



Refining Hispanic ROI

Evaluating the State of Predictive Analytics and the Opportunities for Improvement

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The Question

Most marketers today base the allocation of their marketing funds on the evaluation of their ROI. Using econometric models and other statistical techniques, they attribute brand sales to specific media and promotional efforts. This prompts the question – *how is Hispanic marketing treated in ROI analysis?* AHAA commissioned Sequent Partners to work with us to answer that question. This paper is a result of their work.

Specifically, the study objectives were to:

- provide a clear and comprehensive survey of ROI issues and their importance, in laymen's terms, including measurement issues for both the Hispanic television and Hispanic sales portion of the Total Market.
- develop a detailed technical assessment of television and sales data sets
- and to make recommendations for best practices that would improve marketing mix models' ability to accurately evaluate the ROI of the Spanish language portion of a marketing plan and other elements of the Total Market approach.

Ambitious!

Executive Summary

In the course of this study, we uncovered some issues and questions that affect *any kind* of advertising ROI modeling and some issues *specific* to Hispanic media and sales data that impact Hispanic marketing ROI measurement. We discovered that there is a fundamental, unresolved, question about the best way to model the effects of a marketer's Hispanic efforts. We also learned a lot about the attitudes and perceptions of marketers, modelers and researchers who are genuinely interested in improving their approaches and outcomes, without increasing cycle time or cost. We found that there are significant trade-offs to be considered between the technical opportunities to improve ROI measurement and the business challenges to increased cost and time requirements, as well as the typical inertia of entrenched business processes.

The motivating question – *how is Hispanic marketing treated in ROI analysis?* This question is founded upon the concern that Hispanic marketing efforts may be under-valued in marketing mix models. The number of factors impacting this question and the fact that some of them could potentially overstate as well as understate ROI make it impossible to answer this question categorically. *It is clear that the potential for mis-reading the impact of Hispanic*

marketing is relatively high due to imprecise, insensitive data inputs and lack of best-practices for modeling. Is there a systematic bias in the model? No. Are modelers doing the wrong things? No. But we have uncovered several opportunities to create best practices and strengthen data inputs and Hispanic marketing measurement in general.

These opportunities include:

- Improving the quality of Hispanic television advertising exposure data:
 - Increasing the accuracy of DMA level audience delivery beyond the 25 DMAs currently measured using people meters and highest quality sampling procedures.
 - Enhancing the precision of audience estimates to specific Hispanic ads

- Development of best practices for modeling Hispanic marketing:
 - Modelers face a trade-off between inclusiveness and sensitivity. A new best-practice is needed that provides both.
 - A long-term focus on customer lifetime value is essential for the evaluation of investments in this important, rapidly growing, consumer segment

- Continued improvement of Hispanic sales data:
 - This study occurred during a period of dramatic improvement in the Hispanic sales data available for CPG companies. We applaud these advances on the part of both IRI and Nielsen and encourage their rollout and adoption.
 - But still, smaller retail outlets remain unmeasured. The impact of this coverage shortfall is unknown. Estimates vary from 8% to 15% of sales volume, but we have to believe it is even more significant for some brands.
 - And we remain without an actual measure of consumer sales. We have an estimate of consumer sales based on store data. As long as we continue to model ROI based on a model of sales there will be uncertainty.

- Education of modelers and their marketer clients:
 - There is a lot of confusion about how Hispanic sales and media are measured. Better understanding should lead to better choices and better ROI measurement.

This is quite a laundry list of opportunities. Some of them are simpler and more straightforward than others.

Why ROI and Why Now?

To understand the context of this study of modeling Hispanic marketing ROI, we asked marketers about the importance of Hispanic consumers to their business. Every one told us

that that they recognize the value of the growing Hispanic segment as essential for the future health of their businesses. Packaged goods advertisers – *“have been waking up in the last year that Hispanics have been driving a higher share of their growth – not total volume, but growth.”*

In particular, we heard that the C-suite knows they need to drive penetration and build loyalty now. But we also heard that Hispanic efforts can wane at the brand level if short-term ROI goals are not met. *“In the end, short-term thinking sometimes undermines long-term imperatives like building brands among Hispanic consumers”* said one marketer.

