

Effective Advertising Location in the Commuter Line: Study Cases in Jakarta and Surrounded Cities in Indonesia

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Abstract - The aims of the research were to determine the most effective advertising location compared to various available locations and to examine the behavior of commuter line passengers. The research was conducted at six train stations and samples were taken by a purposive sampling method. Data were collected by a structured interview. The Chi-square test was used to find out the differences of the advertising locations' effectiveness, while a ranking method was used to determine the effectiveness of advertising locations. Eight locations were rated by passengers. The results reveal that the effectiveness of each location on the commuter line has proven to be different and the most effective advertising location is the hanging alley.

Keywords: effective advertising, transit advertising, advertising location, commuter line

I. INTRODUCTION

In larger cities, people's mobility is highly indicated by the time they spend on transportation. Therefore, Out of Home (OOH) advertising has a great opportunity to deliver its message to people on board. In Indonesia, spending on OOH advertising is predicted to be 66 trillion rupiahs, the second largest after television commercials (Wulandari, 2016). Currently, OOH is increasingly diverse, so it can be classified in various ways. Belch and Belch (2012) classify OOH based on advertising media which consists of traditional and nontraditional. Roux (2016) classifies OOH into advertising that are on the road, in the mode of transportation, in shopping and entertainment, as well as in special places.

Based on the technology used, Gurumoorthy (2015) divides OOH into non-digital out-of-home (NDOOH) and digital out of home (DOOH) advertising. NDOOH consists of aerial advertising, airship advertising, billboard bicycle, bulletin, advertising bus, commuter rail-display, com-park advertising, lamppost banner advertising, mobile billboard, postcards, premiere panel, poster, premier square, street advertising and taxi advertising. The advertisements on the commuter line can be distinguished from the interior advertisements inside the carriage of cars and the exterior advertisements placed outside the car (Belch and Belch, 2012).

Advertising on commuter lines is called transit advertising. Transit advertising is one type of OOH advertising where all advertisements are displayed outdoors. It focuses on consumers who are traveling in public places, on-the-go, waiting in public places, or in shopping areas (Gurumoorthy, 2015). In Indonesia, the commuter line serves many routes from Jakarta to several urban cities. It operates from 04:00 to 23:00 WIB (GMT +7) through 79 stations which operate the Jakarta, Depok, Bogor, Tangerang, and Bekasi (abbreviated: Jabodetabek), Banten dan Cikarang with reach routes of 418,5 kilometers and has 1459-unit trains in 2019. Additionally, in 2019, Kereta Commuter Indonesia, Inc. served 1,2 million passengers per day. This has a very potential for advertising. Moreover, the commuter line has a broad target range, not just for commuter line users but also for those who are near the commuter line rail (Commuter Jabodetabek, 2017).

In Indonesia, advertising on commuter lines is considered a new strategy. PT Kereta Commuter Indonesia, a commuter line operator, offers several advertising locations: hanging alley, wall panel, wall

branding, and hand grips, wall panel, wall branding, hand grips, ceiling panel, interior door, branding body and cover seat, and full interior branding (Figure 1).

The competition between OOH advertisers encourages every media to demonstrate the effectiveness of their advertising. Research on commuter advertising effectiveness is needed by advertisers since their budget must be used effectively. Currently, such research is very limited, hence a research on the effectiveness of advertising on the commuter line is required.

The advantage of OOH is being able to deliver the advertisement's message and reach the customer not only at a specific time and place but also in unconventional places (Roux and Var der Waldt, 2014). The advantages of transit advertising are the longer expose period of the audience, the frequency of auditing seeing the advertisement, the timeliness, and the higher possibility to reach audience in a

particular geographical (Belch and Belch, 2012). The disadvantages of transit advertising are the possibility to decrease the product image, difficult to reach the larger target due to passenger density, and often considered a waste due to the incompatibility of the geographical region of the transportation mode route with the target auditing location (Belch and Belch, 2012).

The effectiveness of advertising depends on the interaction of the consumers, advertised products, advertisements, media, and environment (Giri, 2016). The consumer factors which influence the effectiveness of advertising are time, capabilities to record information, knowledge of products and psychological aspects. Other factors are the physical aspects of advertising and the content of the message. The products description also affects advertising, such as the product category, brand image, and sufficient information.



a



b



c



d



e



f

Figure 1 Several Advertising Locations. a) Hanging Alley, b) Ceiling Panel, c) Hand Grip, d) Body Branding, e) Full Interior Branding, f) Interior Door

The environment also has an influence on the effectiveness of advertising. Environmental aspects that determine the effectiveness of advertising are cultural, social, family, personal, and situation factors. Interaction factors influence the psychological processes of consumers, which is predicted to have several levels. The lowest level is being exposed, the higher one is the target audience giving attention, comprehension, acceptance, and then the highest level is retention.

