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## **Research Report**

# **Safety Star Grading Evaluation on Operators Safety Performance and Public Perception**



Mohamad Suffian Ahmad  
Ilhamah Othman  
Wahida Ameer Batcha  
Noor Kamaliah Alias  
Aziemah Azhar  
Mohd Rasid Osman  
Siti Zaharah Ishak  
Khairil Anwar Abu Kassim

**M.I.R.O.S**

MALAYSIAN INSTITUTE OF ROAD SAFETY RESEARCH

ASEAN ROAD SAFETY CENTRE

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## Contents

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	<b>Page</b>
<b>List of Tables</b>	<b>v</b>
<b>List of Figures</b>	<b>vi</b>
<b>Acknowledgements</b>	<b>vii</b>
<b>Abstract</b>	<b>ix</b>
<b>1. Introduction</b>	<b>1</b>
1.1 Aim and Objectives	2
1.2 Scope and Limitation	3
<b>2. Methodology</b>	<b>4</b>
2.1 Sample Size Calculation	4
2.2 Sample Selection	4
2.3 Research Tools	4
2.4 Data Collection Approach	5
2.4.1 Observation	5
2.4.2 Survey	5
2.5 Research Ethics	5
2.6 Data Analysis	5
<b>3. Results and Discussion</b>	<b>6</b>
3.1 Distribution of Respondents	6
3.2 Service Performance: Comparison between Operators	9
3.3 Comfort	14
3.4 Safety Practices	19
3.5 Experience on Bus Service	20

**Safety Star Grading Evaluation on Operators Safety Performance and Public Perception**

<b>4. Conclusion and Recommendations</b>	<b>22</b>
<b>References</b>	<b>24</b>

## List of Tables

		<b>Page</b>
Table 1	Distributions of express bus operators involved	6
Table 2	Distributions of respondents	7
Table 3	Cleanliness of bus exterior	15
Table 4	Cleanliness of bus interior	15
Table 5	Seat condition (Comfort seating)	16
Table 6	Seat condition (Adjustable seat)	16
Table 7	Excessive smoke emission	17
Table 8	Pleasant odour	18
Table 9	No excessive vibration	18
Table 10	Safety practices	19
Table 11	Satisfaction on service provided	20
Table 12	Stay on same operator for next ride	21

## List of Figures

	<b>Page</b>
Figure 1 Drivers wearing uniform	9
Figure 2 Drivers wearing shoes while driving	9
Figure 3 Drivers' seatbelt availability	10
Figure 4 Seatbelt wearing rate for drivers	10
Figure 5 Percentage of buses with installed seatbelt	10
Figure 6 Emergency number displayed inside bus	10
Figure 7 Hotline number displayed inside bus	11
Figure 8 Do & don't sign availability	11
Figure 9 Pre-journey briefing	12
Figure 10 Briefing for breaks at R&R	12
Figure 11 Punctuality of bus departure	13
Figure 12 Smoking while driving	13
Figure 13 Speeding along the journey	13
Figure 14 Occasionally speeding	13
Figure 15 Speeding while overtaking	14

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## Abstract

Safety Star Grading programme provides an indicator of the safety performance of bus operators for the general public to make their best choice with confidence when they want to travel. On the other hand, the safety star grading also would benefit the bus operators themselves in term of their image, publicity and reputation. In year 2015, the level of Safety Star Grading awareness among public was 7.3% and this situation is expected since the program was not extensively publicized (Ahmad et al., 2016). The objectives of this study are to assess the awareness of passenger using the service of award operators; to assess the customer feedback criteria of 5 Star rating in SSG and; to study the difference of six (6) operators awarded with star rating in related to service performance. The sample was randomly selected for six (6) trips of each six (6) express bus with star rating among customers who travel with express bus that involve in this study. This study is based on face to face interview and GPS was used to monitor bus speed. The number of respondents being alert for SSG program also has increase to nearly double from 7.3% in the year 2015 (Ahmad et al., 2015) to 14% in the year 2016. In term of punctuality, the percentage was high ranging from 75% – 97.2% but the pre-journey briefing was low. In term of service, more than 95% of the respondents were satisfied with the service provided and will remain on the same company for another trip. Thus, it shows that the Safety Star Grading program has increased their awareness and implementation level to the public.



## 1. Introduction

Safety, Health and Environment Code of Practice (SHE COP) was developed by the Malaysian Institute of Road Safety Research (MIROS) with various stakeholders. The ultimate aim of ICOP SHE 2010 is to reduce road crashes involving commercial vehicles. Later, it was gazetted under the Occupational Safety and Health Act 1994 (OSHA, 1994) as the Industrial Code of Practice in Transportation Sector in the year 2010 (ICOP SHE, 2010). The purpose of ICOP SHE 2010 is to provide guidance for employers and employees on the proper and effective methods of handling issues relating to occupational safety and health in road transport activities; to ensure that persons other than their employees are not exposed to their safety and health risks in consequence of transport activities carried out; and to encourage education and awareness regarding safety and health at the place of work.

During Ops Bersepadu from 2009 until 2012, several researches related to the evaluation of SHE COP Practices among Bus Operators in Malaysia were carried out to gather more information on safety practices. Nevertheless, in 2010 concurrently with the on-going observation on bus operators' safety practices, the assessment tool for determining SHE COP compliance by bus operators has been developed. Next, the assessment tool was presented and discussed through Focus Group Discussion with the authority and bus operators to get the best method of giving the star rating to the operators.

