

## **IMPACT OF COVID-19 PANDEMIC IN THE SUPPLY CHAIN MANAGEMENT OF THE MILK TEA STORES**

**Fhrizz S. De Jesus<sup>1</sup> and Blisa P. Buenaventura<sup>2</sup>**

<sup>1</sup>Nueva Ecija University of Science and Technology, Palayan City, Philippines

<sup>2</sup>Nueva Ecija University of Science and Technology, Gabaldon, Nueva  
Ecija, Philippines

### **ABSTRACT**

**Purpose** — This paper assesses the impact of the Covid- 19 Pandemic in the supply chain management (SCM) of the milk tea stores in Bongabon, Nueva Ecija, Philippines. Since milk tea is a popular drink in the said area, this paper seeks to know how the owners deal with the barriers they have encountered during the pandemic.

**Design/methodology/approach** — The study used a descriptive method using a total enumeration as the sampling technique. The respondents were fully operational milk tea store owners who encountered barriers in their SCM.

**Findings** — In line with the barriers in the SCM, the study shows that the majority of the respondents strongly agreed that the staff is afraid of the spread of the virus (Human Resource), experienced Limited business time of operation (Enforcement of Local Rules), Limited entrants of delivery vehicle (Transportation), Instability in the supply of raw materials (Raw Materials), & Sales decrease due to pandemic (Cash flow).

**Practical Implications** — The business operations of the respondents suffered from the effect of the covid 19 pandemics.

**Originality/value** — This study presents the recommendation on how the business owners can cope up with the impact of this pandemic not only in their SCM but their business as a whole.

**Keywords** Covid- 19 Pandemic, Supply Chain Management, Milk tea.

**Paper Type** Research Paper.

## **INTRODUCTION**

The effects of the outbreak of coronavirus disease (COVID-19) are remarkable and felt worldwide. The current outbreak has had severe economic consequences across the globe, and it does not look like any country will be unaffected [1]. Economic and social disruption, in addition

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to the threat to public health, threatens the long-term livelihoods and well-being of millions. The pandemic, including global supply chains, is having a major impact on labor markets, economies, and businesses, leading to widespread business disruptions.

One of the mentioned business disruptions in the supply chain. Supply chain management (SCM) is the active management of supply chain activities to maximize customer value and achieve a sustainable competitive advantage [2]. It requires the aggressive reorganization of the supply-side operations of a company to optimize consumer satisfaction and achieve a strategic market advantage. Supply Chain Management reflects an initiative by manufacturers to build and incorporate as efficient and economical supply chains as possible.

The spread of the COVID-19 pandemic has prompted government departments to enforce tight closures on cafes, farms, and factories in order to retain security measures and introduce social distancing. This has resulted in shortages in transport and the operation of both suppliers (tea estates) and demand for consumption points due to a shortage of manpower and limited consumer visits to coffee shops in the middle of the lockdown.

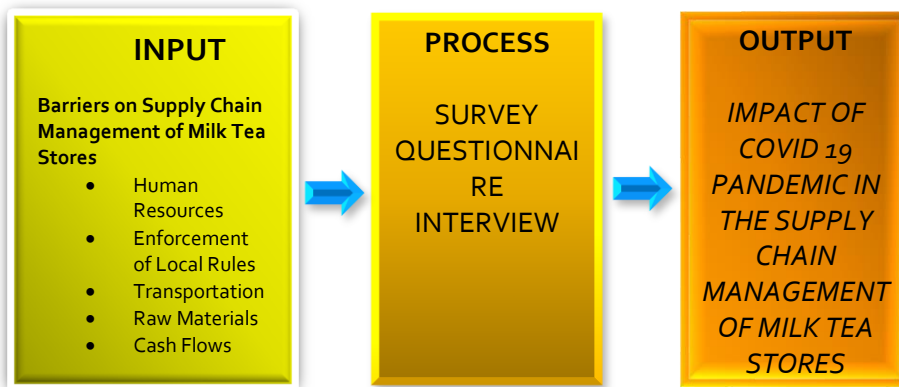
The purpose of this study was to focus on the barriers of the Supply Chain Management (SCM) of Milk Tea Stores in Bongabon Nueva Ecija as the effect of the COVID-19 pandemic. How owners have a solution when faced with certain potential threats to their Supply Chain Management during this pandemic and, the owner of the milk tea stores must have courage and perseverance to survive even at this time of the pandemic. The researchers believed that the findings of the study could provide relevant information and insights for a more productive way of handling small businesses in supply chain management during this COVID 19 pandemic.

