	Security Camera and Monitoring System
\$1200	Productivity Software
\$12,000	Point-of-Sale System

Table 1. Average weekly sales revenue and operational costs prior to COVID-19 versus during the first year of COVID-19. These are a composite of the sales statistics of three actual restaurants located in Long Island, New York.

Average Weekly Sales + Costs	10 March 2019 thru 28 February 2020	1 March 2020 thru 28 February 2021	
	Pre COVID	During COVID	Variables Due to COVID
Customer Count	760	120	25% max seating capacity
F & B Sales Per Guest	\$28	\$22	Mandated distancing
F & B Product Cost	32%	29%	
Pre-pandemic Forecast	75% total sales		
Bar Guest Sales	\$2800	\$400	Mandated distancing
Bar Cost	24%	24%	
Pre-pandemic Forecast	10% total sales		
Curbside Takeout & Delivery	\$1200	\$9750	
Takeout & Delivery F & B Cost	34%	34%	Highest cost% due to packaging
Pre-pandemic Forecast	5% total sales		
Catering Sales	\$2950	\$0	State mandated shutdown
F & B Product Cost	27%	\$0	
Pre-pandemic Forecast	10% total sales		
Grocery Sales	\$0	\$950	Grocery sales promoted
Grocery F & B Cost	0%	65%	during pandemic
Credit Card Processing	2.75%	2.75%	Excludes AMEX (almost 4%)

Recurring Costs

04%	Weekly inventory and supplies Increased to 06% during COVID-19 due to one-time use to-go food packaging, to-go cocktail packaging, masks, hand sanitizers
\$1200	Monthly accounting and bookkeeping
\$7500	Monthly rent (1st year); 2.5% increase in year 2
\$1800	Monthly utility: Electric, gas, and water
\$1200	Monthly waste removal
\$5980	Annual insurance
\$_____	Weekly dining room tipped staff—10 hourly employees 30 h per week per employee \times \$11 per hour (pre COVID-19) = \$3300 Reduced to 4 hourly employees (during COVID-19) = \$1320
\$_____	Weekly kitchen staff—8 hourly employees 30 h per week \times \$15 per hour (pre COVID-19) = \$3600 Reduced to 5 hourly employees (during COVID-19) = \$2250
\$_____	Annual management salaries 1 manager @ \$64,000 + 1 owner @ \$40,000 (pre COVID-19) = \$104,000 1 owner/manager @ $\frac{1}{2}$ salary (during COVID-19) = \$32,000
\$72,500	Annual chef salary
\$375	Monthly website and social media
\$850	Monthly internet + cable + phone + music licensing (permission to broadcast copyrighted music to public)
\$295	Monthly POS (Point-of-Sale System) service plan

COVID-19 Expenses

\$3150	Equipment to meet COVID-related government mandates: Barriers, signage, garden dining igloos (\$500 each), outdoor décor, furniture and umbrellas
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6. State and Federal Legislation Impacting Business Strategy

Teaching Note: Students should analyze and discuss how each legislative action may have impacted JD Corp.'s financial projections (directly) or the ability to staff the operation (indirectly).

Stimulus (effective 27 March 2020)

\$600	Unemployment per week per employee
\$1200	One-time stimulus check

<https://www.irs.gov/coronavirus/economic-impact-payments>.
Access Date: 11 December 2022

Families First Coronavirus Response Act

During most of 2020, this allowed a tax credit of up to two weeks of pay for employees absent due to reasons related to Coronavirus. Under the Consolidated Appropriations Act, this credit was extended to 31 March 2021.

<https://www.dol.gov/agencies/whd/pandemic/ffcra-questions>.
Access Date: 14 December 2022

Payroll Protection Program (First and Second Draw)

Most struggling businesses received first round PPP whereby they were eligible to receive up to 2.5 months of payroll expenses. Fewer businesses qualified for the second round, but many in the hospitality industry qualified for both. For businesses with a NAICS code beginning with "72", the second draw was up to 3.5 months of payroll expenses. Those businesses that qualified for both but did not apply for the first round were permitted to apply for the first round PPP ex post facto, utilize those funds, and then apply for the second round before 31 March 2021.

<https://www.sba.gov/funding-programs/loans/covid-19-relief-options/cross-program-eligibility-sba-covid-19-relief-options>.

Access Date: 12 December 2022

Work Opportunity Tax Credit (WOTC)

This is a Federal tax credit of between \$2900 and \$9600 available to employers for hiring individuals from certain targeted groups who have consistently faced significant barriers to employment. The credit is applicable to each employee hired. Set to expire in 2020, the Consolidated Appropriations Act extends through 2025.

