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Brazil Fusion and Multi-Media Duplication

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Abstract

This paper seeks to highlight the differences between a multi-media plan created using the current tools and practices and a multi-media plan created with the newly available tools of a "virtual single-source" database in the form of a TGI-TAM fused database and multi-media planning software. We have selected two different broad target groups to show these differences: Women from ABC HHs, and Teens aged 12-17.

The analysis begins by showing the GRPs allocated to each of the print and TV portions of the plan, and the total reach of the individual TV and print plans for each target. The individual print and TV plans' total reach is then computed using random duplication, which is currently the method most often used to estimate reach for a complete plan. Then, the same plans have been re-constructed in the multi-media planning software in order to assess the "actual" duplication between print and TV. Finally, using the multi-planning tool, manual "best plans" for the same GRP levels have been created, taking into account the real duplication between the different media.

The purpose of this analysis is to determine how using a multi-media planning system can provide insights into the duplication between print and TV media and learn how much these systems can help improve the efficiencies of the media plan. Using our results, we will suggest how we think these innovative planning tools will affect the media marketplace in the future.

Background

The TGI-TAM multi-media fusion for Brazil is the first commercially available fusion in the world that will allow media planners and buyers to analyze the duplication between print readership and TV viewing using the ratings currency for both media for a variety of sociodemographics and consumer targets. The fusion methodology used here is a constrained statistical matching technique developed by Roland Soong at KMR in NY. This technique was used in order to preserve the magazine readership currency and TV ratings currency as far as possible when combining the two different databases. The same technique has been used to do a fusion of TGI Mexico with the IBOPE-AGB TAM database there, and is currently being used for a fusion of TGI Argentina and the IBOPE TAM database. The method is also being used for the first commercial print-TV fusion in the US, the MARS-NTI fusion. (For more information on this fusion technique, please see Soong and de Montigny's paper on this topic at these proceedings).

The Brazilian fusion is limited to the Sao Paulo and Rio de Janeiro markets. Therefore, all of the analyses presented in this paper are limited to these two major Brazilian markets, which represent 29.3% of the universe covered by TGI Brazil, or 19.8 million persons aged 12-64.

The Brazilian Media Market

The Brazilian media marketplace is dominated by broadcast TV (multichannel penetration for all TGI HHs is at 17%), and within broadcast television, Rede Globo is the clear leader, representing typically between 50% and 60% of broadcast TV advertising expenditures. SBT is clearly the second largest network whereas Record and Bandeirantes together represent about 10-15% of TV ad spend, depending on the market within Brazil.

The kinds of programming that all of these stations offer are relatively homogeneous. Globo's and Record's viewers are pretty evenly spread throughout all demographic groups. SBT is stronger amongst children and lower SES groups, while Bandeirantes' viewers tend to be a little more upscale. Bandeirantes shows more sports programs.

The Brazilian print market is dominated by the Abril publishing group, which owns licenses to many titles that are well known internationally. The print market is strong and diversified. There are many types of titles available, as is the case for the US and Western European markets. For example, there is a wide selection of women's titles, home & garden magazine, health & fitness books, men's titles, magazines for teens, sports magazines, etc.

Analysis

For the sake of simplicity, we have limited our analyses to two different target groups, both of them sociodemographic targets and not product group targets. These targets have been intentionally selected to be very broad target groups in order to sketch a general picture of the duplication between print and television in the Brazilian market.

The two targets for analysis are:

1. ABC Women 12-64
2. Adolescents 12-17

For both of these target groups, we selected magazines that would normally be chosen when creating a media plan. For example, we picked a selection of women's, home & garden and fitness titles for the upscale women target, and women's, men's, teen girls' and boys' titles for the adolescents.

We have limited the TV portion of the analysis to the 4 major broadcast networks that air in both Rio de Janeiro and Sao Paulo: Globo, SBT, Record and Bandeirantes. For each of these 4 TV networks, we chose the 5 major dayparts used for planning in the Brazilian market, each of them covering Mon-Sun:

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|--------------------|---------|
| 1. Morning | 06-12 h |
| 2. Afternoon | 12-18 h |
| 3. Prime-time | 18-22 h |
| 4. Late night | 22-02 h |
| 5. Late-late night | 02-06 h |

For the analysis, we chose a two-week period, the last 2 weeks of December, 2000, of TV viewing data, and the TGI Brazil 2001 survey (field completed October 2000 through March 2001).