Audits of operators on SHE COP compliance had been done in the past on several bus operators and the experience helped in the synthesis of the assessment tool suggested in the study. The tool used standard management methodology for quantitative assessment of management compliance. OSH management system can contain the following elements, which can be used for evaluation purposes: risk analysis, hazard control, defining roles and responsibilities, training, communication, established procedures, Emergency Response Plan, auditing, and closing the loop

## Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

(Transportation Research Board, 2003). These elements have been translated into measurable indicators for assembling the assessment tool.

As a result, in 2013 the assessment tool has been introduced to express bus operators and named as Safety Star Grading programme. The objective of this programme is to provide an indicator of the safety performance of bus operators for the general public to make their best choice with confidence when they want to travel. On the other hand, the safety star grading also would benefit the bus operators themselves in term of their image, publicity and reputation (Norlen et al., 2013).

From 2013 until 2015, 17 operators participated in this programme while six (6) of them being awarded star rating range from 2 star to 4 stars. According to the SSG criteria, the 5-star criteria including customer feedback. Some of the criteria are driver seatbelt wearing status, smoking, safety practice at terminal/Rest & Service areas, punctuality, cleanliness of internal and external bus, passenger seat condition, excessive smoke and ambience.

### 1.1 Aim and Objectives

The main objective of this study is to assess the customer feedback criteria of 5-star rating in SSG. In addition, this study has several objectives to study the awareness of passenger using the service of awarded operators; to assess the customer feedback criteria of 5-star rating in SSG and; to study the difference of six (6) operators awarded with star rating in relation to service performance. Therefore, there is a need to conduct a study to determine whether Safety Star Grading has any effect on the operators' safety management and practices related to customer and whether the difference between each star level has any effect on their service performance.

## 1.2 Scope and Limitation

This study only involves six (6) operators that has been awarded with Safety Star Grading rating. Therefore, the generalization on the performance of other bus operators are inappropriate. The feedback from the respondents might be a bit reserved although respondents were already informed that this study is only for education purpose and confidentiality was assured of their responses.

## 2. Methodology

### 2.1 Sample Size Calculation

This study is a cross-sectional study. Sample size calculation was done using the Raosoft software at <http://www.raosoft.com/samplesize.html>. With 95% confidence level, prevalence for customers that are aware of Safety Star Grading is 7.3% (Ahmad et al., 2016), worst acceptable 10-20% (with precision +5%). Sample size at confident interval 95% is 104. To get more data, the sample size set to be double to 240 considering high non-response rate.

### 2.2 Sample Selection

For observation, the samples were among drivers from six (6) operators who were randomly selected from six (6) trips of each operator that has been awarded with star rating. However, for the survey, sample was among bus passengers who were randomly been selected at the terminal and travelling on the bus. Inclusion criteria for this study were adult, Malaysian, able to communicate in Bahasa Malaysia or English.

### 2.3 Research Tools

A set of the modified questionnaire has been used for this study consist of; Customers' demographic information; Service performance; Safety; and Comfort. Face validity was done to 10 research officers to ensure the respondent can comprehend the questionnaire before the actual data collection took place. GPS Model Garmin 3000 Oregon was used for monitoring speed in this study.

## 2.4 Data Collection Approach

### 2.4.1 Observation

Six trips from six (6) bus operators were selected to observe the driver's behaviour and safety performance. One trained researcher was stationed inside the buses and travelled along the trips. The researcher was equipped with a portable GPS to record and monitor the speed of the bus.

### 2.4.2 Survey

Face to face interviews were conducted to bus passengers of the same bus for observation approach. Passengers were selected randomly and the interviews were conducted at the end of the trip by the same researcher as for observation. Written consent was asked from the passenger prior to the interview.

## 2.5 Research Ethics

The research ethics was obtained from MIROS Research Ethics Committee.

## 2.6 Data Analysis

Data were keyed in and analysed by using Statistics Software SPSS version 21. Data were analysed by researcher and based on descriptive to profile the distribution of the samples. Comparison between operators on safety and comfort aspects were tabulated.



### 3. Results and Discussion

This section discusses the results and findings of the study. This section is divided into five (5) subsections; distributions of respondents, service performance: comparisons between operators, comfort, safety practice and experience on bus service.

#### 3.1 Distributions of Respondents

Table 1 shows the distribution of express bus operators involved. A total of 242 trips from six (6) bus operators that have been awarded star rating in the Safety Star Grading program participated in this study. Based on the rating, the bus operators involved were Sani Express Sdn Bhd, Konsortium E Mutiara Berhad, Disitu Holdings Sdn. Bhd., Cepatsedia Tours & Express Transport Sdn. Bhd., Utama Ekspres Sdn. Bhd., and Syarikat Pengangkutan Maju Berhad.

**Table 1** Distributions of express bus operators involved

Company	Trip	Percent
Sani Express Sdn Bhd	39	16.1
Konsortium E Mutiara Bhd	40	16.5
Disitu Holdings Sdn Bhd	40	16.5
Cepatsedia Tours & Express Transport Sdn Bhd	40	16.5
Utama Ekspres Sdn Bhd	42	17.4
Syarikat Pengangkutan Maju Bhd	41	16.9
Total	242	100.0

Table 2 shows the distribution of respondents. Out of the total respondents, 58.3% are male, and the other 41.7% are female. Most of the respondents are Malay (72.3%) and single (64.0%) while students and private sector workers are 32.2% and 38.4% respectively. The frequency of taking express bus among respondents are distributed

## Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

between once in 2 to 3 months (34.7%), at least once a year (13.6%) and every month (16.9%) while the other 10.7% and 0.4% respondents travelled by bus either every week or every day. Nonetheless, 22.3% of the respondents had never travelled by express bus while 67.8% of the respondents had chosen a safe journey as the most important criteria in choosing the favourable bus operator. A high percentage of respondents (83.5%) are not aware of the Safety Star Grading Program. More than half (62.6%) of the respondents stated that electronic media is the most preferred channel for communicating Safety Star Grading to the general public.