<https://www.dol.gov/agencies/eta/wotc>.

Access Date: 2 January 2023

New Market Tax Credit (NMTC)

This program provides credits against federal tax obligations when opening or expanding a business in an economically disadvantaged community. Originally set to expire in 2020, the Consolidated Appropriations Act has been extended through 2025.

<https://www.irs.gov/pub/irs-utl/atgnmtc.pdf>.

Access Date: 20 December 2022

Economic Injury Disaster Loans (EIDL)

While not credits or forgivable loans, these low interest rate loans of up to \$150,000 are available through the SBA.

<https://www.sba.gov/funding-programs/loans/covid-19-relief-options/eidl/covid-19-eidl>.

Access Date: 22 December 2022

7. Risk Concepts for Introductory Classroom Discussion of Case Study

7.1. Risk Management as an Ongoing Process for Businesses

Risk analysis is a critical part of the accounting internal control process. The Committee of Sponsoring Organizations of the Treadway Commission (COSO) developed an organization-wide approach to analyzing and prioritizing the responses to risks within an organization, known as Enterprise Risk Management (ERM).

The ERM process involves a continuous review of internal and external risk in order to ensure optimal operational efficiencies. In non-crisis times, this review allows an organization to maintain normal operations and to refine its processes to gain a better structure in operations. In a crisis time, such as COVID-19, the ERM process provides an opportunity for organizational leadership to determine the impact of and the proper response to changes in the operating atmosphere based on the crisis.

<https://www.coso.org/SitePages/Guidance-on-Enterprise-Risk-Management.aspx?web=1>.

Access Date: 20 December 2022

7.2. Setting Risk Appetites

Risk appetites are the risks that the organization is willing to accept in operation and the preventative measures that the organization implements. The risk appetite concept, suitably interpreted, has a vital role to play in risk management and in the day-to-day operational decisions of a business (Aven 2013). In their white paper “Improving Organizational Performance and Governance,” COSO indicates that understanding an organization’s risks and risk appetite is important to adapting to extreme changes.

COSO notes:

“Adapting is all about positioning companies to quickly recognize a unique opportunity or risk and use that knowledge to evaluate their options and seize the initiative either before anyone else or along with other organizations that likewise recognize the significance of what’s developing in the marketplace. Early movers have the advantage of time, with more decision-making options before

market shifts invalidate critical assumptions underlying the strategy. Failing to adapt can be fatal in today's complex and dynamic business environment."

<https://www.coso.org/Documents/2014-2-10-COSO-Thought-Paper.pdf>.

Access Date: 20 December 2022

7.3. Planning for Business If Disrupted by Unexpected Events

In uncertain times such as the COVID-19 crisis, risk analysis is critical to the continuation of a business. Risk analysis must be tailored in order to meet challenges unique to the changes in the operating atmosphere (Leech 2013).

Where the usual operations of a restaurant, as in this case study, are challenged by new regulatory legislation and unexpected governmental restrictions that place constrictions on normal operations, the business must assess what resources are available and how to respond and adjust its strategy to keep the business sustainable.

In addition, when extreme changes in consumer behavior develop, as happened during COVID-19, businesses must examine what consumer patterns are developing, assess what actual resources are available, and quickly decide how to respond to keep the business sustainable (Kim et al. 2022).

The ERM assessment of this case should include evaluating supply chain issues, converting business practices to allow for restrictions on seating and on the number of customers permitted in a business establishment, and converting business transactions for the customer to promote takeout, curbside pick-up, touchless payment, and other options that allow the consumer to feel safe during a transaction.

8. Learning Objectives

1. To **categorize** the start-up costs of an organization;
2. To **calculate** the breakeven costs of an organization in the first and second years of operation;
3. To **compare** the changes in the breakeven costs of an organization in the first and second years of operation based on the changes in the risk landscape;
4. To **analyze** the impact of the pandemic on the finances of business operations;
5. To **evaluate** the impact of tax relief programs such as the PPP loan on business operations;
6. To **describe** the impact of government shutdowns on business activities and financial projections; and
7. To **assess** the risk management strategies implemented during crisis operation

9. Case Questions

Teaching Note: Responses should be based on estimated sales. The actual contribution margin will differ when the actual sales and estimated sales are not the same. However, given that the contribution margin ratio is between 66 and 73% and is mostly concentrated on in-store sales, which have a 68% gross profit percentage, the deviation of the actual contribution margin percentage from the estimated contribution margin percentage will be minimal. As such, the difference in the breakeven points between the estimated sales and actual sales of products will be minimal.