## **CONCEPTUAL THEORETICAL FRAMEWORK**

This research was based on Biswas and Das's (2020) study entitled "Selection of The Barriers of Supply Chain Management in Indian Manufacturing Sectors Due To Covid-19 Impacts". The (COVID-19)

pandemic is having a direct effect on practically all producers' supply chain operations. The supply chain has faced several hurdles, whether frozen food and grocery supplies or emergency products or even facilities. It is indeed important for manufacturing companies with complicated supply chains to identify methods to cope with such a crisis.

This study has established the five main supply chain obstacles such as lack of human resources, implementation of local rules, and lack of transportation, raw material shortages, and cash flow deficiency during lockdown for Indian manufacturing industries. It has been shown that a higher weight barrier than others is the lack of human strength.



**Figure 1. Research Paradigm**

Figure 1 shows the process of how the study being conducted. Variables under Input are the main focus of the study. The researchers have used surveys, questionnaires, and interviews in the process of data gathering. Finally, the output of the study was to identify the impact of the Covid 19 pandemic in the supply chain management of milk tea stores.

## **METHODOLOGY**

The study used a descriptive method to determine the impact of the covid 19 pandemics in the supply chain management of milk tea stores. The study was conducted in Bongabon Nueva Ecija, Philippines, where numerous milk tea stores operate.

The researchers used total enumeration for the study. [3] Total population sampling is a type of purposive sampling technique that involves examining the entire population that has a particular set of characteristics. It is used to know the opinions or assessments of all the respondents with a high degree about the study area.

For this study, the researchers utilized 15 registered milk tea stores population in Bongabon, Nueva Ecija. These participants were fully operational during the pandemic period. The researchers chose their respondents based on the status of their business operations, since all of the respondents were fully operational, it means that they are practicing their own supply chain management.

In this study, the questionnaire instrument was utilized to collect the data needed. The research instrument helped the researchers to keep track of the evaluation in order to validate the information gathered. Furthermore, the researchers also had conducted series of interviews to validate the answers of the respondents. The researchers establish face validity and conducted a pilot test. The result of the pilot test was encoded in a spreadsheet and computed thru Principal Component Analysis. After the result was computed, immediate action was done in the revision of the instrument. The reliability coefficient of the instrument has a score of .840, which means that the instrument has a good internal consistency. This reliability test was conducted with another group of respondents. The validity of the research instrument was established by presenting the developed research instrument for the comments of experts who all together rated the instrument with a 4.33 weighted mean with a verbal interpretation of “very good”.

The researchers use developed questionnaires and conduct interviews as their research instrument. The research instrument was properly validated, corrections and suggestions by experts were also incorporated in the final draft. Interviews were done with every respondent in order to check the reliability and validity of the

questionnaire. The questionnaire contained the assessment of the impact of the covid 19 pandemics in the supply chain management of milk tea stores. This part of the instrument was formulated in the modified 4-point Likert scale (Strongly Agree (4); Agree (3); Disagree (2), and Strongly Disagree (1). Subjects were instructed to rate the statements and answer the question.

The data collected from the locale were encoded, tallied, and analyzed using the following statistical tools were used. Data presentation of the given scale was used to interpret the results of the information gathered:

To determine the respondents’ degree of perception, the weighted mean was computed using the following formula: Weighted mean ( $\Sigma WM$ ) is equal to the total weighted frequency ( $\Sigma WF$ ) divided by the total number of cases ( $F$ ).

**RESULTS AND DISCUSSIONS**

**Table 1. Barriers in Supply Chain Management - Human Resource**

<b>Human Resources</b>	<b>WEIGH TED MEAN</b>	<b>VERBAL INTERPRET ATION</b>	<b>RANK ING</b>
<b>Declining turn-over rate due to pandemic.</b>	3.05	Agree	3
<b>Changes in leadership style.</b>	3.25	Agree	2
<b>Spread of virus</b>	4.00	Strongly Agree	1
<b>COMPOSITE MEAN</b>	3.43	Strongly Agree	

All of the respondents strongly agreed that the spread of the virus was the top barrier under the human resource(**WM=4.00**). This implied that the staff was afraid to be infected by the virus. The respondents stated that they provide all the possible precautionary measures for their staff because they are the most important asset of the business. Without their

staff, their business operation will be affected, therefore, they really need to provide all the support they can.

