

“Investigating the level of "opportunity to see": a case of advertisements on the roadside light emitting diode video screens”

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Investigating the level of “opportunity to see”: a case of advertisements on the roadside light emitting diode video screens

Abstract

The current study investigates the level of “opportunity to see” with reference to the advertised products/service/ideas on the LED video screens in Kigali city. A total of 157 respondents were conveniently selected and interviewed just after passing by the video screens. Results demonstrate that some products/services were seen more than others and some products/services were seen in more than one video screens. It was also revealed that there is no relationship between the time of the day, the frequency of passing by the video screen, means of transport used by the respondents and the “opportunity to see” the advertised product/service/idea seen on the video screen. However, the results indicate that there is a significant relationship between the location of the video screens, prior knowledge and the respondent having used or still using the product/service and “opportunity to see” the advertised product/service/idea. Results also suggest that LED video screen advertising can be useful for achieving the desired integrated marketing communication. The paper discusses implications, limitations and directions for future research.

Keywords: advertisement, light emitting diode video screens.

Introduction

Farby (1994) defined “opportunity to see” (OTS) as the number of times an average member of the target audience has the “opportunity to see” the message. It is regarded as the best measurement of the achievement of an advertising schedule. This in turn depends on: size, position, color and timing. A large size may be more visible than a smaller one. Likewise, better position may have better visibility whereas impact can be gained from color. Timing on the other hand can achieve impact on the ground that advertising at the right moment may ensure greater attention from the audience (Farby, 1994). According to Dubow (1994) advertisement effectiveness is reflected in the consumers’ ability to recall the advertised brand/product. It is also widely agreed that the media factors will turn a creative message into an effective sales message only if the message has been seen or heard. Therefore, the medium both defines and limits the advertisers’ choices (Stuart, 1995). Thus, the level of “opportunity to see” is central to advertising for the purpose of building strong brands (Martin, 1989; Aaker, 1991; 1996), develop strong brand differences and strong brand personality (Susan, 2007); increasing product awareness (Hille, 2003); and it is the foundation of effective advertising (Korgaonkar et al., 1984; Korgaonkar and Bellenger, 1985; Hille, 2003). Hence, it is worth to understand the opportunity to see for light emitting diode (LED) video screen.

1. Advertising in Rwanda

For the past 15 years just after the war and genocide, Rwanda has witnessed fast growing economic activities that have attracted both local and foreign investors. It is this fast economic growth that has made

competition inevitable. As such many business entities have been compelled to employ different marketing arsenals to ensure that they get a sizeable market share. One of these arsenals is investing in advertisement for the purpose of informing their target audience as well as building both brand and company images. However, due to limited number of media availability in the country, advertisers had been limited to advertising in state radio commonly known as Radio Rwanda and occasionally in Rwanda Television which is the sole television station in the country. Hence, unlike in other countries with more advanced media industries, this limited the avenues through which marketers could communicate to their current and potential customers. For the past six years, however, the number of radio stations increased from one to about 16 as more radio stations were given operating licenses. Whereas this could be seen as a blessing to advertisers, but it has a negative impact as it increased media fragmentation amongst audience because those who used to tune to only one radio station, now have options of tuning to any of available stations depending on one’s interest. In addition, advertising on Rwanda Television might have been more appropriate because being the only TV station in the country one would assume that advertising on Rwanda Television would attract higher mileage. However, this has not been the case because not only television advertising is more expensive compared to radio and print media advertising, but also the penetration of television sets in Rwanda is very low whereby less than 2 percent of households in Rwanda owns Television sets and most of them are concentrated in towns. Likewise, print media in Rwanda have been performing poorly due to the fact that majority of Rwandans do not have a reading culture, and the circulation of majority of newspapers is concentrated in Kigali city alone. This implies that print advertising will result into very low exposure to

target audience. In view of this, the arrival of video screens came as solution for advertisers who wanted to increase the exposure of their products, services or ideas to the target audiences. Given the fact that Kigali city is both the administrative and commercial center of the country, these video screens target both the city dwellers as well as people from provinces. Upon returning to their hills these people from the provinces may by word-of-mouth spread the information about the advertised products like the prairie fire.

2. Light emitting diode (LED) video screens in Kigali

For the past three years, people in Kigali, the Capital city of Rwanda, had been enjoying bright lights from new video screens found in most of crossroads thanks to one outdoor advertising company namely Alpha Media. These screens also known as light emitting diodes (LED) which look like television sets (except that they are not accompanied with sound) have been attracting the attention of viewers majority of whom are without television sets in their homes. Therefore it wouldn't also be a mistake to say that these video screens have added value to the beauty of the city through aesthetic enhancement, in the same way the video-scoreboards do to the sports ground (Jesse et al., 1999).

