IMPACT OF PANDEMIC COVID-19 TOWARDS PUBLIC BUS SERVICES IN JOHOR BAHRU: MULTIPLE CASE STUDY

MUHAMMAD IKHMAL BIN ROSLAN

UNIVERSITI TEKNOLOGI MALAYSIA

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MUHAMMAD IKHMAL BIN ROSLAN

A project report submitted in fulfilment of the requirements for the award of the degree of Master of Science (Transportation Planning)

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DEDICATION

This thesis is dedicated to my beloved family. They always encourage me and supported me to excel well in academics. With blessings from my parents finally accomplished this task.

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ABSTRACT

Covid-19 pandemic is a serious problem faced by all countries throughout the world nowadays. As this infectious virus could spread via physical touch, most countries announced the lockdown or Movement Control Order (MCO) within their states to monitor and limiting activities/mobility that could make it worse. Malaysia is one of the countries that implemented this order. MCO has affected people's lifestyle and its impact is more visible in the transport system especially bus services. Bus services are among essential services that provide accessibility to the people. In the past studies, research on Johor public transportation system are mainly focuses on the service quality of the bus and customer satisfaction level such as bus operating hours, waiting time, bus conditions and fares. Up to recently, there is no study conducted on impact of viruses towards bus services specifically in Johor Bahru. Therefore, to fill this gap, this research was conducted to study the impact of Covid-19 pandemic towards public transportation bus services in Johor Bahru. In short, this research analyses changes in bus services policy, innovation implementation, Travel preferences as well as safety and security in Johor Bahru city. Respondents from different categories such as bus operators, transport authorities, medical expert and public views were chosen to obtain different perspective points of view.

ABSTRAK

Covid-19 pandemik adalah masalah serius yang telah dihahadapi oleh seluruh dunia. Wabak virus penyakit berjangkit ini boleh merebak melalui sentuhan fizikal, oleh itu kebanyakan negara telah menguatkuasakan perintah berkurung di dalam negara untuk mengawal penularan dan menghadkan aktiviti atau pergerakan yang boleh menyebakan wabak ini merebak dengan lebih cepat. Malaysia adalah salah satu negara yang telah menjalankan perintah berkurung ini. Perintah berkurung telah memberi kesan kepada gaya hidup masyarakat dan kesannya lebih parah kepada sistem pengangkutan terutamanya perkhidmatan bas. Perkhidmatan bas adalah penting untuk memberi kemudahan pergerakan kepada masyarakat. Di dalam kajian yang lepas, kajian tentang pengangkutan awam di Johor hanya tertumpu kepada kualiti perkhidmatan bas, kepuashatian pengguna bas seperti waktu perkhidmatan, masa menunggu, keadaan bas dan kadar tambang bas. Sehingga sekarang, tiada kajian yang dijalankan tentang impak Covid-19 terhadap perkhidmatan bas terutamanya di Johor Bahru. Oleh itu, untuk penambaikan kajian di dalam bidang ini, kajian ini dijalankan untuk meneliti impak Covid-19 terhadap perkhidmatan bas di Johor Bahru. Ringkasnya, kajian ini menganalisa perubahan polisi perkhidmatan bas, inovasi baru yang dijalankan, perubahan perjalanan masyarakat serta keselamatan di bandar Johor Bahru. Pelbagai responden telah dipilih seperti pengusaha bas, pihak berkuasa, pakar kesihatan dan juga penumpang tempatan untuk mendapatkan pandangan melalui perspektif yang berbeza.

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LIST OF ABBREVIATIONS

PAJ	-	Pengangkutan Awam Johor
APAD	-	Land Public Transport Agency
MCO	-	Movement Order Control
CMCO	-	Conditional Movement Order Control
UTM	-	University Technology Malaysia
WHO	-	World Health Organization

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CHAPTER 1

INTRODUCTION

1.1 Research Background

Started at December 2019, a virus called coronavirus or Covid-19 has started a pandemic. The coronavirus pandemic or Covid-19 has unexpectedly affected our lifestyle and transportation systems. According to (Papandreou, 2020), Covid-19 pandemic is possible to spread through air and land transportations mode. Physical spread interactions between cities mostly happened through local transportation network and it worsened when people with infections are travelling to another state or countries with air transportations. Without any countermeasure, this Covid-19 pandemic could not be tackled anymore.