Advertisers and agencies underscored the dominance of Spanish language television in reaching Hispanics. This medium represents a very large share of the Hispanic media modelers routinely evaluate. Other Hispanic media are also modeled at a lower level – including Spanish language radio, digital, in-store and local multi-cultural festivals. Spanish-language print did not appear to be a big factor. Marketers also use English language media to reach bi-lingual consumers, knowing they access both outlets.

We heard that the ROIs of Spanish language media generally exhibit mixed results, like all advertising. Outcomes depend on a number of factors – spend levels, brand development, heritage in the Hispanic community, media mix, and non-working costs. The most common reason for lower ROIs than for general market efforts is the high costs per thousand of Spanish language media, *“Hispanic ROI suffers because we are paying two to three times the CPM, but getting less lift due to lack of scale.”*

This makes clear the importance of getting ROI modeling right!

The Total Market Approach has also been a framework for this inquiry. There can be little hope for success of this approach if its sales results and media inputs can't be measured and its ROI estimates are unreliable. While this has been the case, we are happy to report that many improvements have been made and others are available if the industry has the will to pursue them.

More education will be necessary, as we found confusion and uncertainty about Total Market among modelers and marketers alike. There was no argument with the concept, *“There is no such thing as a mass market anymore - we are a multi-cultural nation.”* But another marketer pointed out the disconnect in the data, *“We like the Total Market approach, with cultural attitudinal segments. But Nielsen is language based. We would like to get a combination of both behavior and attitude.”*

In fact, marketers define Hispanics a number of different ways -- by surname, neighborhood, language spoken in the home, number of years in the US, product choices, and various attitudinal scales. Language segmentation was cited most often. Nielsen Media identifies

Hispanics by language. Nielsen and IRI's purchase panels identify Hispanics by self-identification. Hispanic stores are classified by the census demography of their surrounding retail trading area.

This modeler expressed a common sentiment, "We have heard of Total Market, but are not clear on what it means or how to use it executionally." Or worse, "No, I have not heard of it." But despite not knowing precisely what "Total Market" means, modelers often consider the origins of a campaign and its strategy when evaluating model results to add insight and as a diagnostic to explain results.

Media Data Inputs

One thing you need to know about marketing mix models is that this is a precision game. Media inputs and sales outputs have to be aligned in time and space in order to see the relationship between them. Models are driven by variations and discrete events at specific times - best fueled by highly granular data. Ideally we want ratings for specific campaign ad occurrences aligned to weekly (or even daily) store or consumer sales data. Smooth averages dampen model sensitivity clouding the ability to see the sales contribution of a particular campaign or medium. This often results in an understatement of a medium's ROI. Bear in mind, however, that most of a medium's effectiveness is dependent upon effective creative. Increasing a model's sensitivity with better data inputs only increases the medium's ROI if there is effective creative. A more sensitive read of ineffective copy will leave the ROI unchanged.

Media data frequently lacks the precision required for models. Our media currency data comes from high quality, rigorous samples and industry oversight is strong. So one might assume media inputs to the models are in good shape. However, media data was designed for *planning and buying* and is valued for its stability and trendability. Traditional media measurement, while evolving, was not designed to capture dynamic, discrete, variable audiences. Diaries were intended to collect good average audience information in a highly cost effective manner. Electronic measurement affords continuous and discrete data, yet the industry has resisted reporting individual commercial audiences. These facts work against model sensitivity, accurate ROI measurement, and, on average, will result in understated Hispanic television ROIs.

Despite these issues, marketers told us: "*Spanish language TV data seems okay.*" "*We have no issues Spanish language TV.*" And even, "*Ad sales people have lots of issues with Nielsen, but these are nuances.*"

The only concern we heard was the need for translation to the common currency -- "*We need to recalibrate the Hispanic TRPs to total TRPs because they are used at the total market level.*"

Some marketers recognized the challenge with the level of data granularity. *“The total DMA view blurs and diminishes the contribution of Spanish language media. If you could break down Hispanic ad delivery and response by store, it would be better.” “We would like to look at Spanish language media at the store level. That would provide a sharper contrast, and reveal the actual lift, but would present a problem of how to integrate the contribution of Spanish language media to the total market picture.”*

One did note that, *“The goal is to understand how Hispanic marketing efforts work – in Spanish or English. But we do not have accurate data on a persons basis.”*

The modelers, almost universally get their television data from Nielsen’s Ad*Views product. They either have their own contracts or get it through their clients. In either case, this use of the data carries an additional fee. A few modelers also rely on data supplied by ad agencies and as a result, data quality and degrees of specificity vary. One said, *“Media data is pretty clean; we get it from the agency.”* Another, *“We would feel more comfortable if it didn’t come from the agency. But we have a data review meeting for quality assurance.”*

Opportunities for Improvement - Media

Despite the almost universal acceptance of the adequacy of the television data inputs for marketing mix models, our exploration turned-up a number of opportunities for improvement. Our greatest concern is that these factors are contributing to sub-optimal measures of national Hispanic television weight.