To ensure optimum exposure, Alpha Media, a company that owns and operates these video screens has strategically placed them in three major entry/exit points to and from the city. The one located in Nyabugogo area targets people from or going to the Southern and Western Provinces, while the ones at Remera Giporoso and Remera Kisimenti target people coming from or going to Eastern Province and also Remera and Kimironko residents majority of whom are middle income earners. Given the fact that there is only one major shopping center in Kigali city (i.e., Commercial and Matheus streets), the three screens within the city center and other two situated at Sopetrade which is the major entry to the city center ensure maximum exposure of advertisements to people who go around for shopping and finally leave the city from the busiest central bus station which has two screens one at the entry of the bus park and another at the end of parking line itself. It should be emphasized here that all these screens have been installed either near traffic lights or round about whereby traffic is compelled to go slow or stop while paving a way for other vehicles with more priority to pass.

3. LED video screens vs. billboards

Although both LED video screens and billboards carry ad messages within outdoor atmosphere, there are however notable differences between the nature of the messages on the billboards and video screens. For example, messages on billboards are still and therefore

could be assumed to be easily noticed by the approaching passerby whereas those in video screens keep on moving just like the ones in television sets and therefore some of them may go unnoticed.

In addition, whereas billboards have one message or theme at a time, video screens may have more than one messages and these messages are moving alternately while at the same time the target audience is on the move, hence it may be assumed that the chance of opportunity to see any of the advertisement is lower with the video screen advertisements than for those on the billboard. Lastly, like TV advertisement, the video screens permit creativity in terms of pictures and color whereas the creativity of messages for billboard is limited, which means that messages on video screens are more likely to attract viewers than those on billboards. However, both media have a major common problem which is related to the nature of distraction. For example, driving behind a bigger vehicle such as a lorry may distract drivers and passengers in small and medium vehicles from looking at adverts. However, it may also be assumed that the speed of the means of transport may have more negative effect for advertisements on video screens than those on billboards. That is, in the case of video screen, the higher is the speed, the less is the chance of seeing the advert because the pictures are also moving.

Although there might be many studies on outdoor advertising, majority of them are related to billboards (Taylor and Franke, 2003; 2004) and signage (Berman and Evans, 1998; Belch and Belch, 2004; Taylor et al., 2005) just to mention few. Taylor and Franke (2003) found that billboard users reported that they could expect an average loss of sales in excess of 12 percent if they lost access to billboards. In the same vein, Taylor and Franke (2004) found that 83.7 per cent of respondents stated that billboards are informative and help businesses in creating jobs. Berman and Evans (1998) noted that high visibility of the sign is essential in communicating the location of a business to consumers, whereas Belch and Belch (2004) argued that signs interact with advertising media to help form both store image and the overall impression the consumer has of a business. Taylor et al. (2005), on the other hand, argued that readable and conspicuous signs play an integral role in marketing in the society and are helpful to both businesses and consumers. These roles include communicating the location of the business, reinforcing the advertisements as a part of integrated marketing communications, branding the site, and enhancing store/brand image. Despite these useful findings, there is paucity information on the opportunity to see with regard to the light emitting diode video screens. Even the available researches on outdoor advertisements are based on the markets of advanced economies, whose environment is different from the environment in emerging markets.

4. Objectives of the study

The current work's main objective is to investigate the level of "opportunity to see" (OTS) with regard to advertisements placed on light emitting diode (LED) video screens, bearing in mind the product advertised on these screens. This major objective is hinged on the following variables: namely the location of the video screen; the time of the day the target audience pass by the screen; the means of transport used by the target audience; the frequency with which the target audience pass by the video screen; prior knowledge of the advertised product/service/idea and the target audience having used the advertised product/service/idea. Thus, more specifically, the study intends to investigate the following.

The first objective is to establish if there is a relationship between the location of the video screen and the product/service/idea seen. This is based on the assumption that all locations are not the same in terms of topography, the height at which the video screen has been fixed and the number and movement of the traffic. That is, if the location of video screen gets more traffic, it may result into slower movement that may lead to exposure to advertisements on video screens, hence increased opportunity to see. In addition, traffic passing in different locations does not move at the same speed that is in some locations traffic move faster than in other locations and those moving at higher speed may have less chance of exposing their occupants on advertisements which also scroll across the screens.

The second objective is to determine if there is a relationship between the time of the day people pass by the screens and the opportunity to see the products advertised products. Generally, people have an impression that it easier to see on the video screen when there is darkness than when there is a light. This means that advertisements on the screens are more visible during evenings and nights than during the mid day. This implies that advertisements will not get equal exposure due to the difference in visibility which is associated with intensity of light.