**Table 2** Distribution of respondents

Variables		N	%
Gender	Male	141	58.3
	Female	101	41.7
Race	Malay	175	72.3
	Chinese	29	12.0
	Indian	35	14.5
	Others	3	1.2
Age (Mean: 27.64)	Below 25	110	47.2
	25 to 35	81	34.8
	36 to 45	34	14.6
	46 to 55	4	1.7
	More than 55	4	1.7
Status	Single	155	64.0
	Married	87	36.0
Education	No formal education	3	1.2
	Primary school	3	1.2
	Secondary school	72	29.8
	College/Universities	162	66.9
Occupation	Student	78	32.2
	Private sectors	93	38.4
	Government agencies	17	7.0
	Self-employed	25	10.3
	None	29	12.0

### Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

Monthly income	Below RM500	3	1.2
	RM500 – RM1500	4	1.7
	RM1501 – RM2500	66	27.3
	RM2501 – RM3500	53	21.9
	More than RM3500	14	5.8
Household income	Below RM500	2	0.8
	RM500 – RM1500	6	2.5
	RM1501 – RM2500	16	6.6
	RM2501 – RM3500	33	13.6
	More than RM3500	45	18.6
Frequency of taking buses	Never	54	22.3
	At least once a year	33	13.6
	Once in 2 – 3 months	84	34.7
	Every months	41	16.9
	Every week	26	10.7
Preferred criteria of bus operators	Every day	1	0.4
	Safe journey	164	67.8
	Comfortable journey	137	56.6
	Arrived on time	114	47.1
Heard about Safety Star Grading	Others	1	0.4
	Yes	35	14.0
Source of knowing Safety Star Grading	No	202	83.5
	Newspaper	10	4.1
	Electronic media	5	2.1
	Family and friends	13	5.4
Most preferred channel	Social media	17	7.0
	Newspaper	116	24.1
	Electronic media	301	62.6
	Family and friends	55	11.4
	Social media	239	49.7

### 3.2 Service Performance: Comparison between Operators

All the figures below comparing the service performance between participated bus operators. Figure 1 and 2 show Syarikat Pengangkutan Maju Berhad and Disitu Holdings Sdn Bhd achieved 100% for drivers wearing uniform and shoes while driving.

The colour for each company is as table below for Figure 1 – 15:

	Sani Express Sdn Bhd		Cepatsedia Tours & Express Transport Sdn Bhd
	Utama Ekspres Sdn Bhd		Konsortium E Mutiara Berhad
	Disitu Holdings Sdn Bhd		Syarikat Pengangkutan Maju Berhad

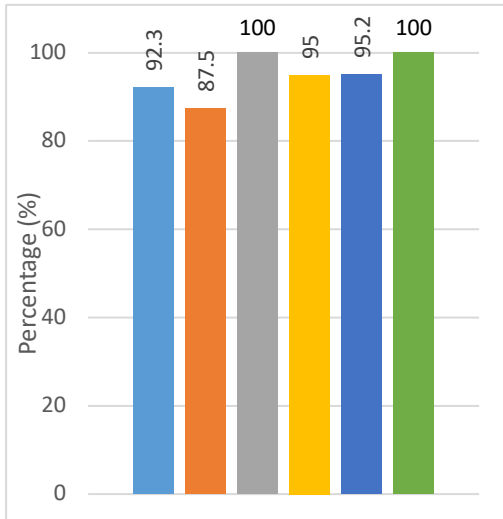


Figure 1 Drivers wearing uniform

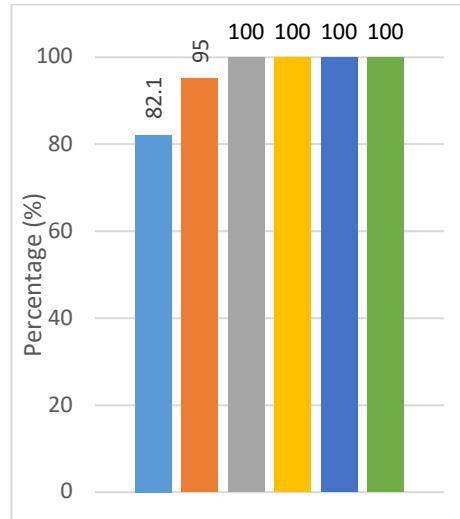
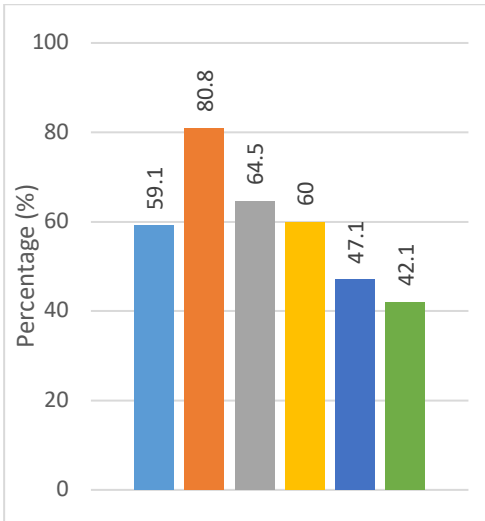