1. What are the total estimated operating costs, excluding pre-opening costs, for JD Corp. in their first year (pre COVID-19)?
- 2.(a) What are the total estimated operating costs, excluding pre-opening costs, for JD Corp. in their second year (during COVID-19)?
- 2.(b) What is the estimated breakeven point, excluding pre-opening costs, for JD Corp. during their second year (during COVID-19)?
3. How should start-up costs be factored into Return-On-Investment, Costs, and Breakeven?
4. What is an estimated impact of PPP on the funds that can be infused into operations?
5. How did the Employee Retention Tax Credit (ERTC) impact breakeven?
6. What other federal relief was provided for businesses?
7. What are some suggestions for reducing the operating costs during COVID-19?

8. What are some suggestions for increasing alternative revenue streams and increasing takeout, grocery sales, and delivery?
9. What impact did the promotion of the delivery and takeout of alcohol (lift on ban) have on revenue?
10. What was the impact of delivery, takeout, and grocery sales on perceived value? On food quality?
11. What additional risks are associated with COVID-19? How did COVID-19 change the pre-pandemic risks?
12. What are some opportunities created by COVID-19?
13. Any costs not indicated above?
14. Additional Considerations?

Model Answers for Review and Discussion

1—What are the total estimated operating costs, excluding the pre-opening costs, for JD Corp. in their first year (pre COVID-19)?

Answer:

Table 2. Year 1 (pre-COVID) estimated operating costs. These are a composite of the sales statistics of three actual restaurants located in Long Island, New York.

Weekly Sales (Year 1)		=	\$28,230
Dining sales	\$21,280 ($760 \times \28)		
+ Bar sales	\$2800		
+ Takeout sales	\$1200		
+ Catering sales	\$2950		
(grocery = \$0)			
Cost of Sales		=	\$9307.16
Dining	\$6809.60 ($\$21,280 \times 0.32$)		
+ Bar	\$672 ($\2800×0.24)		
+ Takeout	\$408 ($\1200×0.34)		
+ Catering	\$796.50 ($\2950×0.27)		
+ Credit card processing	\$621.06 ($\$28,230 \times 80\% \times 2.75\%$)		
(grocery = \$0)			
Recurring Weekly Costs		=	\$ 14,589.19
Inventory and supplies	\$1129.20 ($\$28,230 \times 0.04$)		
Accounting/books	\$276.92 ($\$1200 \times 12 \div 52$)		
Rent	\$1730.77 ($\$7500 \times 12 \div 52$)		
Utility	\$415.38 ($\$1800 \times 12 \div 52$)		
Waste removal	\$276.92 ($\$1200 \times 12 \div 52$)		
Insurance	\$115 ($\$5980 \div 52$)		
Dining room staff	\$3300 ($10 \times 30 \times \11)		
Kitchen staff	\$3600 ($8 \times 30 \times \15)		
Management salary	\$2000 ($\$104,000 \div 52$)		
Chef salary	\$1394.23 ($\$72,500 \div 52$)		

Table 2. *Cont.*

Website/Social media	\$86.54 ($\$375 \times 12 \div 52$)	Gross Sales	\$28,230.00
Cable/Internet/Phone	\$196.15 ($\$850 \times 12 \div 52$)	- Cost	\$9307.16
POS service plan	\$68.08 ($\$295 \times 12 \div 52$)	- Cost	\$14,589.19
		Weekly Net Profit (Loss)	\$4333.65 ($\times 52$)
Start-Up Costs	\$171,900	Annual Net Profit (Loss)	\$225,334.80

2a—What are the total estimated operating costs, excluding pre-opening costs, for JD Corp. in their second year (during COVID-19)?

Answer:

Table 3. Year 2 (during COVID) estimated operating costs. These are a composite of the sales statistics of three actual restaurants located in Long Island, New York.