Since people travel by different means of transport such as public transport, self driving, some ride on motorcycles while others go on foot. Thus, the third objective is related to examining if there is a relationship between the means of transport used and the product/service/idea seen on the video screen. It is obvious that people travelling by these categories of transport do so at different speed which in turn may have bearing on their opportunity to see advertisements on video screens.

The fourth objective is to understand if the frequency with which members of target audience pass

by the screen has a relationship with the product/service/idea seen on the screen. By and large, it would be argued that the more frequency people pass by the screen the more they are likely to notice advertisements on the screen. In other words, the person who frequently passes by the video screen will see more advertisements than a person with less frequency of passing by the video screen.

The fifth objective is related to investigate if prior knowledge of the product/service/idea has a relationship with seeing the advertised product/service/idea on the screen. It is assumed that, it is easier for people to notice something that they are familiar with than the one they are not. In other words, it can be said that it is easier for people to see the advert of product/service/idea which they are familiar with. Closely related to this argument is that, target audience who use particular products/idea is also more likely to notice those products' advertisements.

5. Research hypotheses

From the foregoing objectives, the hypotheses stated will be used to test the relationship between each of the mention variable and opportunity to see the advertised products/service/idea on the screen. The statistical procedure is to state the null hypothesis (H_0), which is to be followed by the alternative hypothesis (H_1). While a H_0 is a statement that no change has occurred from the condition specified, the H_1 is a reversal of a H_0 (Adu-loju et al., 2009). Thus, if in hypothesis testing, a H_0 is rejected, then, the H_1 will be accepted. Thus, the following are the hypotheses put forward:

H_0 : There is no significant relationship between the location of video screen, the time of the day, the means of transport used by the target audience, the frequency with which the target audience pass by the video screens, the prior knowledge of the product/service/idea, having used the product/service/idea, and the opportunity to see the product/service/idea advertised on video screen.

H_1 : There is a significant relationship between the location of video screen, the time of the day, the means of transport used by the target audience, the frequency with which the target audience pass by the video screens, the prior knowledge of the product/service/idea, having used the product/service/idea, and the opportunity to see the product/service/idea seen on video screen.

6. Methodology

Data was collected from the seven locations in which LED video screens have been erected. The target population included all people who pass by these screens irrespective of the means of transport used because basically these screens target mass market.

Since the population of that nature is infinite, and given the nature of the medium (LED video screen), convenience sampling was employed to get the required number of respondents. The approach was that; the interviewer would wait for the potential interviewee to pass by the screen from the opposite direction where it was assumed she/he has seen the screen. Then the interviewer would stop the potential respondent and request for his/her consent to be interviewed. If the person agreed, the interviewing procedures commenced. In order to operationalize the OTS concept, respondents were asked to mention which product/service/idea they saw as they watched on the screen. Although the target was 300 respondents, but the survey resulted into 157 respondents because some respondents did not respond to all questions properly hence such questionnaires were deemed unusable. Data was collected during morning, afternoon and evening so as to check if the time of day has a significant impact on the opportunity to see. Thus, the instrument sought information related to: the location of the LED video screen; time of the data collection; means of transport used by the target audience; frequency of passing by the screen; the product/service/idea seen; whether or not the respondent knew the product/service/idea that he/she claimed to have seen on the screen and lastly whether she/he has ever used the product/service/idea that he/she claimed to have seen on the screen.

7. Analysis and interpretation

Chi-square was performed and resulted into very interesting results. For example, Table 1 (see Appendix) indicates that, the location where the video screen has been placed was found to have a significant relationship with the product/service/idea seen. Therefore, the hypothesis H_0 that "There is no significant relationship between the location of video screen and the opportunity to see the product/service/idea advertised on the screen" was rejected ($\chi^2 = 281.397$; $p < 0.000$) and H_0 is accepted. In this regard, Coca Cola was seen by 18 respondents at Giporoso screen, while Rubangula House and Kisimenti screens each had 8 respondents who claimed to have seen this product. Primus (beer) was also seen by seven respondents at Giporoso, Rubangula 5 respondents, and Sopedtrade and Kisimenti each by 4 respondents and SMS Media was seen by 6 respondents at Nyabugogo screen. This could be due to the possibility that some advertisements appear more frequently in some screens than in others, or it could also be just a matter of coincidence.