Figure 2 Drivers wearing shoes while driving

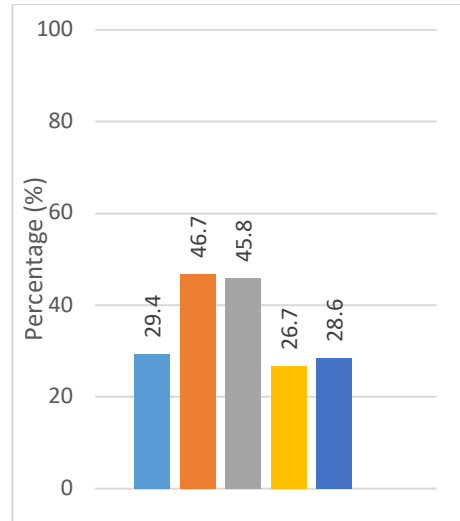
Figure 3 shows the availability of drivers' seatbelt installed inside the buses. The highest percentage is Konsortium E-Mutiara Berhad with 80.8% and the lowest is 42.1%, Syarikat Pengangkutan Maju Berhad. Unfortunately, only half of the drivers fasten their seatbelt as seen in Figure 4. Most of new buses had installed seatbelt for all passengers. However, Syarikat Pengangkutan Maju Berhad had a low percentage of installation compared to other operators with only 26% and as shown in Figure 5.

**Safety Star Grading Evaluation on Operators Safety Performance and Public Perception**

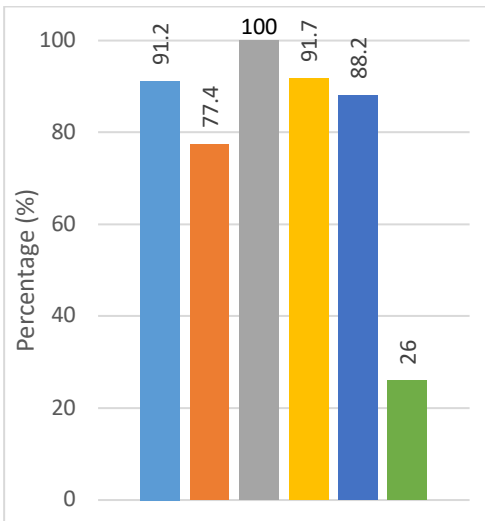
Figure 6 and 7 shows more than 80% of the bus operators did display emergency number and hotline inside buses with the highest is Disitu Holdings Sdn Bhd.



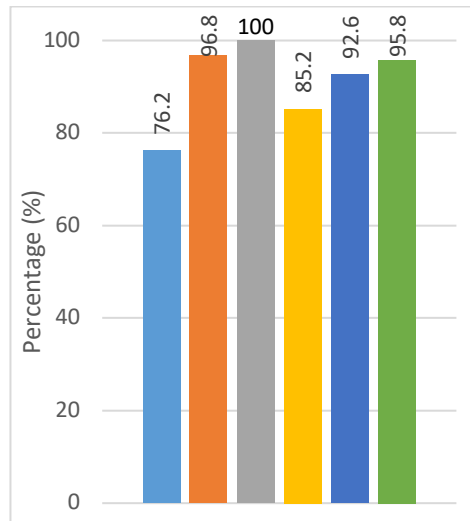
**Figure 3** Drivers' seatbelt availability



**Figure 4** Seatbelt wearing rate for drivers



**Figure 5** Percentage of buses with installed seatbelts



**Figure 6** Emergency number displayed inside buses

Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

As seen in Figure 8, signboards available inside almost all bus operators. While Figure 9 and 10 show pre-journey and briefing during breaks at R & R station. From the Figure 9, it is clearly shown that low percentage of a pre-journey briefing with the highest only 35.5% and there is even 0% which is none of the drivers does briefing before the journey. However, it is slightly increased for a briefing for breaks at R&R as shown in Figure 10.