Weekly Sales (Year 2)	=		\$13,740
Dining sales	\$2640 ($120 \times \22)		
+ Bar sales	\$400		
+ Takeout sales	\$9750		
+ Grocery sales	\$950		
(catering = \$0)			
Cost of Sales	=		\$5096.38
Dining	\$765.60 ($\2640×0.29)		
+ Bar	\$96 ($\400×0.24)		
+ Takeout	\$3315 ($\9750×0.34)		
+ Grocery	\$617.50 ($\950×0.65)		
+ Credit card processing	\$302.28 ($\$13,740 \times 80\% \times 2.75\%$)		
(catering = \$0)			
Recurring Weekly Costs	=		\$10,442.86
Inventory and supplies	\$824.40 ($\$13,740 \times 0.06$)		
Accounting/books	\$276.92 ($\$1200 \times 12 \div 52$)		
Rent	\$1774.04 ($\$7687.50 \times 12 \div 52$)		
Utility	\$415.38 ($\$1800 \times 12 \div 52$)		
Waste removal	\$276.92 ($\$1200 \times 12 \div 52$)		
Insurance	\$115 ($\$5980 \div 52$)		
Dining room staff	\$1320 ($4 \times 30 \times \11)		
Kitchen staff	\$2250 ($5 \times 30 \times \15)		
Management salary	\$1384.62 ($\$72,000 \div 52$)		
Chef salary	\$1394.23 ($\$72,500 \div 52$)		
Website/Social media	\$86.54 ($\$375 \times 12 \div 52$)		
Cable/Internet/Phone	\$196.15 ($\$850 \times 12 \div 52$)	Gross Sales	\$13,740.00
POS service plan	\$68.08 ($\$295 \times 12 \div 52$)	- Cost	\$5096.38
COVID-19 expenses	\$60.58 ($\$3150 \div 52$)	- Cost	\$10,442.86
		Weekly Net Profit (Loss)	(\$1799.24) ($\times 52$)
Start-Up Costs	\$171,900	Annual Net Profit (Loss)	(\$93,560.48)

2b—What is the estimated breakeven point, excluding pre-opening costs, for JD Corp. during their first year (pre COVID-19)?

Answer:

The estimated breakeven point measured in dollars is derived as follows:

$$\text{Fixed costs/contribution margin\%}$$

$$\text{Contribution margin\%} = \text{sales} - \text{variable costs/sales revenue}$$

In the case of multiple product sales, the contribution margin is the sum of the weighted average of the contribution margins of each of the products or services.

Table 4. Breakeven analysis. These are a composite of the sales statistics of three actual restaurants located in Long Island, New York.

Product/Service	Contribution Margin (x)	% of Total Sales	=Weighted Avg CM
Dining sales	100% – 32% = 68%	75%	51.0%
Bar sales	100% – 24% = 76%	10%	7.6%
Takeout sales	100% – 34% = 66%	5%	3.3%
Catering revenue	100% – 27% = 73%	10%	7.3%
	Subtotal: CM		69.2%
	Less: Variable Costs		(6.2%)
Credit card	2.75%	80%	2.2%
Inventory & supply			4%
	Contribution Margin CM		63%

Fixed Costs =

$$\begin{aligned} &\text{Weekly costs less inventory supplies costs (included above as variable costs)} \\ &= 10,442.86 - 824.40 = \$9618.46 \end{aligned}$$

Answer:

$$\text{Breakeven point per week in \$} = \$9618.56 / 0.63 = \$15,267$$

Note (Year 1):

Selling above the breakeven point as profit

Note (Year 2):

Below the breakeven point as loss

3—How should start-up costs be factored into Cost, Breakeven, and Return-On-Investment for first year (pre-COVID)?

Answer:

The start-up costs are \$171,000. If this is factored in the analysis, then the fixed costs will increase. The increase will be factored over the usable number of months on the lease term, which is for 60 months on 1 December 2018. However, the store opened on 1 March 2019, making the recovery period of the start-up costs 57 months.

$$\text{Hence, the fixed costs will increase by } \$171,900 / 57 \text{ months} = \$3015.79$$

Answer 1

$$\text{Total costs inclusive of these start-up costs} = \$3015.79 + \$9618.63 = \$12,634.63$$

Answer 2

$$\text{Breakeven point inclusive of these start-up costs} = \$12,634.42 / 0.63 = \$20,055$$

Answer 3

Return On Investment = Net Income (Loss) – Year/Investment = Net Income (Loss)
Divided By \$171,900

Year 1

Net Income = \$225,334.80/\$171,900 = 131%

Year 2

Net Loss = (\$93,560.48)/\$171,900 = (54%)

4—What is an estimated impact of PPP on funds that can be infused into operations?

Answer:

1st round: to employer (2.5 × 2019 average monthly payroll)

2nd round: to employer (2.5 × 2019 average monthly payroll)

PPP Loan for Restaurants =

3.5 × 2019 Average monthly payroll subject to \$100,000 annual salary per employee

PPP Loan =

Monthly salaries × 3.5

Table 5. Impact of PPP on labor costs. These are a composite of the sales statistics of 3 actual restaurants located in Long Island, New York.

Employee Type	Weekly Salary * Limit \$100,000/52 = \$1923	Total Weekly Salaries
Dining Room	\$3300	\$3300
Kitchen	\$3600	\$3600
Management	\$2000 (limit \$1923)	\$1923
Chef	\$1393	\$1393
Total Weekly Salaries		\$10,217
		× 52
2019 Salaries (52 weeks)		\$531,284
2019 Weekly Salaries (÷ 52)		\$44,273.67

Answer:

Total PPP round 1 and round 2 = 3.5 times average monthly payroll \$44,273.67 × 3.5 = \$154,958

Total PPP forgiveness potential = \$154,958 × 2 = \$309,916

Business can apply for loan forgiveness 24 weeks after the origination of the loan. If the loan is not forgiven, the interest rate on the loan is 1% per annum payback over 60 months.