The next step of our analysis was to investigate a group of different scenarios for each of the target groups. We built 3 different GRP distributions for print and TV, with 300 total GRPs over a campaign that lasted one month for print and 2 weeks for TV:

1. 80% TV, 20% Print
2. 70% TV, 30% Print
3. 60% TV, 40% Print

To do the analyses, we used three different pieces of software, to compare the results of stand-alone print planning/optimization (using Choices 3 and TGI Brazil) and TV planning/optimization (using Super MIDAS and IBOPE Brazil ratings) with the results obtained using a multi-media planning system that allows us to see the duplication between the media while constructing the plan (using Mercury and the fused database). Once the original plans were constructed in Mercury, we manipulated them to see how much better we could do by hand.

Expectations

Prior to the existence of constrained matching fused databases, such as the Brazilian database that we used for our analysis here, the duplication between media could only be calculated using more crude methods, by "hand." Most planners calculate "random duplication," under the assumption that those who are reached by a specific medium have media usage patterns for other media that are similar to the people who were not reached by that medium. While random duplication is the most common method for calculating duplication, the assumption has always been that, if anything, it would overestimate reach, because there is a tendency for people who are heavy users of a particular medium to also be users of other media.

Since we know that random duplication probably overestimates reach, and we expect that print and TV plans created in isolation will not produce optimal combined plans, we expect the following patterns to appear in our results:

- 1) Random duplication between the separate print and TV plans will show the highest reach results
- 2) These results will show higher differences where the reach results for one medium are different from those of the other medium
- 3) The plans that were optimized in the separate pieces of software and then analyzed in Mercury to see their duplication patterns will show the lowest reach results
- 4) The plans that were manually created in Mercury will show reach results that are better than the plans created separately but not as good as random duplication

Results

ABC Women

The results were what we expected: random duplication showed higher reach results than true duplication for the same plan. The differences were largest when the plans used less GRPs in print. For example, in our first plan, with 60 GRPs in print and 240 GRPs in TV, the reach obtained via the random duplication method was 74.1% while it was 68% using the fused database. The reach was therefore overestimated by 6.1 percentage points. Meanwhile, the reach was only overestimated by 4.2 percentage points when the plan consisted of 120 GRPs in print and 180 GRPs in TV.

<i>Plan 1: 20/80</i>	<i>Print Plan</i>	<i>TV Plan</i>	<i>Random Duplication</i>	<i>Fusion/MMPS Original Plan</i>	<i>Best MMPS Manual Plan</i>
<i>GRPs</i>	62.9	240	302.9	302.9	301.9
<i>I+ Reach%</i>	39.1	57.5	74.1	68.0	69.9
<i>Ave. Frequency</i>	1.61	4.18	4.09	4.45	4.32

<i>Plan 2: 30/70</i>	<i>Print Plan</i>	<i>TV Plan</i>	<i>Random Duplication</i>	<i>Fusion/MMPS Original Plan</i>	<i>Best MMPS Manual Plan</i>
<i>GRPs</i>	88.2	210	298.2	298.1	302.7
<i>I+ Reach%</i>	44.7	55.6	75.4	70.7	73.1
<i>Ave. Frequency</i>	1.97	3.78	3.95	4.22	4.14

<i>Plan 3: 40/60</i>	<i>Print Plan</i>	<i>TV Plan</i>	<i>Random Duplication</i>	<i>Fusion/MMPS Original Plan</i>	<i>Best MMPS Manual Plan</i>
<i>GRPs</i>	119	180	299	298.8	298.9
<i>I+ Reach%</i>	53.9	50.7	77.3	73.1	74.9
<i>Ave. Frequency</i>	2.21	3.55	3.87	4.09	3.99

To do the manual plans using the fused database, we "played" with different scenarios using the original plan as a starting point. These new "best" plans were created "blind"--numerically, rather than based on best assumptions about duplication between different print vehicles and TV dayparts. This means that a very good planner would probably be able to improve upon the "best" plans because of a more intimate knowledge of the media marketplace and the specific target.

It was not difficult to improve upon the original plans, which had been built on optimizations (best plans) for print and TV separately. The three "best manual" plans for ABC Women showed an average increase in reach of 2 percentage points over the original plans. The assumption is that a good planner and/or an optimization algorithm would easily be able to improve upon these plans.

An interesting observation is that when using random duplication for the three different levels of GRPs allocated to print and TV, there was only a 3 percentage point difference from the best plan, with 40% of the GRPs in print and 60% in TV, to the worst plan, with 20% of the GRPs in print and 80% in TV. Using Mercury, with regard to both the original plan and the best manual plan, there was a 5 percentage point difference between the best plan (40 print/60 TV) and the worst plan (20 print/80 TV).