Strong empirical evidence shows that recall, when used in combination with other measures, is a valid measure of advertising effectiveness (Mehta & Purvis, 2006). Turley & Shannon (2000) use recall as a measure for the effectiveness of advertising in the sports arena. Opportunity to see (OTS) is considered the best advertising success rate measurement. According to Farby (1994), the opportunity to see explains the number of times the average target audience sees an advertisement (Musonera & Karuranga, 2011). Cannon (2012) states that advertising effectiveness is determined by the advertising cost, target audiences, and exposed at every possible level.

According to Morissan (2015), advertising effectiveness is determined by aspects of market coverage, reach, frequency and advertising budget. The advertising focuses on the target audience that hears, watches and reads the advertisement for a certain period. The range of outdoor advertising is calculated by multiplying the number of people passing through on the road and the probability of the person noticing the advertisement. People who notice the advertisements may be exposed to brand messages within a certain period. Advertising frequency assesses how many people are exposed by the media.

Makienko (2012) concludes that there are two mainstreams in assessing effectiveness, such as being dependent on reach and others that emphasize frequency. The function of advertising is to increase brand awareness, persuade customers, remind customers and shape consumer perceptions.

For effective advertising, it is necessary to pay attention to aspects of market coverage, reach, frequency, and the advertising budget (Morissan, 2015). Frequency is also the average amount of time people are reached and the opportunity for exposure to brand messages in a given period. The frequency of advertisements assesses how much someone is exposed to the media. This research focuses on the effectiveness of advertising which is measured by reach and frequency.

Reach is measured by the advertising location and categories that are commonly seen by passengers. Advertising frequency is measured by the number of advertising seen by passengers and the average of advertisement content read by passengers. In this research, reach depends on the advertisement location and categories that are often seen by passengers. Based on the previous research, it is hypothesized that there is a difference in exposure in each ad location on the commuter line.

II. METHODS

The frequency of using a subway is positively correlated with advertisements on a subway (Chan & Fung, 2013), therefore the respondents in this research are passengers who routinely use commuter line services at least twice per week and see advertisements on the commuter line route from Jakarta to Bogor and vice versa. The survey is conducted at large stations in and around Jakarta city, namely Bogor Station, Depok Station, Pasar Minggu Station, Manggarai Station, Juanda Station, and City Station. The sample size is 100 people.

The survey method is a structured interview consisting of three parts: (1) The profile of passengers, (2) The behavior of passengers while on the commuter line, and (3) The assessment of advertisements seen on the commuter line. Consumer behavior is measured using a Likert scale.

The location of advertising on the commuter line determines the effectiveness of advertising. Thus, the statistical hypothesis of this research is:

H_0 : There is no difference in advertising exposure at the location on HA, WB, WP, BB, HG, ID, CP, CS.

H_a : There is different advertising exposure on HA, WB, WP, BB, HG, ID, CP, CS.

Note:

HA = hanging alley
 WP = wall panel
 WB = wall branding
 HG = handgrip
 CP = ceiling panel
 ID = interior door
 BB = body branding
 CS = cover seat and full interior branding hanging alley

To determine the effectiveness of advertising, respondents are asked to rank the best eight advertising locations by giving a rating score of 1 to 8. Score 8 represents the easiest way the advertisement can be noticed and 1 for the most difficult one. The total value for each location is calculated. The ease of noticing advertisements is considered ideal, so it is categorized as the expectation frequency (F_e), while the frequency of viewing is categorized as an actual frequency (F_o). To test the difference in the effectiveness of each advertising location, the Chi-square test (χ^2) is used for hypothesis testing regarding the comparison between observational or actual frequencies (F_o) with expected frequencies (F_e) based on certain hypotheses.

III. RESULTS AND DISCUSSIONS

There are 100 respondents, with male and female respondents being quite balanced. The respondents represent a variety of age groups and

gender. The most highly represented is aged 20-31 years. For representation, the number of men and women is relatively even although there is no difference in attention to advertising between men and women (Chan & Fung, 2013). Respondents are diverse in employment, most of whom work as private employees with diverse incomes. Most respondents earn between three million and five million rupiahs (Table 1).