5—How did the Employee Retention Tax Credit (ERTC) impact breakeven?

Answer:

The ERTC provided as much as \$19,000 per employee to small businesses. The ERTC (under the original CARES ACT of March 2020—Coronavirus Aid, Relief, and Economic Security Act of 2020) was initially tabulated based on the following:

- (1) A tax credit of up to \$5000 per employee (50% of the first \$10,000 in eligible wages);
- (2) Gross receipts must have declined by >50% in any quarter 2020 versus 2019;
- (3) Businesses could not apply for both PPP and ERTC;
- (4) Limited to employers with 100 or fewer employees.

The changes to the ERTC under the Consolidated Appropriations Act (January 2021) were as follows:

- (1) A tax credit of up to \$5000 per employee (50% of the first \$10,000 in eligible wages) for 2020 plus a tax credit of up to \$7000 per employee (70% of the first \$10,000) for each of the first two quarters. This amounts to a tax credit of up to \$19,000 per employee.
- (2) Payroll paid for using PPP funds does not qualify.
- (3) Gross receipts must have declined by >20% in any quarter of 2020 versus 2019 (resulting in significantly more businesses qualifying). Did they decline >20%?
- (4) Businesses could apply for both PPP and ERTC.
- (5) The employee threshold (which includes all affiliate businesses) was raised to a 500-employee maximum.
- (6) These provisions were made retroactive, meaning that these changes could be applied to 2020.

The Employee Retention Tax Credit was a refundable tax credit on a percentage of the first \$10,000 paid to employees. Most businesses ignored the ERTC because the option was to apply for either the ERTC or the PPP, and the PPP provided more money. The Consolidated Appropriations Act changed this to allow businesses to apply for both and businesses could claim the credit retroactively.

The act also extended the credit into the first two quarters of 2021 and raised the amount so that this credit exceeded what many businesses received in PPP, and they could apply for both. Between 12 March 2020 and 30 June 2021, the span of the credit, this could have amounted to up to \$19,000 in tax credits per employee.

The qualifications were different for 2020 and 2021, but most hospitality businesses, even newly opened ones that did not qualify for PPP, qualified for the ERTC. While the concept was simple, the details of this credit were complex. Businesses were not able to use the same payroll used for forgiven PPP loans to receive the ERTC. Also, in some instances, businesses were deducting expenses on their tax return that they did not actually pay. To receive the maximum credit and calculate everything correctly, the accounting aspect was extremely important. Businesses that did not do so faced penalties and/or overpaid on their taxes.

6—What other federal relief was provided for businesses?

Answer:

Families First Coronavirus Response Act

During most of 2020, this allowed a tax credit of up to two weeks of pay for employees absent due to reasons related to Coronavirus. Under the Consolidated Appropriations Act, this credit was extended to 31 March 2021.

<https://www.dol.gov/agencies/whd/pandemic/ffcrs-questions>

Access Date: 20 December 2022

Payroll Protection Program (First and Second Draw).

Most struggling businesses received first round PPP, whereby they were eligible to receive up to 2.5 months of payroll expenses. Fewer businesses qualified for the second round, but many in the hospitality industry qualified for both. For businesses with a NAICS code beginning with “72,” the second draw was up to 3.5 months of payroll expenses. Those businesses that qualified for both but did not apply for the first round were permitted to apply for the first round PPP ex post facto, utilize those funds, and then apply for the second round before 31 March 2021.

<https://www.sba.gov/funding-programs/loans/covid-19-relief-options/cross-program-eligibility-sba-covid-19-relief-options>

Access Date: 21 December 2022

Work Opportunity Tax Credit (WOTC)

This is a Federal tax credit of between \$2900 and \$9600 available to employers for hiring individuals from certain targeted groups who have consistently faced significant

barriers to employment. The credit is applicable to each employee hired. Originally set to expire in 2020, the Consolidated Appropriations Act has been extended through 2025.

<https://www.dol.gov/agencies/eta/wotc>.

Access Date: 21 December 2022

New Market Tax Credit (NMTC)

This program provides credits against federal tax obligations when opening or expanding a business in an economically disadvantaged community. Originally set to expire in 2020, the Consolidated Appropriations Act has been extended through 2025.

<https://www.irs.gov/pub/irs-utl/atgnmtc.pdf>.