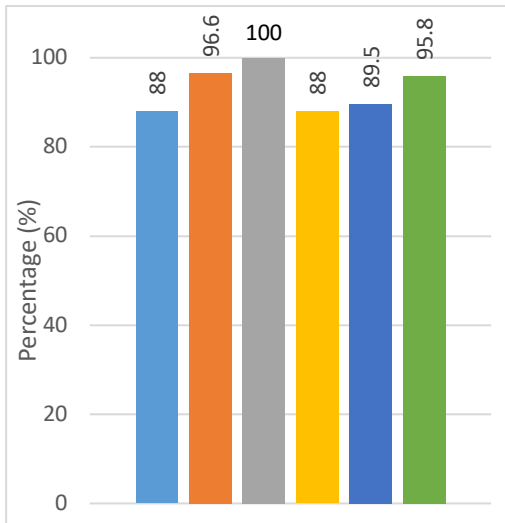


Figure 7 Hotline number displayed inside bus

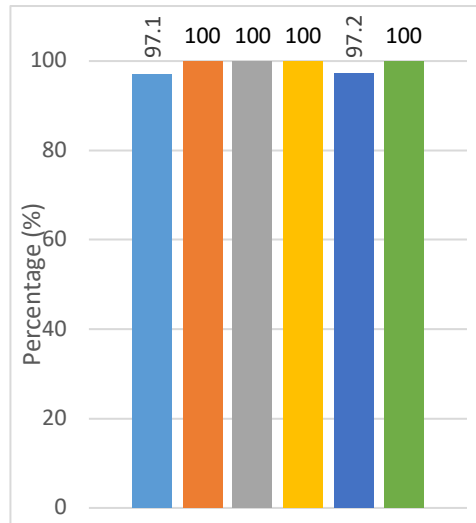


Figure 8 Do & don't sign availability

Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

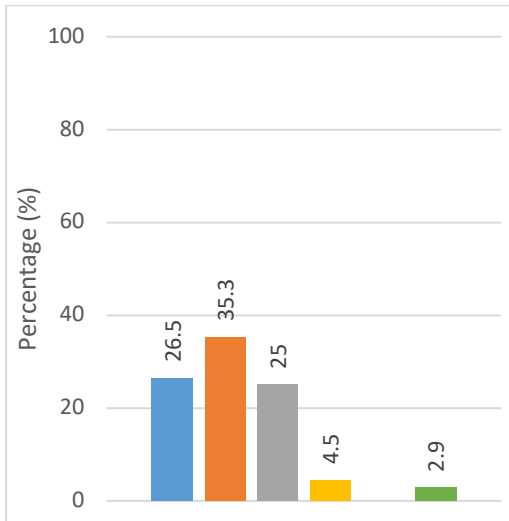


Figure 9 Pre-journey briefing

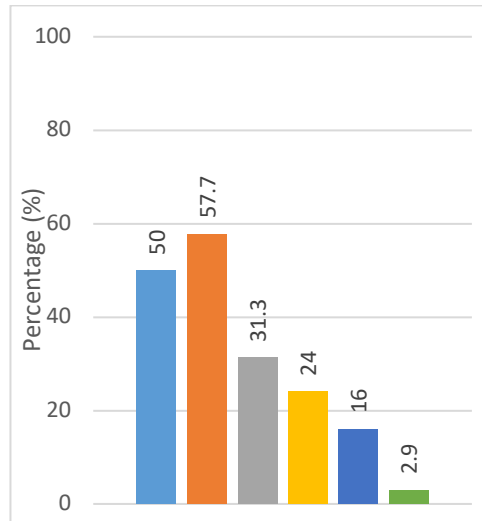


Figure 10 Briefing for breaks at R&R

Figure 11 shows the percentage of punctuality of bus departure. Surprisingly enough, as shown in Figure 12, about 20% of the drivers from Disitu Holdings were smoking while driving although it is prohibited. Figure 13, 14 and 15 show the occasions when the drivers are driving at high speed. Cepatsedia Tours & Express Transport had a high percentage with 78.9% for the entire journey and 82.4% during overtaking. Meanwhile, Konsortium E-Mutiara had the highest percentage for speeding (96.3%) part of the journey. Thus, it indicates that almost all bus operators are speeding either part of the journey or during overtaking.

Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

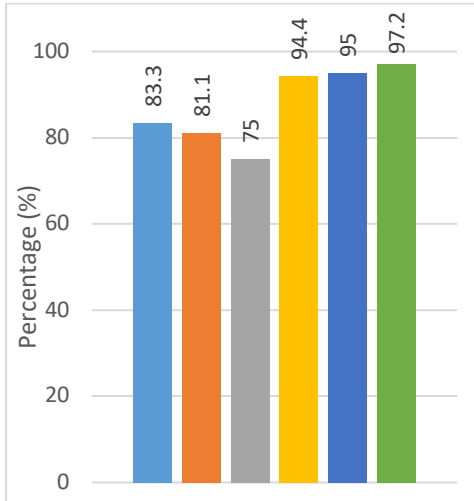


Figure 11 Punctuality of bus departure

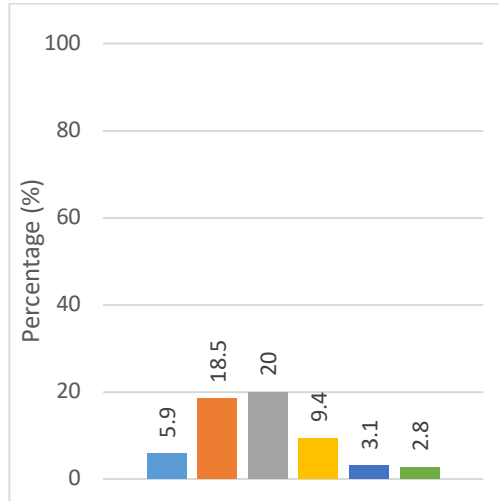


Figure 12 Smoking while driving

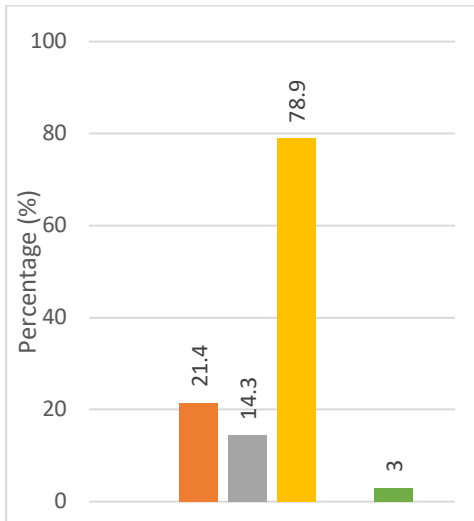


Figure 13 Speeding along the journey

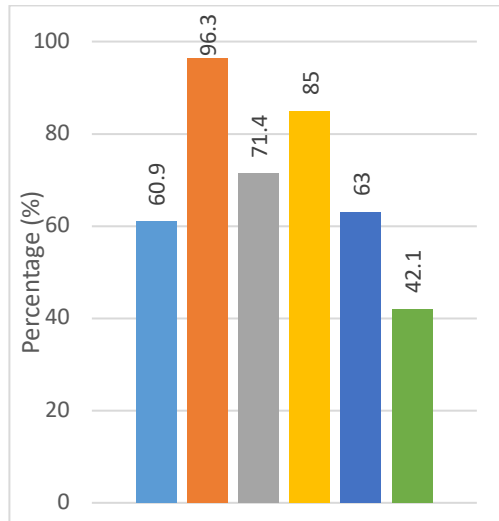


Figure 14 Occasionally speeding



## Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

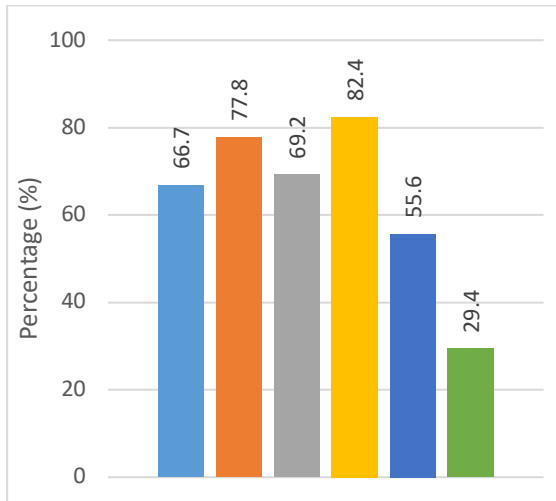


Figure 15 Speeding while overtaking

### 3.3 Comfort

Among the comfort elements, which were assessed in the study includes cleanliness outside and inside of the bus, seat condition, excessive smoke emission, odour, as well as vibration. Table 3 reveals that more than 50% of the respondent of Sani Express Sdn Bhd and Konsortium E Mutiara Berhad agree that the bus exterior is clean. In contrast, respondents of Disitu Holdings Sdn Bhd, Cepatsedia Tours & Express Transport Sdn Bhd, Utama Ekspres Sdn Bhd and Syarikat Pengangkutan Maju Berhad mostly not sure on the cleanliness condition of the bus exterior with the percentage ranging from 69 to 90%. Meanwhile, for the interior cleanliness aspect, a high percentage of respondents agree that inside of the bus is clean regardless of bus operators as shown in Table 4. Only one (1) of respondent of Konsortium E Mutiara Berhad stated disagree on the cleanliness of the bus interior.

## Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

**Table 3** Cleanliness of bus exterior

Company	Clean exterior bus			Mean (SD)
	Unsure	Agree	Strongly agree	
Sani Express Sdn Bhd	14 36.8%	17 44.7%	7 18.4%	3.82 (0.730)
Konsortium E Mutiara Bhd	14 37.8%	16 43.2%	7 18.9%	3.81 (0.739)
Disitu Holdings Sdn Bhd	32 80.0%	6 15.0%	2 5.0%	3.25 (0.543)
Cepatsedia Tours & Express Transport Sdn Bhd	32 82.1%	5 12.8%	2 5.1%	3.23 (0.536)
Utama Ekspres Sdn Bhd	29 69.0%	12 28.6%	1 2.4%	3.33 (0.526)
Syarikat Pengangkutan Maju Bhd	36 90.0%	4 10.0%	0 0.0%	3.10 (0.304)

**Table 4** Cleanliness of bus interior

Company	Clean interior bus				Mean (SD)
	Disagree	Unsure	Agree	Strongly agree	
Sani Express Sdn Bhd	0 0.0%	0 0.0%	30 78.9%	8 21.1%	4.21 (0.413)
Konsortium E Mutiara Bhd	1 2.7%	1 2.7%	25 67.6%	10 27.0%	4.19 (0.616)
Disitu Holdings Sdn Bhd	0 0.0%	2 5.0%	34 85.0%	4 10.0%	4.05 (0.389)
Cepatsedia Tours & Express Transport Sdn Bhd	0 0.0%	3 7.7%	27 69.2%	9 23.1%	4.15 (0.540)
Utama Ekspres Sdn Bhd	0 0.0%	0 0.0%	36 85.7%	6 14.3%	4.14 (0.354)
Syarikat Pengangkutan Maju Bhd	0 0.0%	1 2.5%	32 80.0%	7 17.5%	4.15 (0.427)

## Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

Regarding seat condition, the majority of respondents agree that the seat of the bus is comfortable and adjustable as presented in Table 5 and Table 6. Nevertheless, about 2.6% and 5% of respondents of Disitu Holdings Sdn Bhd and Cepatsedia Tours & Express Transport Sdn Bhd respectively claimed that they disagree that the seats are adjustable. Table 7 represent excessive smoke emission observed by the respondents. The highest percentage of respondents of all operators except Sani Express Sdn Bhd answered not sure whether the bus had an excessive smoke emission. Nearly 56% of respondents of Sani Express Sdn Bhd agree that the buses do not emit excessive smoke through one of the respondents disagrees.

**Table 5** Seat condition (Comfort seating)

Company	Comfort seat			Mean (SD)
	Unsure	Agree	Strongly agree	
Sani Express Sdn Bhd	1 2.7%	27 73.0%	9 24.3%	4.22 (0.479)
Konsortium E Mutiara Bhd	0 0.0%	30 81.1%	7 18.9%	4.19 (0.397)
Disitu Holdings Sdn Bhd	0 0.0%	36 90.0%	4 10.0%	4.10 (0.304)
Cepatsedia Tours & Express Transport Sdn Bhd	2 5.1%	28 71.8%	9 23.1%	4.18 (0.506)
Utama Ekspres Sdn Bhd	1 2.4%	34 82.9%	6 14.6%	4.12 (0.400)
Syarikat Pengangkutan Maju Bhd	0 0.0%	32 80.0%	8 20.0%	4.20 (0.405)

**Table 6** Seat condition (Adjustable seat)

Company	Adjustable seat condition				Mean (SD)
	Disagree	Unsure	Agree	Strongly agree	
Sani Express Sdn Bhd	0 0.0%	0 0.0%	28 75.7%	9 24.3%	4.24 (0.435)
Konsortium E Mutiara Bhd	0	2	26	9	4.19

### Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

	0.0%	5.4%	70.3%	24.3%	(0.518)
Disitu Holdings Sdn Bhd	2	0	30	8	4.10
	5.0%	0.0%	75.0%	20.0%	(0.632)
Cepatsedia Tours & Express Transport Sdn Bhd	1	3	25	10	4.13
	2.6%	7.7%	64.1%	25.6%	(0.656)
Utama Ekspres Sdn Bhd	0	0	35	7	4.17
	0.0%	0.0%	83.3%	16.7%	(0.377)
Syarikat Pengangkutan Maju Bhd	0	1	29	10	4.23
	0.0%	2.5%	72.5%	25.0%	(0.480)

**Table 7** Excessive smoke emission

Company	Excessive smoke emission				Mean (SD)
	Disagree	Unsure	Agree	Strongly agree	
Sani Express Sdn Bhd	1	12	20	3	3.69
	2.8%	33.3%	55.6%	8.3%	(0.668)
Konsortium E Mutiara Bhd	0	24	11	1	3.36
	0.0%	66.7%	30.6%	2.8%	(0.543)
Disitu Holdings Sdn Bhd	0	22	16	2	3.50
	0.0%	55.0%	40.0%	5.0%	(0.599)
Cepatsedia Tours & Express Transport Sdn Bhd	0	24	11	4	3.49
	0.0%	61.5%	28.2%	10.3%	(0.683)
Utama Ekspres Sdn Bhd	0	32	8	2	3.29
	0.0%	76.2%	19.0%	4.8%	(0.554)
Syarikat Pengangkutan Maju Bhd	0	23	14	2	3.46
	0.0%	59.0%	35.9%	5.1%	(0.600)

Table 8 shows that majority of the respondents had no discomfort issue due to bad odour of bus interior. The remaining respondents with percentage ranging from 5 to 25% reported they are not sure about the odour issue of the buses. Table 9 shows feedback on the experience of excessive vibration. Almost 80% of Sani Express Sdn Bhd respondents reported they agree that the bus does not vibrate excessively.

## Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

Meanwhile more than half of the respondents of Disitu Holdings Sdn Bhd and Cepatsedia Tours & Express Transport Sdn Bhd are not sure of the vibration issue.

**Table 8** Pleasant odour

Company	Pleasant odour			Mean (SD)
	Unsure	Agree	Strongly agree	
Sani Express Sdn Bhd	2	30	6	4.11
	5.3%	78.9%	15.8%	(0.453)
Konsortium E Mutiara Bhd	3	29	5	4.05
	8.1%	78.4%	13.5%	(0.468)
Disitu Holdings Sdn Bhd	6	28	4	3.95
	15.8%	73.7%	10.5%	(0.517)
Cepatsedia Tours & Express Transport Sdn Bhd	5	24	9	4.11
	13.2%	63.2%	23.7%	(0.606)
Utama Ekspres Sdn Bhd	5	34	3	3.95
	11.9%	81.0%	7.1%	(0.439)
Syarikat Pengangkutan Maju Bhd	10	22	8	3.95
	25.0%	55.0%	20.0%	(0.677)

**Table 9** No excessive vibration

Company	No excessive vibration				Mean (SD)
	Disagree	Unsure	Agree	Strongly agree	
Sani Express Sdn Bhd	0	9	26	3	3.84
	0.0%	23.7%	68.4%	7.9%	(0.547)
Konsortium E Mutiara Bhd	0	17	15	5	3.68
	0.0%	45.9%	40.5%	13.5%	(0.709)
Disitu Holdings Sdn Bhd	0	26	12	2	3.40
	0.0%	65.0%	30.0%	5.0%	(0.591)
Cepatsedia Tours & Express Transport Sdn Bhd	0	22	13	4	3.54
	0.0%	56.4%	33.3%	10.3%	(0.682)
Utama Ekspres Sdn Bhd	1	19	20	2	3.55
	2.4%	45.2%	47.6%	4.8%	(0.633)

## Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

Syarikat Pengangkutan Maju Bhd	0	18	19	3	3.63
	0.0%	45.0%	47.5%	7.5%	(0.628)

### 3.4 Safety Practices

Table 10 below represents Inappropriate Driving Behaviour (IDB) among bus drivers as observed by the respondents. The findings reveal that none of IDB was demonstrated by drivers of Sani Express Sdn Bhd except overtaking at double line which as reported by one of the respondents (2.6%). Harsh braking is the most frequent IDB among drivers as revealed by the respondents of all operators except Sani Express Sdn Bhd. The highest percentage of respondents that reported this IDB is from Disitu Holdings Sdn Bhd (30%). Second most frequent IDB is phone usage while driving among drivers of Konsortium E Mutiara Sdn Bhd, Cepatsedia Tours & Express Transport Sdn Bhd, Utama Ekspres Sdn Bhd and Syarikat Pengangkutan Maju Bhd with the percentage of 7.5, 7.5, 4.8 and 2.4 respectively.