[2] Employees are the **major contributors to the profits and worth** of the organization. The staff might appear under “asset” in the balance sheet or books of accounts of an organization, however, they are the most appreciated assets that cannot be given any monetary value as such. This is because of the inimitable efforts that the employees put in, which further results in outstanding customer reviews and creating brand loyalty from customers.

As agreed by the respondents, another result under the human resource was changed in leadership style (**WM= 3.25**). This pointed to the fact that the owners of the milk tea stores change the way they manage their business due to pandemics. According to the respondents, this pandemic is very different from the normal way of their business operation. As added, because of the pandemic, they have put different considerations for their staff, especially in terms of going to their store. They have adjusted the time in of the staff because of the limited transportation vehicle.

[5] Leading a business in the post-pandemic world means shifting not only your management methods but your mindset about what it means to be a collective business team.

Lastly, the declining turn-over rate of the respondents has been experienced (**WM= 3.05**). The data shows that due to pandemics, people are afraid to go out of their houses which causes other people to resign from their work. The respondents stated that some of their staff do not want to go to the store because they are afraid to be infected with the virus. This causes a lack of manpower for the store.

## **Table 2. Barriers in Supply Chain Management – Enforcement of Local Rules**

<b>Enforcement of Local Rules</b>	<b>WEIGHTED MEAN</b>	<b>VERBAL INTERPRETATION</b>	<b>RANKING</b>
<b>Age Restrictions</b>	3.80	Strongly Agree	2
<b>Limited business time of operation</b>	4.00	Strongly Agree	1
<b>New safety standards ( Face mask, Face shield, etc.)</b>	3.20	Agree	3
<b>COMPOSITE MEAN</b>	<b>3.67</b>	<b>Strongly Agree</b>	

The result shows that limited business time of operation has been strongly agreed by the respondents as a top barrier in supply chain management under-enforcement of local rules (**WM=4.00**). It turns out that the government imposes limited time for businesses to operate to limit the time of people to stay outside their houses. The respondents said that since the operation time is limited, customers per day are also limited. This causes a decline in the profit of the business.

[6]The COVID-19 pandemic is having a catastrophic effect on working hours and earnings, globally. It creates a shorten period of business hours and reduces business income.

Another result pointed out that due to age restrictions (**WM= 3.80**), only a few customers are coming to their store. The respondents mentioned that the local government unit was strictly monitoring the people who stay outside their houses, if the person whose age is restricted, they will be caught and be punished. This creates a limited opportunity for businesses.

[7] The inter-agency task force leading the country's COVID-19 pandemic response has allowed a wider range of age groups, including the youth and seniors, to go out of their homes, easing a restriction meant to stop the spread of COVID-19. In line with this, it resulted in a limited number of customers for the businesses.

**Table 3. Barriers in Supply Chain Management – Transportation**

Transportation	WEIGHTED MEAN	VERBAL INTERPRETATION	RANKING
Increased delivery fees.	3.10	Agree	2
Limited entrants of the delivery vehicle.	3.25	Agree	1
COMPOSITE MEAN	3.18	Agree	

The above findings pointed out that the delivery vehicles who deliver the milk tea supplies have difficulty entering a municipality because of the restrictions (**WM= 3.25**). It was strongly agreed with the respondents since the municipality has been implementing travel restrictions, the movement of the goods to their municipality has been restricted too. This resulted in the delayed supply of products.

[8]The pandemic spread to the rest of the world, leading to lockdowns and border closures that restricted the movement of goods. This causes a shortage in the supplies of the raw materials of the milk tea business.

Another result pointed the fact that the effect of the pandemic made the delivery fees higher (**WM=3.10**). As agreed by the respondents, they were experiencing an increase in the delivery charges because they do not have any choice. These delivery vehicles were the only authorized and allowed to enter their municipality.

[9] These days delivery is more necessity than a convenience. The owners believe that it is a win-win situation for them because what matters most during this pandemic is their safety.

