

IMPACT OF PANDEMIC COVID-19 OUTBREAK TOWARDS INVENTORY MANAGEMENT: A CASE STUDY AT POSLAJU VICTORIA STREET HUB GEORGETOWN PENANG MALAYSIA

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ABSTRACT

The World Health Organization (WHO,2020) have categorized the coronavirus as a pandemic that is attacking the core of our societies. Governments and authorities on different levels used different methods to limit the spread of the virus. Most countries closed their borders, institutes and companies limited social gatherings and encouraged or ordered people to self-quarantine, stay home, and avoid social contact to minimize the risk of getting infected and/or spread the virus especially among risk groups. This study aims to investigate the inventory management at courier service Poslaju Victoria Street Hub Georgetown Penang, during COVID 19 pandemic and to identify the factors contribute on delay parcel. This survey involves 50 participants including the inventory staff. Descriptive analysis used to determine the mean and the percentage. These findings emphasize the importance of the courier services during this COVID-19 pandemic from this research it identifies highest factor that contribute to delay parcel which is customer location, online sale, and manpower of poslaju services.

***Keywords:** poslaju, pandemic covid 19, inventory management, parcel, courier service*

1. INTRODUCTION

The coronavirus (covid-9) created a crisis to people and system around the world. Malaysia has recorded the highest number of COVID-19 cases in Southeast Asia with more than 35% of new COVID-19 cases linked to the Sri Petaling gathering, a Moslem missionary movement attended by more than 19 000 people of different nationalities, in March 2020 in Kuala Lumpur. From this cluster, 1701 samples have been tested positive out of 21 920 tests carried out [1]. Several daily activities became less or inaccessible. People who are most vulnerable are the ones in quarantine, sickor/and in a risk group, like the elderly (age 60 and older) and people with chronic diseases [2]. There is an increase in parcel volume during the country's movement control order (MCO) period, the company's other businesses including mail and international parcels, besides operations under Pos Aviation and Pos Logistics have been affected (Poslaju). Inventories are often used as cost centers that serve as supply chain buffers and temporary item storage locations. Inventories impact the company as many percentages of the management and retail company's sales are logistics costs, and inventory costs account for approximately 50 percent of the total logistics cost [3]. Covid-19 is the name of disease arising from the infection of a new coronavirus designated as SARS- CoV-2 also known as Covid-19 or Wuhan virus. Covid-19 is now certain to become a pandemic likely to affect not only people, but also the economic well-being of the planet. PosLaju offers domestic and international courier service via its 50 dedicated courier centres supported by Pos Malaysia's retail network. To complement its express services, PosLaju also introduce value-added services which are pick-up service, web- based tracking, insurance package

and packaging. PosLaju has evolved from strength to strength and is moving from becoming a supplier of mail and postal services to being a dynamic supplier of communications, financial services, and supply chain solutions. Moving forward, PosLaju will continue to evolve, innovate and to retain its importance and competitive advantage and to continue to link Malaysians with the rest of the world. (Pos Malaysia Berhad).

The effective distribution and collection of items, such as parcels and/or documents, is the central activity of any courier service. The challenges related to this process include firstly the distribution network changes on a regular basis; secondly, the demand for pick-up during delivery in real time; and, thirdly, there is a growing trend for courier companies to provide micro logistics services. Including deliveries of high-value goods in small sizes such as mobile phones or network connectivity. These latter services are not usually of the "next day" sort but can be offered within a certain period of time agreed upon [4]. The COVID-19 pandemic has disrupted consumer payment space in Malaysia as customers are increasingly moving from offline to online shopping. The closure of physical stores due to locking and social distancing steps has led customers to ramp up online shopping, which in turn has accelerated the growth of the e-commerce sector in Malaysia. [5] as shown in Figure 1. The pandemic of COVID-19 forced the nation's retail outlets to remain closed. This condition has been described as an unprecedented disturbance of many companies. When the number of major cities has been deemed self-isolated, lockdowns and resulting social distances have been geared towards the development of the user's activities.

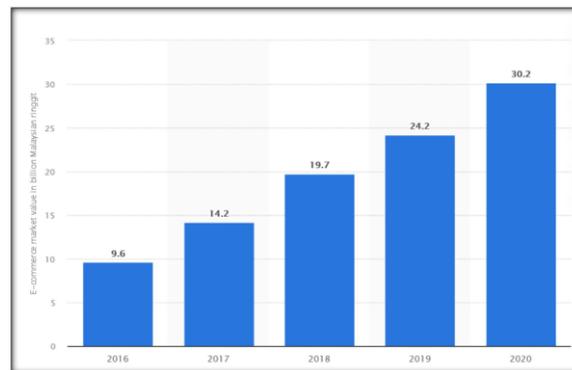


Figure 1: Malaysia Ecommerce Value 2016-2020

According to [6] there are fourteen elements of effective inventory management are listed below of the elements are

1. Ensure the organization against misappropriation-Verify that the main individuals who were supposed to be in the warehouse.
2. Build a certified inventory checklist for each warehouse-almost all dead inventory, 'D.O.A.' (Dead Upon Arrival). Request just a measure of non- stock or special request that the consumer has agreed to buy. Before adding product to inventory, try to obtain liability from the client. On the off chance that this is unrealistic, notify the salesman who demands the product in large portion of the conveying expense of any piece of the beginning shipment that isn't sold inside of nine months.