Hence, most governments responded to this problem by issuing the travel restrictions order and ban all the incoming travellers/tourists into each other's country. As a result, dramatic decrease in public passengers number cause an impact to numerous operator/agencies that operating transport services as stated by (Papandreou, 2020). In Malaysia the first positive cases of Covid-19 are recorded at 25th January 2020 involving three tourists from China. Due to several positive cases increases with first two deaths, Prime Minister of Malaysia announces initiatives/ measure to combat Covid-19 with "Movement Control Order" (MCO) was announced intended to overcome the spread of Covid-19 through social distancing practices. Attorney General of Malaysia has gazetted a restriction on individual from travelling to other states at this time.

Based on (Zainal, 2020), all public transport services only can resume its operations by following safety guidelines provided by the government as mentioned by the Senior Minister (Security Cluster) Datuk Seri Ismail Sabri Yaakob on 4th May 2020. The safety guideline is one of the solutions to prevent Covid-19 from spreading further. Transportation agencies are required to disinfect bus vehicles regularly, provide protection to drivers with appropriate equipment and draw indication on where the seats can be filled. As for passengers, they are compulsory to keep the minimum social distancing while seated, regular hand sanitization and wearing masks. Also, cashless payment to pay the fare is preferred to be used in the meantime as a protection to both passengers and drivers.

1.2 Problem Statement

Covid-19 pandemic has affected our current lifestyle, connectivity and accessibility. As this pandemic give a great cause to community, world trade, business and movement activities are being disrupted during this infection. Since global travelling has been declined all over the world, local and international transportation have taken the hardest blow. According to (Mofijur *et al.*, 2021), average global road haulage activity in regions with lockdowns had been declined to almost 50% while air travel had almost completely stopped in certain regions with aviation activity decreasing by over 90%. Figure 1.1 shows the global transport and aviation activity in year 2020.



Figure 1.1 Global transport and aviation activity in year 2020 (Mofijur *et al.*, 2021)

A preliminary study was conducted based on interview and all respondent agreed that public bus ridership decrease at least 50% drop during Covid-19 pandemic. According to (The Star Online, 2020) in Johor Bahru the number of passengers remain low during Covid-19 pandemic even though government lift up interstate travel restrictions. Larkin bus terminal auxiliary police coordinator Noor Azman Yusof stated that there is no rapid increase number of public bus passengers. Based on interviews with government agencies also mention that during Covid-19 there significantly drop number of passengers.

In Johor Bahru, Iskandar Regional Development Authority is aiming to increase commuting trips using public transportation and increases public transport modal share of 60% by 2030. However, due to Covid-19 pandemic, the aims are now difficult to achieve and would progress slowly. Bus services are among essential services that provide accessibility to the people. Although Covid-19 has been affecting people's lifestyle, by working from home and commute using private vehicles, however, some of our community who cannot afford such lifestyle would still choose to take public transport to go to certain places. Therefore, this study is mainly conducted to find the impact of Covid-19 towards current bus services and how the authorities prevented this pandemic from spreading among the passengers during current situation.

1.3 Research Gap

Past studies conducted on Johor public transportation system mainly focuses on the service quality of the bus and satisfaction level regarding the services offered. This study will help to analyse the impact of Covid-19 pandemic towards public transportation bus services in Johor Bahru system with different perspective point of view of stakeholder such as from government agencies, bus operators and bus users. Past studies are only focusing on bus operators of the impact of public transportation. Thus, this study offers different research gap from the past studies.

1.4 Research Aim

This study is to analyse the impact of pandemic Covid-19 towards the use of public bus services in Johor Bahru using qualitative methodology.

1.4.1 Research Objectives

- (a) To determine the impact of Covid-19 pandemic towards use of public bus services.
- (b) To investigate expert opinion regarding the impact of Covid-19 pandemic towards use of public bus services.
- (c) To suggest impermanent solution to surge ridership bus services during Covid-19 pandemic.

1.4.2 Research Questions

- a) What is the impact of Covid-19 pandemic towards use of public bus services?
- b) What is the expert opinion regarding the impact of Covid-19 pandemic towards use of public bus service?
- c) What is the appropriate impermanent solution to surge ridership of bus services during Covid-19 pandemic?

1.5 Significance of Research

This study will suggest and recommend several comprehensive ways to increase ridership during current Covid-19 condition. The improvement is mostly suggested by selective respondent based on their experience. Significantly of the data collection will promote using public transport in Johor Bahru. At the same times it helps Johor State government and Iskandar Regional Development Authority (IRDA) reached they're of 40% of modal share of public transport by 2025.

1.6 Scope of Research

The boundaries of this study are as follows:

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