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PROCEEDINGS OF JOHOR INTERNATIONAL INNOVATION INVENTION COMPETITION AND SYMPOSIUM 2024 (JIIICaS 2024)



*“Flourish and Nurturing Sustainable
Innovation for a Prosperous Nation”*

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Preface

In the name of Allah, the Almighty who gives us the enlightenment, the truth, the knowledge and with regards to Prophet Muhammad (peace be upon him) for guiding us to the straight path. We thank to Allah for giving us guidance and strength to write this e-book.

This e-book compiles the extended abstracts that submitted to Johor International Innovation Invention Competition and Symposium 2024 (JIIICaS2024), where JIIICaS2024 is a virtual platform for all creative minds to share and present their invention and innovation. Each abstract gives a brief background on the innovation or project.

We hope that this e-book will help the readers to get to know the innovation done by the students and get some ideas to develop future innovation products.

Foreword Rector



Assalamualaikum warahmatullahi Wabarakatuh,
Salam Sejahtera, Salam Malaysia MADANI and
Salam UiTM Dihatiku.

In the name of Allah, the Most Gracious, the Most
Merciful.

It is a great honor to welcome you to the Johor
International Innovation, Invention, Competition, and
Symposium 2024 (JIIICaS 2024). This event

connects various disciplines, focusing on education and engaging educators,
students, researchers, and innovators from all walks of life.

Innovation is not just about ideas; it demands perseverance, creativity, and
determination to turn those ideas into reality. The remarkable projects
showcased today highlight the dedication and spirit of all participants.
Initiatives like this not only explore new technologies but also cultivate skills
and leadership among our youth. At Universiti Teknologi MARA (UiTM) Johor
Branch, we are fully committed to fostering a dynamic culture of innovation,
promoting the commercialization of new products, and encouraging
meaningful collaborations with industry and society.

As we celebrate this event, I would like to extend my heartfelt gratitude to all
sponsors, judges, the College of Computing, Informatics and Mathematics,
UiTM Pasir Gudang Campus as the event organizer, as well as to the
researchers and participants for their hard work in making this event a
success. Let us continue striving for innovation and excellence. May the
ideas presented today inspire us and lay the groundwork for future
achievements.

Thank you.

Associate Professor Dr. Saunah Zainon
Rector
Universiti Teknologi MARA (UiTM)
Johor Branch

(A-PP021) ANALYZING VEHICLE USAGE AMONG UITM STUDENT COMMUNITY

Muhammad Iman Ajwad bin Mohd Nazri¹, Muhammad Hamizan bin Rusli¹, Haidhir Lee bin Abdul Rahman¹, Nur Fatimah Najwa bin Johar¹, Ahmad Irfan Hazim bin Ahmad Tarmizi¹, Nur Intan Syafinaz binti Ahmad¹

¹Universiti Teknologi MARA, Johor Branch, Pasir Gudang Campus, Malaysia

Corresponding author: inasahmad85@gmail.com (Nur Intan Syafinaz binti Ahmad)

ABSTRACT

This report examines the transportation needs and preferences of university students at UiTM Pasir Gudang. It provides an in-depth analysis of various factors influencing students' choices regarding vehicle services, including the types of services used, frequency of use, and associated expenses. The study utilizes data from a questionnaire survey targeting students to gather insights into their transportation habits. Key findings reveal that Grab Car is the most preferred vehicle service, primarily used for shopping and travel purposes. Most students spend between RM0 to RM50 monthly on vehicle services, with online banking being the favored payment method. The report highlights the importance of understanding student transportation needs to enhance their overall campus experience and suggests potential improvements in transportation options and related services. By addressing these needs, the university can support students' mobility and contribute to their academic and personal well-being.

Keywords: transportation, vehicle, services

1.0 INTRODUCTION

Vehicles that can transport us from one place to another can be divided into categories based on their function. The use of a vehicle these days can be vital for both students and someone with a career to meet their daily needs regardless of how the vehicle is used. University students are also known for their hectic daily schedules as students can benefit a lot from a vehicle. This is because sometimes students need a vehicle whether it is a rental or car service from a well-known application for them to be mobile to wherever they need to be.

In UiTM Pasir Gudang, even though there is a curfew for students to enter the campus from 8.00 a.m. to 11.00 p.m. It does not stop them from doing those activities which are renting a car and getting car service from applications that are the choice of many students if they need to be in a certain place. These activities can be seen daily inside the campus when the car service is required.

Next about the operating hours for rental car services and car services from the application. Car rental service usually starts operating from 9 am to 9 pm according to the operating hours of a company. The car service from the application operates for 24 hours according to the number of drivers working at that time. From the questionnaire given to all UiTM students, we wanted to know which services are the before the students. Car rental and car services from the application provide various

payment methods for UiTM students such as cash and online transfer to make it easier for students to make transactions. Therefore, this survey aims to find a comparison of rental car services and car services from the applications.

2.0 OBJECTIVE

Those are the overall objectives of the study:

- To observe the vehicle needs among students.
- To study the frequency of vehicle use among students.
- To identify where students often get vehicle service.
- To discover where the vehicle is used among students.
- To compare which services are the best between car rental and vehicle service by apps.

3.0 METHODOLOGY

3.1 Description of data

Population	A set of all populations or complete groups consists of individuals, objects, or measurements under study. This research population is students in UiTM.
Sample	The sample of this survey consists of 100 students from all UiTM branches.
Sampling Technique	This research uses a quota-sampling technique. This method is much easier and more effective. The sample is selected from UiTM students who mostly use the vehicle service to go outside.