Access Date: 20 December 2022

Economic Injury Disaster Loans (EIDL)

While not credits or forgivable loans, these low interest rate loans of up to \$150,000 are available through the SBA.

<https://www.sba.gov/funding-programs/loans/covid-19-relief-options/eidl/covid-19-eidl>.

Access Date: 20 December 2022

7—What are some suggestions for reducing operating costs during COVID-19?

Answer:

Reduce scope of the menu and product offerings (fewer ingredients to purchase, purchase fewer materials, purchase ingredients in bulk); reduce the portion size of menu items to reduce inventory usage; re-evaluate the grade of products sold (lower grade is lower cost); re-negotiate rent; minimize staffing (discuss how this may impact customer satisfaction); have salaried managers take on additional hourly employee duties; minimize paid advertising; focus on social media, which is a lower cost alternative.

8—What are some suggestions for increasing alternative revenue streams and increasing takeout, grocery sales, and delivery?

Answer:

Sell groceries as a convenience for customers (takeout and delivery); focus social media campaigns on takeout, delivery, and the lift of the ban on to-go alcohol sales; promote off-premise catering; sell bottled water; charge for bread.

9—What impact did the promotion of the delivery and takeout of alcohol (lift on ban) have on revenue?

Answer:

The impacts included increased revenue, the opening of sales to a broader market, and more frequent patronage.

10—What was the impact of delivery, takeout, and grocery sales on perceived value? On food quality?

Answer:

Delivery, takeout and grocery sales may have diminished the perceived value (not a full-service meal, no restaurant atmosphere—music, ambiance, décor; food quality deteriorates in take-out packaging—yet meal price remains the same or is increased).

11—What additional risks are associated with COVID-19?

Answer:

Risk appetites and related operational strategies must be re-evaluated in times of crisis. Specific Considerations for Enterprise Risk Management include:

- (1) **Legal?** Liability related to liquor takeout and delivery; insurance policy, lease, and city/town code violations related to pop-up exterior dining structures and propane heating tanks; litigation risk related to COVID-19 exposure; canceled catered and private events due to gathering size restrictions.

- (2) **Supply chain?** If using a limited number of suppliers, there is an increased risk to product availability.
- (3) **Liquidity?** It is harder to exit a business or find a buyer. Any business goodwill that was cultivated prior to COVID-19 has diminished in value.
- (4) **Political?** Additional governmental actions and mandates (ex. Additional restrictions, shutdowns, vaccination tracking for employees and customers) are possible.
- (5) **Operational?** The impact of stimulus relief on motivation for employees to work during pandemic.

12—What are some opportunities created by COVID-19?

Answer:

The opportunities created by COVID-19 include PPP loans; loan forgiveness opportunities; ERTC; lower interest rate loans; landlord non-eviction government mandates; and the availability of a larger workforce population. In addition, the pandemic led to new approaches to conducting business (Zoom events—wine tastings and cooking classes; no physical menu—contactless food ordering; food delivery, curbside pick-up, grocery sales, awareness of importance of OSHA and Board of Health guidelines).

13—Any costs not indicated above?

Answer:

FICA (+7.65%); Workers' Comp (+3.2%); Unemployment (4.9%).

14—Additional Considerations?

Answer:

- (1) Re-evaluate the legal consequences of the use of a Force Majeure clause in an insurance policy and in customer contracts in relation to business sustainability ([Januarita and Sumiyati 2021](#)).

"A Force Majeure clause allocates the risk of loss if performance is hindered, delayed, or prevented because of an event that the parties could not have anticipated or controlled. It provides a contractual defense, the scope and effect of which will depend on the express terms of a particular contract. These terms may have been negotiated, if the parties took the time to tailor the clause to their specific transaction ... " ([Bagger 2021](#))

- (2) (Do the strategies implemented to offset COVID-19 increase risk (alcohol takeout and delivery; grocery sales; outdoor dining; staffing) require additional insurance?
- (3) Are the limits of liability in insurance policies adequate for COVID-19 related risks?
- (4) Owners should consider recruiting shareholders to offset risk.
- (5) Food handling and sanitation guidelines need to be updated and established with staff, and the protocols need to be shared with patrons.
- (6) NYS waived 'personal guarantee' clauses in commercial leases (lease holder not personally liable for business closure).
- (7) Depending on the time remaining on a lease, tenants should consider renegotiating for more favorable lease terms.
- (8) Increased takeout and delivery increases supply costs (packaging) while decreasing labor costs (service staff, dishwasher staff, etc.).
- (9) Sustainability initiatives (recycling, re-usable materials) were minimized due to the need for one-time use disposable materials during COVID-19.