Table 1 Demographic Characteristics of Commuter Lines Passengers and their Frequency

Category	Options	Frequencies
Gender	Male	48%
	Female	52%
Age	≤ 20	10 %
	>20-30	38 %
	>30-40	32 %
	> 40	20%
Marital Status	Single	42%
	Married	58%
Occupation	Private employee or civil servant	53%
	Businessman	11%
	Student	28%
	Other	8%
Earning	≤ 3 million Rupiah	15%
	> 3 - 5 million Rupiah	43%
	> 5 - 10 million Rupiah	37%
	> 10 million Rupiah	5%

The length of the commuter line passenger journey quite varies (Figure 2). However, most commuters spend more than an hour in travel. Passengers spend time on various activities on their trip, but most of the time is spent using mobile phones and sleeping.

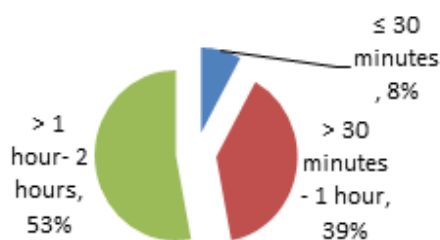


Figure 2 The Length of the Trip on Commuter Lines

In a certain period of time, passengers are trapped in a confined space, so their views are also limited. Thus, passengers are potentially exposed to the advertising multiple times during the trip. The number of respondents who see the advertisement at least one to three times is quite balanced with those who view the advertisement four to six times (Figure 3). The commuter line is the transportation of the urban population to work in the city; thus, there is a possibility of a higher frequency of viewing advertisement. The results of this survey support the opinion of Veloutsou and O'Donnell (2005) that captive market transit advertising viewers can be exposed to advertising several times. However, it is necessary to update the advertisement to catch more attention.

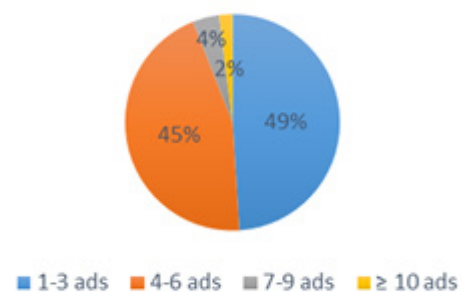


Figure 3 Number of Advertisements Read and Percentage of Number of Readers

Grigaliūnait and Pilelienė (2016a) conclude that two important elements of outdoor advertising are visual and textual. To attract passengers' attention, advertisers should focus on visual and textual appeal. Some of the visual appeals that advertisers need to consider are the illustrations, images, image products and other images, while the essential textual appeal is the headline and body copy.

Respondents are more interested in visual rather than textual aspects. The most attractive advertising elements for the respondents are images and colors (Figure 4). Texts only appeal to 20% of the passengers. The location of the advertisement is not an attraction for most passengers. Advertisers need to increase their appeal to gain greater attention. Chan and Fung (2013) recommend that exciting advertisements are those that have creative ideas, bright colors, and are large in size. Advertisement sizes, which Chan and Fung (2013) suggest, may be appropriate for subway stations but not for commuting. It may not be an important issue due to the shorter visibility of up to 20 meters. According to Wilson et al. (2015) and Khan et al. (2016) the bigger the advertisement, the more it is recognized by the target audience. The greater advertisement is possible to be recognized by the target audience. The size of the commuter-line has been set. Advertisers will face a trade-off choosing the location of the advertisement that has a large size or the location that is seen the most.

In commuter lines, the number of advertisements seems to be more important. In each carriage, there are six to nine pieces in a hanging alley measuring 100cm × 27cm; 20 pieces of wall panel measuring 50cm × 36cm; 20 pieces of wall branding measuring 45cm × 80cm; 60 to 70 hand grips measuring 10cm × 10cm; 20 pieces of ceiling panel measuring 100cm × 27cm; eight pieces of interior door-sized; and body branding size 2cm × 360cm. Advertising frequency can cover all passengers in the carriage evenly.