Results also reveal that there is no relationship between the time of the day (Table 2, see Appendix), and the product/service/idea seen ($\chi^2 = 67.736$; $p > 0.05$). This could be due to the bright light on these

screens which make them clearly visible even during the day. It has also been shown that the means of transport (Table 3) used by respondents have no relationship with the opportunity to see the product/service/idea advertised on the screen ($\chi^2 = 76.493$; $p > 0.05$). Probably this could be due to the fact that, these screens have been placed in areas (for example near traffic lights) where people have to move at a low speed or even stop for their own safety irrespective the means of transport they use. It is during this time that people have opportunity to look at the screen. Also the frequency of passing near the video screen (Table 4, see Appendix) was found to have no relationship with the opportunity to see the product/service/idea advertised on the screen. This could also be due to the assumption that people who frequently pass near these video screens tend to get used to them such that they may pass without even looking at them thus reducing their chances of seeing more advertised products/brands. Thus, the hypothesis H_0 that "There is no significant relationship between the location of video screen, the time of the day, the means of transport used by the target audience, the frequency with which the target audiences pass by the video screens, and the opportunity to see the product/service/idea seen on video screen" is accepted whereas the alternative hypothesis H_1 rejected.

However, as Table 5 indicates, it was found that there is a relationship between the prior knowledge of the product/service and the opportunity to see the product/service/idea seen ($\chi^2 = 5056.684$; $p < 0.000$). Thus, the hypothesis H_0 that "There is no significant relationship between the prior knowledge of the product/service/idea and the opportunity to see the product/service/idea advertised on the screen" was rejected and the alternative hypothesis was accepted. Corollary to this, the same Table 5 (see Appendix) shows that the respondent who has used or still using the product/service/idea is more likely to see or recognize the same product once she/he comes across the related advertisement, hence the relationship was significant ($\chi^2 = 4967.838$; $p = 0.000$). This led to the rejection of the hypothesis H_0 that "There is no significant relationship between the respondent having used the product/service/idea and the opportunity to see the product/service/idea advertised on the screen" and the alternative hypothesis H_1 accepted.

In addition, descriptive data on socio-economic characteristics of respondents, means of transport used by the respondents, the number of the advertised products seen on the screens, and products/service/idea seen in different screens were obtained. The results indicate that total number of respondents interviewed was 157 out of 300, that is 52 percent of the total questionnaires expected. This was partly due to the respondents being under time pressure such that they could not fill in all

questions (for those who requested to fill in themselves) or not responding to all questions (for those who agreed to be interviewed) which in turn made those questionnaires being rejected. In this regard, the number of complete and usable questionnaires from different areas was as follows: Remera Giporoso – 47; Rubangula – 32; Sopetrade – 24; Remera Kisimenti – 23; Roundabout City center – 15; Nyabugogo – 10 and Centenary House – 6. Of 157 respondents, 61.8 percent were males whereas 38.2 percent were female (Table 6, see Appendix), whereas 63.1 percent and 34.1 percent were single and married respectively (Table 7, see Appendix). Regarding education level of respondents, 41.4 percent were university graduates and 40.8 percent were secondary school leavers (Table 8, see Appendix). Regarding the income levels, majority (47.1 percent) stated that they earn less than RWFR 100,000 per month, followed by those who earn above RWFR 101,000 per month 26.1 percent (Table 9, see Appendix). Respondents who are employed made up 56.1 percent while business persons were 24.8 percent (Table 10, see Appendix). Of 157 respondents, 38.9 percent used public transport followed by pedestrians (30.6 percent) and self driving were 21 percent (Table 11, see Appendix).

On the other hand, Table 12 (see Appendix) indicates that the Roundabout screen in the city center is leading with a bigger number of products seen (9), followed by Sopetrade (6), Kisimenti (5) and the screen at Rubangula House and Giporoso each with 4 products. In the case of service advertisements, Giporoso screen is leading with 8 followed by the screen at Rubangula House (7), Sopetrade (5) and Kisimenti (4). Regarding the product/service/idea seen on different screens, Table 13 (see Appendix) shows that Rwanda tea and Coca Cola were each seen in 6 screens, Primus and SMS Media were seen in 5 screens, Mutzig and Rwandair each was seen in 4 screens, MTN was seen in 3 screens, other ten items were each seen in 2 screens and the rest 17 were each seen in one video screen. This shows that not all products have equal chances of being seen.

It was also found that, the total number of products claimed to have been seen were 16, services were 15 and ideas were 3. Table 13 also shows that the first five products that were seen most in that order were: Coca Cola – 45 (28.66 percent); Primus – 22 (14 percent); SMS Media – 12 (7.64 percent); Rwanda Tea – 11 (7.0 percent) and MTN – 8 (5.1 percent). This could be due the assumption that these are familiar products and services in Rwanda such that their ads are easier to notice, probably because their image can be easily retrieved from the respondents' memories. The video screens at Gioporoso, Rubangula House and Kisimenti in that order are leading

areas where the major products were seen except SMS media which was seen most in Nyabugogo.