10. Implementation Guidance

Based on the authors' experiences in utilizing this case study with both undergraduate and graduate students in Fall 2021, Spring 2022, and Fall 2022, we recommend that instructors plan for this case study to be implemented over at least three class sessions of a course (75 min per class session).

To maximize the efficient use of class time, the instructor should provide students with a copy of the case prior to the first class session to allow sufficient time for stu-

dents to carefully read the case before class and to be prepared for the class review and introductory discussion.

Our recommendation is to allocate one class session for the instructor to review and interactively discuss the following with the class:

- The distinction between the business start-up phase and “normal” operations;
- The impact of unforeseen circumstances (ex. COVID-19) on operations;
- The impact of government mandates and restrictions on operations;
- The impact of government intervention (ex. Tax relief) on operations;
- The facts of the case study and the governmental legislation enacted during COVID-19.

After the in-class review and discussion, assign Questions 1, 2, and 3 for students to complete individually or in assigned teams of students outside of the classroom (approximately 90 min).

The second class session can be used to review Questions 1, 2, and 3. If any time remains, the instructor can utilize the time to review the expectations for the remaining questions within the case study.

We recommend that students then be assigned to apply the facts of the case (and results of Questions 1, 2, and 3) to drafting written responses to Questions 4 through 12 as homework to be brought to the third class session, which will be dedicated to the discussion and debate of students’ ideas and their proposed strategies for the business being studied. We have found that providing students with the opportunity to openly discuss their responses (to Questions 4 through 12) in a classroom environment resulted in more overall positive feedback about the case study, since it enabled students to apply their personal experiences and reflect on their own perspectives on how businesses (restaurants, retailers, etc.) handled the challenges they were confronted with during COVID-19. The time allotted for discussion enabled students to collectively generate practical ideas and openly debate various alternatives for the business operators to consider.

Motivation and Classroom Activity

This case study works well in graduate and upper-level undergraduate managerial accounting, cost accounting, revenue management, and risk management courses. It integrates the introduction of the interaction between tax issues and everyday operation in a business.

First, an author assigned the case study in a 200-level undergraduate Operations Management course. Since the students did not have prior knowledge of the accounting topics, this author felt that additional supporting literature and an introduction would be necessary (an additional day or days). The author also noted that two students who had more life experience and were several years older than the traditional 200-level students had a clearer command and understanding of the issues that the business confronted in the case study. This author also felt that, based on this classroom experience, the case study would be more efficiently taught in a 300 to 400-level course, where students possess more life experience and more exposure to business practices, and have more of an academic foundation in the topics presented.

Second, an author assigned the case study in a 300-level undergraduate Cost Accounting class. The author felt that the accounting and finance majors clearly performed better than the 200-level students who had less of an accounting background. Further, it was observed that, while the material was still challenging for the students, the students were better able to interpret and understand the questions presented in the case study, having more of a background in the prerequisite subjects.

Third, an author also assigned the case study in a graduate Managerial Accounting course as a group project, with each group consisting of two students. In a group project format, with advanced level students, the project was completed in two (and less than half of a third) class sessions with a positive response and an engaging conversation in both sections. The quality and depth of the students’ responses demonstrated a high level of understanding and interest, since all could relate to the issues presented.

Both implementation experiences showed that utilizing a case study in the context of COVID-19 (and retail food service in particular) enabled ALL students of ALL academic levels to intimately relate to the issues presented, since they have all experienced it themselves in their own lives during the early stages of COVID-19. This facilitated student engagement through more personal and in-depth discussions than general hypothetical class discussions.

11. Discussion/Implications

11.1. Discussion

This case study illustrates the necessity for organizational planning throughout the business's life cycle and the need for a business to have the ability to adapt to catastrophic changes in an operating environment.

The COVID-19 pandemic had a profound impact on the global business community. Due to the pandemic, a business's ability to respond to risk to ensure operational continuity has become more of a strategic focus. This case study presented a small retail business that applied strategies to immediately address the variables that adversely impacted the profitability of the operation amidst an ongoing crisis. This case study enabled students to consider start-up costs and breakeven costs, to discuss tax and regulatory issues, and to analyze the breakeven and the financial impact of a disruption caused by a global pandemic.

The questions and the model responses provide insight into how any small business could have taken additional measures to mitigate risk and increase their likelihood of outlasting the effects of the pandemic and the government restrictions that impeded their recovery. Responses to risk necessitate the creation of contingencies that outline action plans that must be swiftly enacted. Applying traditional risk management principles, including avoidance, mitigation, transfer, and acceptance, many businesses owners responded to pandemic-related risks in ways that we can learn from and apply to our future risk management assessments and action plans if similar challenges arise in the future.