Allocated and utilization bin locations- Allocate main and surplus bin areas for each loaded product. All picking and accepting reports ought to rundown the essential container area (in either characters or a standardized identification). With right container areas on records, request picking id most likely the minimum entangled occupation in the distribution centre, relegate unpractical individuals to this undertaking and the most experienced warehouse specialists to accepting inventory and stock administration. The impact from COVID-19 pandemic has disrupted consumer payment space in Malaysia as customers are increasingly moving from offline to online shopping. The closure of physical stores due to locking and social distancing Standard of Procedures (SOP) has led customers to ramp up online shopping, which in turn has accelerated the growth of the e-commerce sector in Malaysia. [7].

Pos Malaysia urges public to be patient for packages, receiving 600,000 parcels daily during MCO

Source From: [8]

This study will be important to identify the factor contribute to parcel delay at Poslaju. This paper also to determine the improvement of inventory management overflowing parcel due to Covid-19 to Poslaju Malaysia Berhad. This research can give a benefit to the company, employees, and customer of Poslaju Malaysia Berhad to prepare if pandemic happen again in the future or there have an overflowing parcel due to any online sale. Other than that, this research analysis the factor contributed to delay parcel. The pilot test study was conducted to distinguish the validity and reliability of the questionnaire survey. The respondents were selected randomly on 50 workers at Poslaju including the operations department. Descriptive analysis was used to determine the mean and percentage of findings [9]- [12].

2. RESULTS AND DISCUSSION

In this study showed the result of the reliability test. This finding shows that all factors the result is good. The Cronbach's Alpha for all variables the factors contribute parcel delay are 0.919. Thus, all variables are said to be valid because the Cronbach's alpha greater than 0.7. So, the data in this study can be classified as good and adequate for this research means as shown in Table 1.

Factors	Cronbach Alpha	No of Items
Factor Contribute the Parcel Delays	0.919	45

Table 1: Cronbach's Alpha Scale

<i>Cronbach's Alpha Score</i>	<i>Level of Reliability</i>
0.0 – 0.20	Less Reliable
>0.20 – 0.40	Rather Reliable
>0.40 – 0.60	Quite Reliable
>0.60 – 0.80	Reliable
>0.80 – 1.00	Very Reliable

Table 2: Summary of Factors Contribute to Delay Parcel

Factors	Mean	Standard Deviation	Rank
Customer	3.96	0.784	6
Wrong Information	3.813	0.716	8
Customer Location	4.38	0.666	1
Distribution centers	3.96	0.578	5
Systems issues	3.755	0.737	9
Online sales	4.18	0.725	2
Movement Control Order	3.913	0.662	7
Accident	3.36	0.669	12
Manpower	4.112	0.685	3
Time	3.455	0.588	11
Weather	4.095	0.638	4
Pets	3.653	0.749	10
Delivery Schedule	3.265	0.606	13

Based on the finding above, the summarize of the factors in Table 2 showed the most factors contribute to parcel delay are customer location $M=4.38$, $SD=0.666$ followed by online sales $M=4.18$, $SD=0.725$, manpower $M=4.095$, $SD=0.638$, weather $M=4.095$, $SD=0.638$ which is agree about this factor.

Next, it was followed the neutral with distribution center $M=3.96$, $SD=0.578$, customer $M=3.96$, $SD=0.784$, Movement Control Order (MCO) $M=3.913$, $SD=0.662$, wrong information $M=3.813$, $SD=0.716$, system issues $M=3.755$, $SD=0.737$, pets ($M=3.653$, $SD=0.749$), time $M=3.455$, $SD=0.588$ and accident $M=3.36$, $SD=0.669$. Meanwhile the least factor contributes to parcel delay are delivery secluded $M=3.265$, $SD=0.606$.

3. CONCLUSION AND RECOMMENDATION

In conclusion, For the factor of parcel delay, we can see that the highest mean is customer location ($M=4.38$, $SD=0.666$), which is one of the causes of delivery delays because rural locations take longer to arrive. As a result, delivering any service in a rural location is more expensive than in urban areas. For the urban area the courier may occasionally require an access code to enter the building.

The second higher is online sale $M=4.18$, $SD=0.725$, in recent years, the buyer's decision-making process has shifted dramatically. Buyers are also making more direct purchases online and through their smartphones, and an ecommerce system can provide real-time data.

The third highest mean is manpower $M=4.095$, $SD=0.638$, Poslaju still use manpower as their major operation. Due to the limitation of movement and manpower during MCO, Poslaju was looking for riders to deliver items posted via Poslaju to meet the demand, Pos Malaysia recently posted an online ad seeking full-time and part-time riders.

As for recommendation, Poslaju are suggested to review the operation method to incorporate new technology to improve operation management, particularly in the inventory department, to reduce the time required to sort the parcel. As we all know, robots unlike automated machinery, are designed to perform multiple tasks at once, making their applications in the logistics industry virtually limitless. Furthermore, Automation, which uses data-driven software to improve machine operational efficiency, provides a variety of solutions for the logistics industry, ranging from improving package labelling to streamlining warehouse sorting systems. For example, DHL and Robomove have implemented a robot picking cell at the DHL Supply Chain campus in Beringe, Netherland. The picking cell with an advanced vision system can process up to 600 boxes per hour. Repetitive tasks are being performed faster and more efficient and articles can be changed quickly environment. Poslaju also can apply wearable technology as wearable technology become a standard "must have" in the logistics industry.

Having enough manpower including skill workers is important for the courier service business. Suitable trainings to increase the workers knowledge and skills should be done especially trainings related to new technology or new system to solve the issues and expediate the time taken and reduce cost occurs for the delay and at the same time may increase customer satisfaction.

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