Discussion and findings

The purpose of this exploratory research was to determine the level of “opportunity to see” (OTS) of advertisements on the light emitting diode (LED) video screens. This which could be an indicator of advertising effectiveness of these video screens as the number of businesses using them in Kigali is increasing. In view of this we sought to determine the number of people who claim to have seen the advertised product/service/idea after passing by these video screens. Hypotheses testing revealed that the location where the screen has been fixed has significant relationship with the “opportunity to see” the advertisement on the screen. This means that the topography and the overall environment of the screen location, may favor the level of “opportunity to see” the advertisement on the screen, and consequently increasing the ad effectiveness. However, the time of the day people pass by the screen has been found to have no relationship with the “opportunity to see”, which implies that seeing the advertisement does not depend on the intensity of the light surrounding screen. This may imply that if all other factors remain constant, ads have equal opportunity to be seen during any time of the day. Likewise, means of transport has been found to have no relationship with the “opportunity to see” advertisements on the screen. This means that people who pass by these screens irrespective of their socio-economic status have equal chance of seeing advertisements which indicates that these video screens can help advertisers reach a wider cross-section of the market. However, it was surprising to find that frequency of passing by the screen does not have relationship with the opportunity to see advertisements. In other words, passing by the screen more frequently does not lead to seeing many different advertised products. This implies that the longer the ad stays with the screen(s) the higher is the level of “opportunity to see” the advertisement. Lastly, both prior knowledge and having used the advertised product/service/idea has been found to have a relationship with the “opportunity to see” the advertised product. This supports the earlier findings (Rosbergen et al., 1997; Ha and Litman, 1997; Grunert, 1996; Okechuku, 1992; Wilber, 1988; and Krugman, 1986) who found that prior knowledge of the product has positive relationship with its advertisement recognition. This implies that, marketers can increase the “opportunity to see” the advertisements on the screen by increasing knowledge of their products through the application of other marketing strategies including other promotional tools.

Thus, our findings support the role of LED video screens in supplementing the traditional media such as radio, television and print media for the purpose of informing and building product/brand, company and institution image (Martin, 1989; Aaker, 1991; 1996) which forms the basis for better price and ultimately higher profit (Low and Mohr, 2000). In view of this, it is not surprising to see that the Ministry of Local Government (MINALOC) has used these screen for their campaign to inform the public about the Works for Public Interest done by the genocidaires who have pleaded guilty; the Ministry of Health has used them in their against exploitation of teenagers by sugar daddies and sugar mummies and the Rwanda Defense Forces (RDF) has used them to inform and build its image during their "Army week" activities.

Managerial implications

Our study has the managerial relevance for the business community and the advertising industry in Rwanda. Although our study is exploratory in nature, the results show that LED video screens can be effective medium as measured by the opportunity to see that is translated by the number different products/services and ideas that respondents claimed to have seen. First, the relationship between the location of the screen and the opportunity to see the advertisement implies that advertisers can gain more if they could place more ads with the screens in those locations. The fact that the time of the day does not affect the visibility of the advertisements encourages advertisers to take advantage if there are advertising rates that are based on the time of the day. Also, the fact that means of transport has no relationship with the "opportunity to see", assures the advertisers that these LED video screens are useful in exposing their products to various socio-economic groups. Lastly, the finding that prior knowledge and having used the product have relationship with opportunity to see the advertisement, signals that these screens can be suc-

cessfully used as supporting media in addition to other marketing strategies including other promotional tools. Finally, placing advertisement in different screens can increase its exposure to the target audience. In view of this, advertised products/services/ideas are more likely to gain mileage by advertising on LED video screens. The importance of using LED video screens in emerging economies arises from the fact that the use of other traditional media such as TV, radio and news papers alone do not bring about the desired results. As earlier highlighted, this is because of poor TV set penetration in households as a result of low purchasing power and low level of rural electrification, the problem of clutter for radio advertisements as more advertisers place their ads with radio stations and low newspaper circulation and poor readership that make news paper advertising more uneconomical. Therefore, the use of LED video screens for advertising is encouraged for the purpose of achieving integrated communication management.

Limitations

There are limitations to this study highlighted in this section. Responses of people who claimed to have not seen any advertisements were not recorded. If these were recorded perhaps could have shown the percentage of those who saw the adverts on the screen and those who did not. Also the respondents' future intentions were not measured so as to determine whether the ads in video screens can bring about change in attitudes towards the advertised products/service/idea. Not only that but also the screens involved were not of the same sizes, which also could have affected the opportunity to see whereby locations with bigger screens may have more chances than those with the smaller ones. However, as the smallest screen was 4m², it is assumed that this could not pose major difference amongst the screens. Therefore, future research could look into these limitations.