**Table 4. Barriers in Supply Chain Management – Raw Materials**



<b>Raw Material</b>	<b>WEIGHTED MEAN</b>	<b>VERBAL INTERPRETATION</b>	<b>RANKING</b>
<b>Instability in the supply of raw materials.</b>	3.80	Strongly Agree	1
<b>Increase in the price of raw materials</b>	3.26	Strongly Agree	2
<b>Hoarding of Raw Materials</b>	3.15	Agree	3
<b>COMPOSITE MEAN</b>	3.40	Strongly Agree	

Resulted under table 4 shows that the respondents were experiencing instability in the supply of raw materials (**WM= 3.80**). The respondents stated that some of their flavors were not available because there were no supplies being delivered to them. This creates different images for the company that makes the customer transfer to other stores.

[10]COVID-19 has adversely affected the supply of inputs for many businesses. With lockdown rules, the businesses suffer from this, it makes their supplies limited, it makes their profit limited too.

Another result of table 4 pointed out that due to pandemic, the price of raw materials increases too (**WM=3.26**). This result is related to other barriers in supply chain management. According to the respondents, since the delivery charge increases, the price of the raw materials increases too, this is because of the chain effect of the restrictions in entering different municipalities. As agreed by the respondents, this result is also related to

hoarding of raw materials (**WM= 3.15**). As mentioned by the respondents, these results made their cost of operation higher.

[11]Demand for most raw materials generally fell significantly in the early months of the Coronavirus pandemic. For the milk tea stores, this happens because, during the lockdown, the majority of the milk tea owners have only a limited inventory of materials. When the milk tea stores began to operate again, they can only provide products that they have in their inventory.

**Table 5. Barriers in Supply Chain Management – Cash Flow**

Cash Flows	WEIGHTED MEAN	VERBAL INTERPRETATION	RANKING
Sales decrease due to pandemic	3.80	Strongly Agree	1
Financial losses and unpaid liabilities during lockdown	3.60	Strongly Agree	2
COMPOSITE MEAN	3.70	Strongly Agree	

Table 5 shows that due to pandemic, respondents strongly agree that their sales decreases (**WM= 3.80**) due to the pandemic. According to the respondents, because of the restrictions and limitations during the pandemic, they have temporarily closed their stores which resulted in no earning. Their normal business operation has changed in a glimpse.

[12] The situation is rapidly changing. The amount of people reckoned safe to gather in a single place has reduced from thousands to hundreds, to ten. Restaurants, bars, movie theaters, and gyms in many major cities are temporarily closed and some resulted in shutting down.

Table 5 also shows that the respondents were strongly agreed that they have experienced financial losses during lockdown (WM= 3.60). The respondents revealed that they have dues that need to be paid, but because of the pandemic, the cash inflow in their business stops, which resulted in non-payment of bills and incurs penalties. As added, their savings have been used and incurred additional loan to pay for their previous dues.

[13] The debts now being chased would have been unpaid before the coronavirus lockdown. Meaning, the cash inflow of an entrepreneur stops and it creates discourse in their finances.

## **CONCLUSION AND RECOMMENDATIONS**

With the above results, it was strongly agreed by the respondents that Covid-19 Pandemic has bought supply chain management problems to the milk tea industry in Bongabon Nueva Ecija. . These problems have causes business discourse in different aspects of business operation, especially the financial aspect of the business.

The best way to deal with the problems is to be prepared in the future, the researchers recommend to the milk tea owners to have a revision of their strategic plan which includes the following alignment:

The milk tea owners can use the available resources in the market for their production. Also, it is recommended that the milk tea owners expand their network to look for a wider source of supplies.

It is also recommended by the researchers to look for financial interventions to cope up with the current financial difficulty. It is suggested to look for financial institutions in which the respondents can lend money to pay for their dues that occurred during the pandemic.

Since the world is still under limited restrictions, the researchers also recommend the use of social media platforms to market their product, with this mean, the business owners can expand their market and create business opportunities with the other possible stakeholders.

Lastly, the researchers recommend that the milk tea stores in Bongabon Nueva Ecija create a formal group/ association/ cooperative, which could provide different assistance in their operation. This cooperative could be in a form of a Marketing Cooperative which they can sell different raw materials useful for their production.

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