Adolescents

With adolescents, the same patterns emerged as for ABC Women. Our expectations were confirmed again.

However, in this case, the random duplication reach estimates for the plans with less print were much more different from the "real" duplication reach estimates using fusion. On average, across the three different scenarios, the random duplication method overestimated reach by 4.7 percentage points. On the other hand, it was more difficult to achieve an improvement in reach by manually changing the insertions for the print vehicles or the GRP allocations to the TV dayparts, particularly for the plan that had a higher proportion of print (40% print, 60% TV GRPs). The average improvement in reach with the "best" manual plans across the three scenarios was of 1.8 percentage plans over the original plan that consisted of the best individual print plan and TV plans created separately.

<i>Plan 1: 20/80</i>	<i>Print Plan</i>	<i>TV Plan</i>	<i>Random Duplication</i>	<i>Fusion/MMPS Original Plan</i>	<i>Best MMPS Manual Plan</i>
<i>GRPs</i>	60.1	240	300.1	299.7	299.3
<i>I+ Reach%</i>	32.8	59.8	73.0	65.3	67.9
<i>Ave. Frequency</i>	1.83	4.01	4.11	4.59	4.41

<i>Plan 2: 30/70</i>	<i>Print Plan</i>	<i>TV Plan</i>	<i>Random Duplication</i>	<i>Fusion/MMPS Original Plan</i>	<i>Best MMPS Manual Plan</i>
<i>GRPs</i>	89.7	210	299.7	299.4	301.5
<i>I+ Reach%</i>	42.8	56.0	74.8	69.7	72.2
<i>Ave. Frequency</i>	2.09	3.75	4.01	4.29	4.18

<i>Plan 1: 40/60</i>	<i>Print Plan</i>	<i>TV Plan</i>	<i>Random Duplication</i>	<i>Fusion/MMPS Original Plan</i>	<i>Best MMPS Manual Plan</i>
<i>GRPs</i>	120.6	180	300.6	299.5	300.2
<i>I+ Reach%</i>	49.3	52.4	75.9	73.7	74.1
<i>Ave. Frequency</i>	2.44	3.43	3.96	4.07	4.07

Discussion

The analyses and results shown above are very simple and intended to test our first assumptions about the duplication between print and television and utility of fused print-TV databases and analytical software. Therefore, the analyses were in fact quite crude. A planner in a true planning situation would probably have developed a better defined target (for example, a product usage target or a more tightly defined demographic), and defined the TV dayparts in such a way as to reflect that target's use of the medium. We expect that this would show greater differences in random duplication vs. real duplication, and perhaps even greater differences between plans created separately or created jointly using tools such as fusion and Mercury.

A fuller analysis covering various different targets, GRP levels, and percentage GRP allocations to print and TV would need to be done to make more sweeping generalizations about the results. Our timing has not allowed us to do this more extensive analysis, but KMR expects to do these analyses for this and other databases in the near future.

Conclusions

The best TV and print plans, created in vacuums, do not make the best communications plans. In order to fully understand the true value of a media campaign, it is necessary to use tools that will allow us to look at the duplication of different media for a specific target. There is a lot to learn about how different vehicles across different media interact with each other. We are at the very beginning stages of this learning process, with the first rudimentary tools, including only two different media.

The future will bring us better tools, including multi-media optimization, extended fused databases that will include radio and internet ratings information, and planners and buyers who will have overcome all of the current assumptions that are being made regarding the duplication between media. Planners and buyers will create a new basis of knowledge for developing more efficient and effective multi-media plans.

These tools and the new expertise that will result from them could change the current media landscape. Magazines and TV programs that almost exclusively reach selective target groups will be recognized for contributing that exclusive reach--something that is not possible to verify with the current tools at our disposal.

We expect that the effects of these tools will be felt in the media and advertising community wherever these tools are launched. We expect that the effects will be strongest in countries with well-developed print markets, in the sense that the more diversified the print market, the more likely it is for people to recognize the contribution of specific print titles in a multi-media plan. The tools should have a positive impact on the print industry internationally.

Data Sources:

TGI Brazil 2001, KMR and IBOPE Brazil
 IBOPE Brazil TV ratings, 2000
 TGI-TAM Brazil 2000 Fused database, KMR and IBOPE Brazil
 IBOPE Brazil Monitor

Software Tools:

Choices 3
 Super MIDAS
 Mercury