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Appendix

Table 1. The relationship between the video screen location and the product/service/idea seen

S/No	Product	Location of the study							Total
		Roundabout	Rubangula	Centenary House	Nyabugogo	Sopetrade	Kisimenti	Giporoso	
1	Coca Cola ^p	5	8	1	0	5	8	18	45
2	Primus ^p	0	5	0	2	4	4	7	22
3	Uprotur ^p	1	3	0	0	0	0	0	4
4	Rwanda-Tea ^p	1	3	1	0	3	2	1	11
5	Mutzig ^p	1	0	0	0	1	3	2	7
6	Ocir cafe ^p	1	0	0	0	0	0	0	1
7	Palmalaccoil ^p	0	0	1	0	1	0	0	2
8	Agaseke ^p	1	0	0	0	0	0	0	1
9	Aprofoam ^p	1	0	0	0	0	0	0	1
10	Amekicolor ^p	1	0	0	0	0	1	0	2
11	Afrifoam	0	0	0	0	1	0	0	1
12	Fruits ^p	0	0	0	0	0	0	1	1
13	Juice ^p	0	0	0	0	0	0	1	1
14	Tiles ^p	0	0	0	0	1	0	0	1
15	Snacks/hamburger ^p	0	1	2	0	0	0	0	3
16	Rwandadispatch ^p	1	0	0	0	0	0	0	1
17	Lotto ^s	0	0	0	0	0	1	0	1
18	SMS Media ^s	1	3	1	6	1	0	0	12
19	Express forex bureau ^s	1	0	0	0	0	0	1	2
20	Westrn Union ^s	0	0	0	0	0	1	1	2
21	COGEAR ^s	0	0	0	0	0	0	1	1
22	MTN ^s	0	1	0	0	2	0	5	8
23	SORAS ^s	0	0	0	0	0	0	1	1
24	KIU ^s	0	0	0	0	0	1	1	2
25	RITA ^s	0	0	0	0	0	0	1	1
26	KCB ^s	0	1	0	0	1	0	0	2
27	Rwandair ^s	0	2	0	0	1	1	2	6
28	Star Africa Media ^s	0	1	0	0	3	0	0	4
29	Rwandese Musicians ^s	0	1	0	0	0	0	0	1

Table 1 (cont.). The relationship between the video screen location and the product/service/idea seen

S/No	Product	Location of the study							Total
		Roundabout	Rubangula	Centenary House	Nyabugogo	Sopetrade	Kisimenti	Giporoso	
30	Riviera School ^s	0	1	0	0	0	0	0	1
31	Football ^s	0	1	0	0	0	0	0	1
32	MINALOC ⁱ	0	0	0	0	0	1	0	1
33	Armyweek ⁱ	0	1	0	0	0	0	4	5
34	Sinigurisha ⁱ	0	0	2	2	0	0	0	2
Total		15	32	6	10	24	23	47	157
Chi-square = 281.397					p = .000				

Notes: p is a product; s is a service; i is an idea.

Table 2. The relationship between the time of the day and advertisement of the product/service/idea seen

S/No	Product/service/idea	Time of the study			Total
		Morning	Afternoon	Evening	
1	Coca Cola ^p	15	8	22	45
2	Primus ^p	6	7	9	22
3	Uprotur ^p	3	0	1	4
4	Rwanda-Tea ^p	3	3	5	11
5	Mutzig ^p	0	2	5	7
6	Ocircafe	1	0	0	1
7	Palmalac oil ^p	0	1	1	2
8	Agaseke ^p	0	1	0	1
9	Aprofoam	0	1	0	1
10	Amekicolor ^p	1	0	1	2
11	Afrifoam ^p	0	1	0	1
12	Rwandadispatch ^p	0	1	0	1
13	Fruits ^p	1	0	0	1
14	Juice ^p	0	0	1	1
15	Snacks/hamburger ^p	1	0	2	3
16	Tiles ^p	0	1	0	1
17	Lotto ^p	0	0	1	1
18	SMS Media ^p	0	4	8	12
19	Express forex bureau ^s	1	1	0	2
20	Westrnunion ^s	0	0	2	2
21	COGEAR ^s	0	0	1	1
22	MTN ^s	2	0	6	8
23	SORAS ^s	0	0	1	1
24	KIU ^s	1	0	1	2
25	RITA ^s	1	0	0	1
26	KCB ^s	1	0	1	2
27	Rwandair ^s	3	0	3	6
28	Star Africa Media ^s	1	1	2	4
29	Rwandese Musicians ^s	1	0	0	1
30	Riviera School ^s	0	0	1	1
31	Football ^s	1	0	0	1
32	MINALOC ⁱ	0	0	1	1
33	Armyweek ⁱ	1	1	3	5
34	Sinigurisha ⁱ	0	0	2	2
Total		44	33	80	157
Chi-square = 67.736					p > .05

Notes: p is a product; s is a service; i is an idea.