**Table 10** Safety practices

No.	Safety practices	n (% of respondents within each company)					
		Sani Express Sdn Bhd	Konsortium E Mutiara Bhd	Disitu Holdings Sdn Bhd	Cepatsedia Tours & Express Transport Sdn Bhd	Utama Ekspres Sdn Bhd	Syarikat Pengangkutan Maju Bhd
1.	Harsh braking	-	8 (20.0)	12 (30.0)	7 (17.5)	4 (9.5)	4 (9.8)
2.	Dangerous overtaking	-	-	4 (10.0)	1 (2.5)	-	1 (2.4)

### Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

3.	Use phone while driving	-	3 (7.5)	-	3 (7.5)	2 (4.8)	1 (2.4)
4.	Tailgating	-	-	-	-	1 (2.4)	-
5.	Overtaking at double line	1 (2.6)	-	-	-	-	-

### 3.5 Experience on Bus Service

Besides feedback on safety practice and comfort, this study also gathered information on customer satisfaction. Table 11 and Table 12 below show customer satisfaction and their willingness to stay with the same operator. The findings reveal that all of the respondents of Sani Express Sdn Bhd, Konsortium E Mutiara Bhd, Disitu Holdings Sdn Bhd and Syarikat Pengangkutan Maju Bhd feel satisfied with the services provided by the respective operators. The respondents also claimed that they would choose the same operators for their next journey except for Sani Express Sdn Bhd as one of the respondents refuses to opt for the same operator.

**Table 11** Satisfaction on service provided

Company	Are you satisfied with the services of this company?		
	Yes	No	Mean (SD)
Sani Express Sdn Bhd	38 100.0%	0 0.0%	1.00 (0.000)
Konsortium E Mutiara Bhd	39 100.0%	0 0.0%	1.00 (0.000)
Disitu Holdings Sdn Bhd	40 100.0%	0 0.0%	1.00 (0.000)
Cepatsedia Tours & Express Transport Sdn Bhd	39 97.5%	1 2.5%	1.03 (0.158)
Utama Ekspres Sdn Bhd	41 97.6%	1 2.4%	1.02 (0.154)

### Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

Syarikat Pengangkutan Maju Bhd	41	0	1.00 (0.000)
	100.0%	0.0%	

**Table 12** Stay on the same operator for next ride

Company	Will you continue to use the services of this company		Mean (SD)
	Yes	No	
Sani Express Sdn Bhd	37 97.4%	1 2.6%	1.03 (0.162)
Konsortium E Mutiara Bhd	39 100.0%	0 0.0%	1.00 (0.000)
Disitu Holdings Sdn Bhd	40 100.0%	0 0.0%	1.00 (0.000)
Cepatsedia Tours & Express Transport Sdn Bhd	38 97.4%	1 2.6%	1.03 (0.160)
Utama Ekspres Sdn Bhd	40 95.2%	2 4.8%	1.05 (0.216)
Syarikat Pengangkutan Maju Bhd	41 100.0%	0 0.0%	1.00 (0.000)



## 4. Conclusion and Recommendations

According to the findings, the main objective of this study has been achieved to assess the customer feedback criteria of 5-star rating in SSG. This study has included all six (6) operators that have been awarded by MIROS for star rating in the SSG programme. From the study, the customer feedback criteria such as use of seatbelt for driver, no smoking while driving, safety practice at terminal and rest & service area, punctuality for departure, seatbelt installed for all seats, customer complaints mechanism, cleanliness of internal and external bus, seat condition, excessive smoke emission and ambience has been collected from the respondents. The number of respondents that are aware of SSG program also has increased to nearly double from 7.3% in year 2015 to 14% in year 2016 (Ahmad et al., 2016).

The second objective is to study the difference of six (6) operators awarded with star rating related to service performance. From the findings, it can be seen that all companies have a good image since their drivers wore uniform and shoes while driving. In addition, most of the buses display emergency number, hotline and do & don't sign inside the buses and this show very good practice. In term of punctuality, the percentage was high ranging from 75% – 97.2% but the pre-journey briefing was low (highest was 35.5%) and surprisingly there is one (1) company that none of the drivers does any briefing before the journey.

For seatbelt item, although most of the companies with new buses with seatbelts installed for all passengers, the concern is only half of the drivers fastened their seatbelt. For smoking, there was still a number of drivers smoking during driving even though it is prohibited. The passengers perceive that almost all bus operators are speeding either part of the journey or during overtake.

From the findings, more than 70% from the respondents agree and strongly agree that all the companies have a clean interior, the seats are in good condition, the buses

have a pleasant odour and the bus seats are also adjustable accordingly. Nevertheless, respondents from four (4) companies were unsure about the exterior cleanliness of the buses while on average 50% of the respondents from five (5) companies were unsure about the excessive smoke emission and vibration on the buses.

For the safety practices, the less frequent Inappropriate Driving Behaviour (IDB) were tailgating, overtaking at the double lane and dangerous overtaking. However, the IDB occurrence for using phone and harsh braking is more frequent for most of the companies even though the frequency is not high according to the respondents. In term of service, more than 95% of the respondents are satisfied with the service provided and will use the service of the same company for another trip.

Generally, from the study, it shows that all operators that have been awarded Safety Star Grading have given their very best to ensure that customers had experienced good service performance, comfort and safety practices while travelling with their buses. It shows that the Safety Star Grading program has increased the operators' awareness and implementation level to the public. Overall, the respondents were satisfied with the services and will continue to use their services afterwards.

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## Research Report

# Safety Star Grading Evaluation on Operators Safety Performance and Public Perception

Designed by: MIROS



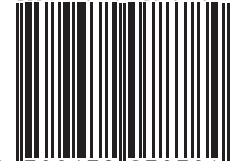
### Malaysian Institute of Road Safety Research

Lot 125-135, Jalan TKS 1, Taman Kajang Sentral  
43000 Kajang, Selangor Darul Ehsan

**Tel:** +603 8924 9200 **Fax:** +603 8733 2005

**Website:** [www.miros.gov.my](http://www.miros.gov.my) **E-mail:** [dg@miros.gov.my](mailto:dg@miros.gov.my)

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