11.2. Theoretical Implications

By presenting the responses of a business to unprecedented business challenges, governmental mandates and shutdowns, and relief programs provided for both employees and employers, this case study demonstrates the necessity for a business to be able to quickly adapt to a crisis. Crisis level risk management demands an immediate change to both short- and long-term planning strategies. In addition, this case study demonstrates the impact of the legislation that was passed to assist businesses during the pandemic.

11.3. Practical Implications

While business startups and existing businesses have different risk management considerations, a catastrophic crisis environment requires immediate changes to long-term considerations. In addition, short-term legislation providing relief in crisis environments must be applied for quickly to mitigate natural and government-required business shutdowns.

This case study applies real tax issues and relief legislation to enable the students to navigate the uncertainty and the complexity of decision making in a crisis environment. This case also illustrates the impacts of these legislative changes and of the decisions made by businesses on the overall breakeven analysis of a business.

11.4. Limitations and Future Research

Post-pandemic business plans will likely address more risk-related concerns, considering the impact of catastrophic events on the business landscape (Patnaik et al. 2021). Future research should address and identify the challenges businesses are presented with in a post-pandemic world, including but not limited to the new considerations that must be factored into budgets, forecasts, and overall strategic and operations planning.

While post-pandemic business planning will likely return to a long-term strategic planning model, future research should also incorporate pandemic-related changes in

consumer patterns and preferences, as well as pandemic-related changes to supply chain management (Ramalingam et al. 2020).

This paper presents a case study of a single business and its response to a catastrophic event. Future research should assess risk management implementation strategies based on a large sample of businesses that survived the pandemic crisis to address a gap in the literature on the long-term impact of the risk reduction decisions made to mitigate risk in response to emergency governmental regulatory restrictions and changes in tax policy. Additionally, future research should examine a large sample of the businesses that failed during the pandemic to understand how lessons from their failure can inform future risk implementation strategies.

This case study could also be expanded to include an additional segment on forecasting, budgeting, and the effects of fixed and variable cost considerations (operating leverage) on net income and earnings per share in post-pandemic operations, along with addressing how consumers (and operators) have responded to the new operational norms in a post-COVID world (Pedersen and Ritter 2020).

This case study was limited in that it only briefly addressed how insurance coverage may reduce the impact of a catastrophic event on a business. It also only briefly addressed how Force Majeure clauses in insurance policies must be closely examined by businesses when seeking out policy coverage. Future research should address the scope of the insurance products available and how COVID-19 impacted the insurance companies providing commercial policies in more depth and with data pertaining to changes in the insurance industry, and in Force Majeure clauses in particular, since 2022.

11.5. Learning Objectives for Future Expansion on Case Study

1. To **identify** the difficulties in budgeting, forecasting, strategic planning, responding to supply chain issues, and controlling business operations in a post-pandemic world;
2. To **assess** risk management implementation strategies in a post-pandemic environment based on the effects of risk reduction strategies employed by businesses during the COVID-19 pandemic;
3. To **distinguish** fixed and variable cost considerations and their effects on net income and earnings per share in a post-pandemic environment;
4. To **examine** the availability and scope of insurance products aimed at reducing risks related to governmental shutdowns and Force Majeure events.

12. Conclusions

The unique challenges COVID-19 thrust upon the business community forced business operators to respond in ways that will increase the likelihood of greater business resilience and of survival in the future. When faced with external factors that impede business in the future, businesses are now better prepared to confront such challenges with more historic references and information resources, and with an experienced awareness of risk (OECD 2020a).

This case study is useful for students as they consider how changes in the business environment impact the financial analysis throughout different stages of a business's life cycle. In addition to the normal growth issues within any corporation, external factors can change the overall risk climate and operational environment. Students analyze how a crisis like COVID-19 requires businesses to strategically pivot to preserve their customer base and to take advantage of the relief legislation provided by a government.

Students are able to analyze the financial impact of an unexpected catastrophic event on a retail business and observe how the strategic operational decisions made in response to regulatory restrictions and changes in tax policy impact risk tolerance and breakeven analysis, and increase the likelihood of a business outlasting a catastrophic event. Students are provided with the opportunity to analyze the financial statements of a retail business prior to the occurrence of an unexpected catastrophic event, how the catastrophic event impacted revenue and profitability, and how the risk reduction strategies the business

employed contained the adverse impact on breakeven of the factors brought on by the catastrophic event.

Students are given the opportunity to think critically about how strategic operational decisions made to generate sales, to minimize risk, to comply with mandated state government policy, and to take advantage of federal tax relief policy collectively changed the financial projections and impacted the breakeven analysis of that business to ensure its survival.

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