Grigaliūnaite, Pilelienė and Bakanauskas (2016) proved that attractive advertisements are those with more elements and more visual aspects. Besides, it becomes more appealing when advertisements contain more visuals and less interesting text compared to those containing more text and fewer visuals. The attention of the target audience is influenced by colour, size, celebrity image, brand image, logo texture, and message (Khan et al., 2016). Higgins et al. (2014) recommend eye movement in designing advertisements. Eye movement on advertising starts with the visual appeal, and then the textual appeal. Although the attention of the most respondents goes to the image, it is essential to include a textual appeal when the composition is less than visual. The previous research results are relevant to the research. Creative ideas and clear colors on advertisements can attract the attention of subway passengers (Chan & Fung, 2013). The advertising elements that attract the passengers of commuter line are pictures, color, and content (Figure 4).

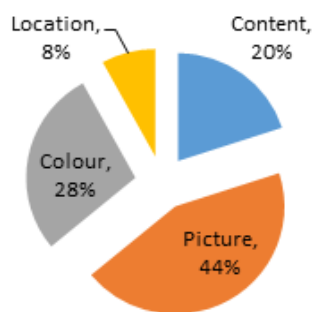


Figure 4 The Most Interesting Ad Element and the Percentage of Readers

The length of the railway carriage is 20 meters, width is 2,8 meters and the height are 4,086 to 4,140 meters. The maximum capacity is 250 people per carriage, but it could be up to 650 people. The seating capacity is 40 persons. In crowded conditions, the passengers' visibility is limited, so passengers only see advertisements placed close to them. Even though the place of advertising is strategic, it can be less effective if it is crowded since the density will reduce human attention to the advertisements (Wilson & Suh, 2018).

Due to a limited number of seats and crowded passenger cars, passengers have limited mobility, so

they see or read advertisement a few times. Attractive advertisements will encourage viewers to read the entire content of advertising messages. Apparently, only 25% of respondents read advertisement between 75-100%; 38% of respondents read 75-50% of the content; 25% of respondents read 50-25% of the message content (Figure 5). There are 10% of respondents who read less than 25%. The desire to read the contents of the message is determined by many things, such as density, brand, pictorial, size and headline.

The brand has an important role in attracting the attention of the target audience (Wilson et al., 2015). A well-known brand may give rise to a desire to read advertisements. However, the other way could happen. For a well-known brand, the reader is often aware that the message is an advertisement so the person is not interested in reading the ad. Brand unfamiliarity is more likely to cause low awareness (Chan & Fung, 2013).

Pictures are the most important element in magazine advertisements, possibly also in commuter lines. This is especially significant when the distance between the target audience and advertising is far enough that the text is difficult to read. Images can increase the audience's interest and intention to read. The low target audience that reads the text probably do so because of the brand, image, and headline.

In certain conditions, the message is more interesting than the picture. Grigaliūnaite and Pilelienė (2016 b) recommend that the headline composition should be twice the body text. Thus, text advertisement for commuter lines should be short and simple.

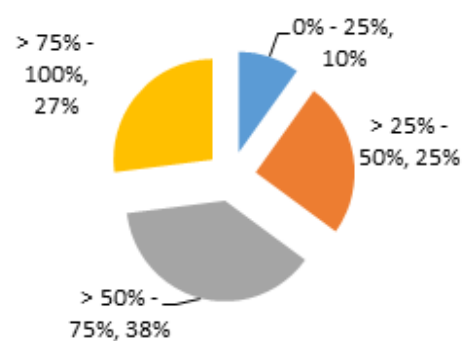


Figure 5 Number of Advertisements Read and Percentage of Number of Readers

The first rank of the most frequently viewed advertisement categories of users is the banking and insurance category, at 18,46%. The two categories of body care and cosmetics are 17,96%, in second place. The third category is the promotion of films, at 17,89%. The fourth category is mobile applications, at 16,21%. The fifth category is food and beverages at 15,93%. The sixth is household at 7,54%, and the seventh is the health or pharmaceutical category at 6,00%. Consequently, the commuter line is suitable for

banking and insurance products, body care products and cosmetics, and movie promotion.

Predictions of advertisement location determine the effectiveness of advertising, hence the differences in the effectiveness of an advertisement location. To test the difference in effectiveness, it is assumed that there are differences in the effectiveness of advertising locations I, II, III, IV, V, VI, VII, and VIII in commuter line advertising media. The locations are (1) between the hanging alley, (2) wall branding, (3) wall panel, (4) body branding, (5) hand grips, (6) interior doors, (7) ceiling panels, (8) seat covers, and (9) full interior design. In the first step, the expectations for each location and the actual assessment are counted. Next, they are compared, based on the expected and actual results. Since the p-value $\leq \alpha (k-1)$, the null hypothesis is rejected and the alternative hypothesis is accepted. Accordingly, it is concluded that there are differences in the effectiveness of advertising locations on I, II, III, IV, V, VI, VII, and VIII (Table 2 and Table 3).