Table 3. The relationship between the means of transport used and product or service or idea seen

S/No	Product/service/idea	Means of transport used by respondent				Total
		Public	Personal vehicle	Motorcycle	On foot	
1	Coca Cola ^p	17	11	4	13	45
2	Primus ^p	9	5	3	5	22
3	Uprotur ^p	1	1	0	2	4
4	Rwanda Tea ^p	6	2	1	2	11
5	Mutzig ^p	2	2	0	3	7
6	Ocircafe ^p	0	1	0	0	1
7	Palmalacoil ^p	1	0	0	1	2
8	Agaseke ^p	0	0	0	1	1
9	Aprofoam ^p	0	0	0	1	1
10	Amekicolor ^p	1	1	0	0	2
11	Afrifoam ^p	1	0	0	0	1
12	Tiles ^p	0	0	1	0	1
13	Juice ^p	0	1	0	0	1
14	Fruits ^p	0	0	0	1	1
15	Snacks/hamburger ^p	1	1	0	1	3
16	Rwandadispatch ^s	1	0	0	0	1
17	Lotto ^s	0	0	0	1	1
18	SMS Media ^s	6	1	3	2	12
19	Rwandadispatch ^s	1	0	0	0	1
20	Western Union ^s	1	0	0	1	2
21	COGEAR ^s	0	0	0	1	1
22	MTN ^s	2	2	2	2	8
23	SORAS ^s	1	0	0	0	1
24	K'la International University ^s	1	0	1	0	2
25	RITA ^s	1	0	0	0	1
26	KCB ^s	2	0	0	0	2
27	Rwandair ^s	2	2	0	2	6
28	Star Africa Media ^s	1	2	0	1	4
29	Rwandese Musicians ^s	0	0	0	1	1
30	Riviera School ^s	0	0	1	0	1
31	Football ^s	0	0	0	1	1
32	MINALOC ^s	0	1	0	0	1
33	Army Week ^s	2	0	0	3	5
34	Sinigurisha ^s	1	0	0	1	2
Total		61	33	15	48	157
Chi-square = 76.496				p > .05		

Notes: p is a product; s is a service; i is an idea.

Table 4. The relationship between frequency of passing near the location of LED video screen vs product/service/idea seen

	How often do you pass this route?				Total
	Once per day	Twice per day	Three times a day	Above three times	
Coca Cola ^p	11	15	2	17	45
Primus ^p	2	11	2	7	22
Uprotur ^p	0	2	1	1	4
Rwanda-Tea ^p	4	6	0	1	11
Mutzig ^p	1	3	1	2	7
Ocircafe ^p	0	1	0	0	1
Palmalacoil ^p	1	0	1	0	2
Agaseke ^p	0	0	0	1	1
Aprofoam ^p	0	0	0	1	1
Amekicolor ^p	0	1	0	1	2
Afrifoam ^p	0	0	1	0	1

Table 4 (cont.). The relationship between frequency of passing near the location of LED video screen vs product/service/idea seen

	How often do you pass this route?				Total
	Once per day	Twice per day	Three times a day	Above three times	
Tiles ^p	0	0	1	0	1
Juice ^p	0	1	0	0	1
Fruits ^p	0	0	0	1	1
Snacks/hamburger ^p	1	2	0	0	3
Lotto ^s	0	0	0	1	1
SMS media ^s	4	4	2	2	12
Rwandadispatch ^s	0	1	0	0	1
Express forex bureau ^s	1	0	0	1	2
Westmunion ^s	0	2	0	0	2
COGEAR ^s	0	1	0	0	1
MTN ^s	2	1	1	4	8
SORAS ^s	0	0	1	0	1
K'la International University ^s	0	1	0	1	2
RITA ^s	0	1	0	0	1
KCB ^s	1	0	1	0	2
MINALOC ⁱ	0	1	0	0	1
Armyweek ⁱ	1	1	1	2	5
Rwandair ^s	1	2	0	3	6
Sinigurisha ⁱ	0	1	0	1	2
Star Africa Media ^s	1	3	0	0	4
Rwandese Musicia ^s	0	1	0	0	1
Riviera School ^s	0	1	0	0	1
Football ^s	0	0	0	1	1
Total	31	63	15	48	157
Chi-square = 95.752			p > .05		

Notes: p is a product; s is a service; i is an idea.