3.2 Method of data analysis

Table 1 : Summary of methodology Objectives

Objectives	Variables	Methodology
1. To observe the vehicle needs among students.	Importance of vehicle among UiTM students	Graph - Pie chart
2. To study the frequency of vehicle use among students.	Frequency of vehicle use among students.	Graph - Bar chart
3. To identify where students often get vehicle service.	The most application used to get vehicle services	Graph - Pie chart
4. To discover where the vehicle is used among students.	Purpose of the car is used for.	Graph - Bar chart
5. To compare which services are the most popular between car rental and vehicle service by apps.	Which vehicle services are most popular choices among student	Graph - Bar chart

4.0 RESULTS

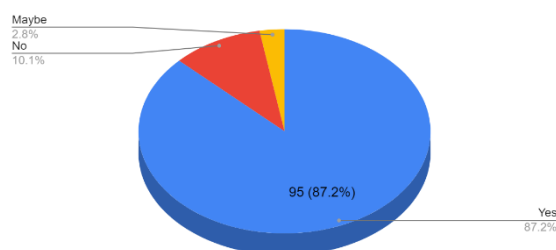


Figure 1: Pie Chart of respondents based on the importance of vehicles used for them.

Based on Figure 1, most respondents think the use of vehicles is important for students. This is most likely because they need it to go to class or move somewhere

easily. A total of 11 respondents think vehicles are not important and 3 people are not sure. This may be because they live in or around the university area.

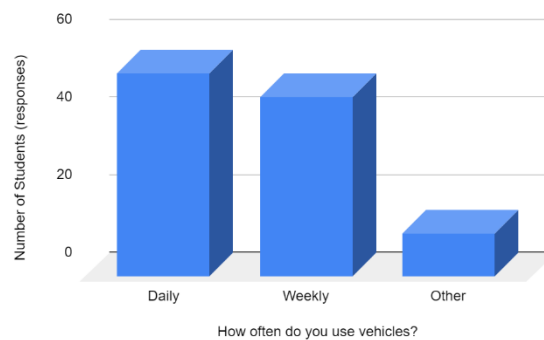


Figure 2: Bar Chart of respondents based on the frequency of vehicles used by students.

Based on the information above, 52 out of 109 respondents use the vehicles every day and 46 of them use the vehicle every week. While 11 respondents only use the vehicle a few times a month.

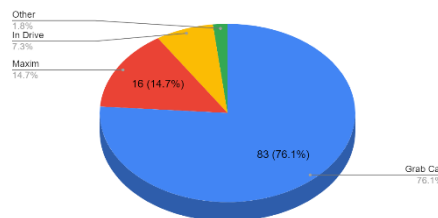


Figure 3: Pie Chart of respondents based on the types of applications used by students to get vehicle service.

Based on the table and pie chart above, the most popular application used by students to get vehicle service is Grab Car. Following Maxim, In Drive and the lowest choice by students is using the other vehicle service apps.

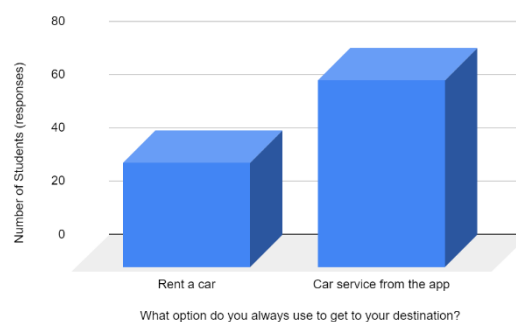


Figure 4 : Bar Chart of respondents based on the choice of vehicle used for students to go to their destination.

Based on the Bar Chart above, 64.2 percent of the respondents choose to get car services from the apps to go to their destination. Other than that, 35.8 percent of the respondents prefer the services of renting a car.

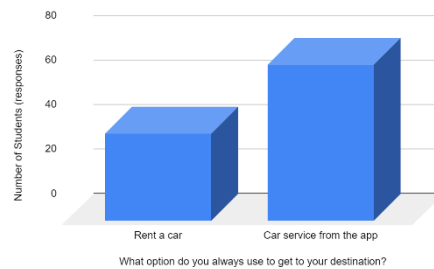


Figure 5 : Bar Chart of respondents based on the choice of vehicle used for students to go to their destination.

Based on the Bar Chart above, 64.2 percent of the respondents choose to get car services from the apps to go to their destination. Other than that, 35.8 percent of the respondents prefer the services of renting a car.

5.0 CONCLUSION

A study on vehicle use among UiTM students reveals that they primarily use car services for shopping and traveling. The survey highlights that these activities are the main reasons students rely on vehicles.

Most respondents view vehicle use as essential for students, likely due to the need for convenient transportation to classes and other destinations. The most popular app among students for car services is Grab Car, chosen for its affordability, widespread availability, and ease of finding a driver. Students prefer using such apps over renting cars, as it is more convenient to have a driver rather than drive themselves.

In conclusion, the preferences of 109 UiTM students indicate a clear favor towards app-based car services over traditional car rentals. The data underscores that app-based services are more popular due to their convenience, accessibility, and user-friendly nature. These services offer notable advantages, such as ease of use and cost-effectiveness, making them the preferred choice among students compared to conventional car rental options.