Based on the consequences of this test result, due to the differences in the effectiveness of each location, advertisers must choose the most effective location. The results of this test are relevant to Wilson

and Casper (2016) who state that distance and out of home position (OOH) from the road determine the target audience's attention (Wilson & Casper, 2016). Other research results are visual aspects that affect the attention of the target audience as long as the advertisement is in the right location. Thus, the first and most important thing is to determine the right location, and other aspects will support.

By using ratings and ranking weighting, the result for the location of the most effective advertisement is the hanging alley since it is the most frequently passed by. Wall branding and wall panel are in the second and third position. At certain times, usually in the morning and evening, the commuter line is extremely crowded, and visibility is limited, so the hanging alley is where the advertisements are often seen (Figure 6).

The consequence of the research for advertisers is to choose the most effective location. Locations that are considered ineffective if the advertisement is low-priced, the size is large, and having striking images and colors. The consequence of the research for media providers is that there needs to be a price difference between advertising locations so that ineffective locations remain the advertiser's choice.

Table 2 Expectation Frequency

Rank	Weight	Rank×Weight								Total
		WB	WP	BB	HG	ID	CP	CS		
I	8	155	152	140	92	89	76	52	44	800
II	7	135	133	123	80	78	67	46	39	700
III	6	116	114	105	69	67	57	39	33	600
IV	5	97	95	88	57	56	48	33	28	500
V	4	77	76	70	46	45	38	26	22	400
VI	3	58	57	53	34	34	29	20	17	300
VII	2	39	38	35	23	22	19	13	11	200
VIII	1	19	19	18	11	11	10	7	6	100
Total		696	682	632	412	402	343	235	198	3600

Table 3 Actual Frequency

Rank	Weight	Rank×Weight								Total
		WB	WP	BB	HG	ID	CP	CS		
I	8	320	280	160	32	0	8	0	0	800
II	7	238	266	161	14	7	14	0	0	700
III	6	90	66	210	90	60	36	18	30	600
IV	5	20	50	75	85	185	50	25	10	500
V	4	28	8	20	112	80	80	40	32	400
VI	3	0	12	6	60	42	105	45	30	300
VII	2	0	0	0	10	20	48	80	42	200
VIII	1	0	0	0	9	8	2	27	54	100
Total		696	682	632	412	402	343	235	198	3600

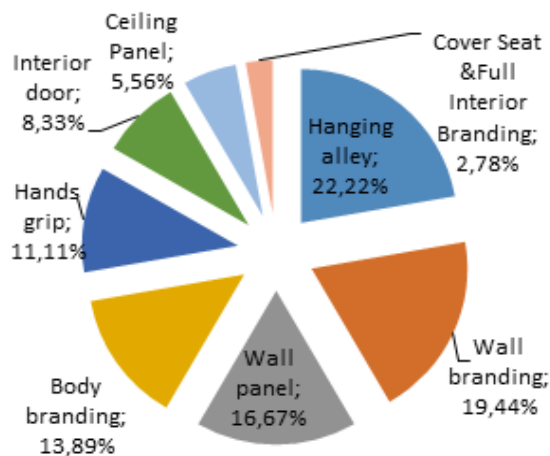


Figure 6 Coverage of Advertisements on the Commuter Line

IV. CONCLUSIONS

The research contributes to advertising on commuter lines by showing that the effectiveness of advertising locations on commuter lines varies. This research also provides an overview of advertising planning based on passenger behavior. Advertising on commuter lines is effective for mass products such as banking and insurance, cosmetic and body care, movie promotion, and mobile applications. To be effective, advertisers must choose a location in the commuter line, such as hanging alley, wall branding or wall panel. Advertisements should emphasize the visual aspect rather than textual aspect. Visual aspects that need to be highlighted are images and colors.

The research only discusses the effectiveness of advertising for commuter-line passengers. Further research is expected to have non-passengers of commuter line who see the advertising on the commuter line or at the station since they also be exposed to commuter-line advertising. Therefore, the effectiveness of the advertising location can change considering this aspect.

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