Table 5. Relationship between prior knowledge or having used the product/service/idea and the product/service/idea seen

S/No		Prior knowledge of the product/service/idea		Total	Used the product/service/idea		Total
		Yes	No		Used	Not used	
1	Coca Cola ^p	43	2	45	40	5	45
2	Primus ^p	17	5	22	12	10	22
3	Uprotur ^p	-	4	4	1	3	4
4	Rwanda-Tea ^p	10	1	11	10	1	11
5	Mutzig ^p	7	-	7	5	2	7
6	Ocircafe ^p	1	-	1	1	-	1
7	Palmalacoil ^p	1	1	2	1	1	2
8	Agaseke ^p	1	-	1	1	-	1
9	Aprofoam ^p	1	-	1	1	-	1
10	Amekicolor ^p	2	-	2	2	-	2
11	Afrifoam ^p	1	-	1	1	-	1
12	Tiles ^p	1	-	1	1	-	1
13	Juice ^p	1	-	1	1	-	1
14	Fruits ^p	1	-	1	1	-	1
15	Snacks/hamburger ^p	2	1	3	1	2	3
16	Lotto ^s	1	-	1	1	-	1
17	SMS Media ^s	8	4	12	4	8	12
18	Rwandadispatch ^s	1	-	1	-	1	1
19	Express forex bureau ^s	2	-	2	1	1	2
20	Westmunion ^s	1	1	2	1	-	2
21	COGEAR ^s	1	-	1	1	-	1

Table 5 (cont.). Relationship between prior knowledge or having used the product/service/idea and the product/service/idea seen

S/No		Prior knowledge of the product/service/idea		Total	Used the product/service/idea		Total
		Yes	No		Used	Not used	
22	MTN ^s	4	4	8	4	4	8
23	SORAS ^s	1	-	1	1	-	1
24	K'la International University ^s	1	1	2	-	2	2
25	RITA ^s	1	-	1	1	-	1
26	KCB ^s	2	-	2	2	-	2
27	MINALOC ⁱ	1	-	1	1	-	1
28	Armyweek ⁱ	5	-	5	2	3	5
29	Rwandair ^s	6	-	6	2	4	6
30	Sinigurisha ⁱ	1	1	2	1	-	1
31	Star Africa Media ^s	2	2	4	-	4	4
32	Rwandese Musicians ^s	-	1	1	-	1	1
33	Riviera School ^s	-	1	1	-	1	1
34	Football ^s	1	-	2	1	-	2
Chi-square = 5056.78		p = .000		Chi-square = 4967.838		p = .000	

Notes: p is a product; s is a service; i is an idea.

Table 6. Respondents' gender

	Frequency	Percent
Female	60	38.2
Male	97	61.8
Total	157	100.0

Table 7. Respondents' marital status

	Frequency	Percent
Married	54	34.4
Single	99	63.1
Widow	4	2.5
Total	157	100.0

Table 8. Respondents' level of education

	Frequency	Percentage
Primary school	28	17.8
Secondary school	64	40.8
University graduate	65	41.4
Total	157	100.0

Table 9. Respondents' estimated monthly

	Frequency	Percent
Less than 100,000 FRW	74	47.1
101,000-150,000 FRW	24	15.3
151,000-200,000 FRW	18	11.5
Above 200,000 FRW	41	26.1
Total	157	100.0

Table 10. Respondents' employment

	Frequency	Percent
Student	27	17.2
Employed	88	56.1
Businessperson	45	24.8
Jobless	3	1.9

Table 11. Means of transport used

	Frequency	Percent
Public	61	38.9
Personal vehicle	33	21.0
Motorcycle	15	9.6
On foot	48	30.6
Total	157	100.0

Table 12. Product, service or idea as seen per video screen

Area	Product	Service	Idea	Total items seen
Roundabout	9	3	-	10
Rubangula	4	7	1	12
Centenary House	3	1	-	4
Nyabugogo	1	1	1	3
Sopetrade	6	5	-	11
Kisimenti	5	4	1	10
Giporoso	4	8	1	13

Table 13. The advertisement of the product/service/idea as seen in different video screens

S/No	Product	Number of screens on which ad was seen
1	Coca cola ^p	6
2	Rwanda-Tea ^p	6
3	Primus ^p	5
4	SMS media ^s	5
5	Mutzig ^p	4
6	Rwandair ^s	4
7	MTN ^s	3
8	Uprotur ^p	2
9	Palmalacoil ^p	2
10	Amekicolor ^p	2
11	Snacks/hamburger ^p	2
12	Express forex bureau ^s	2
13	Westrn Union ^s	2
14	KIU ^s	2
15	KCB ^s	2
16	Star Africa Media ^s	2
17	Ocir cafe ^p	1
18	Agaseke ^p	1
19	Aprofoam ^p	1
20	Afrifoam	1
21	Fruits ^p	1
22	Juice ^p	1
23	Tiles ^p	1
24	Rwandadispatch ^p	1
25	Lotto ^s	1
26	COGEAR ^s	1
27	SORAS ^s	1
28	RITA ^s	1
29	Rwandese Musicians ^s	1
30	Riviera School ^s	1
31	Football ^s	1
32	MINALOC ⁱ	1
33	Armyweek ⁱ	2
34	Sinigurisha ⁱ	1