Nielsen National Hispanic TV Data is excellent. But it is not used in the modeling process. It is based on an enumeration study-- a census of the Hispanic population, which some people we interviewed feel is better than the US Census. All US Hispanic households are included in the sampling frame and each household has a known probability of selection. Higher density Hispanic areas are oversampled for efficiency and proportionately weighted. Viewing is measured continuously, capturing all of the natural variation that fuels models. It is a strong, rigorous system.

Local measurement can’t match national for these reasons:

- Local ratings are based on quarter-hours, not the minutes metrics used for national television
- Three different measurement methods are employed – local people meter, meter-diary and diary-only, creating biases by market size

- There is no data in some markets due to unmeasured affiliates
- In diary markets, ratings are constant for a quarter, suppressing the natural variability of viewing
- Measured cable network ratings by DMA are not used, cable network audiences are allocated proportionate to cable subscriber populations

Local measurement also does not provide for commercial audience metrics like the C3 metric at the national level. Only program audiences, live+24 or live+7 are offered. It seems that actual commercial audience should be possible. Moreover, playback viewing is credited to the date of the initial commercial airing, not the date of viewing. This could result in impressions being credited to the wrong week. As we said – modeling is a precision game and week-to-week variations matter.

Finally, we want to mention that modelers often ignore variations in specific campaigns and commercials. This is not a data issue. Campaign-level data is readily available in Ad*Views. But it is often difficult to model due to technical issues (co-linearity), or sometimes overlooked. As a result, the nuances of the Total Market Approach are often washed out in ROI evaluation.

Sales Data Inputs

The most striking issue we found was the most obvious. If we hope to accurately measure the ROI of Hispanic marketing, we need measures of Hispanic consumer sales, but we do not have them.

We have three types of sales measurement:

- Store sales from which Hispanic consumer sales are estimated
- Household panel purchase data
- Frequent shopper data.

The second and third options offer direct measures of consumer household sales. But they are challenged by low Hispanic participation and resultant biases. The first option, store level data, is comprehensive and authoritative, but it doesn't provide a direct measure of Hispanic consumer sales. Sales must be estimated.

This is a CPG perspective. For non-CPG brands, sales are generally direct-to-customer and therefore directly measured. While not a focus of this study, it seems that best practices are needed for identifying Hispanics within customer data bases used for modeling. We heard quite a bit of variation in approaches used by non-CPG marketers. With that noted, let's return to the three options for the CPG world. Store data faces two challenges – coverage of stores included in the measurement and estimating consumer purchases.

Store Coverage

Coverage is simple. Smaller retail outlets, such as independent chains and even smaller bodegas are not measured. How important is this? We heard estimates between 8% and 15% of sales moving through these channels. But no one was really sure. We believe that this may be a very small concern for some brands and a significant issue for others.

Estimating Hispanic Sales from Store Sales

The issue of estimation is much harder to assess. Every measurement from a sample is subject to sampling error. This is a familiar issue that is well managed by the measurement services. But Hispanic sales require an additional level of estimation. They are modeled, as explained below, from total store sales. The fact that ROI is derived from a *model*, which uses *modeled* sales inputs, suggests the answers are two steps removed from truth. We have not seen what could be considered a full validation of the sales input estimation techniques currently employed. That would be very reassuring.

However, our exploration revealed that the techniques are very reasonable and well thought out. Over the course of this study, we were delighted to see both IRI and Nielsen move well beyond imperfect legacy systems that project total Hispanic sales from a sub-set of stores that over-represented unacculturated Hispanics. Today, both companies offer their own proprietary method that includes these features:

- Hispanic sales data for all products in all markets
- All stores included in the estimation process
- The Hispanic population of each store's trading area is the first factor in estimating the percent of store sales attributed to Hispanic shoppers.
- The preference for each product among Hispanics is the second factor. This is estimated based on preferences observed at the individual store level, as they relate to the density of Hispanic shoppers in each store.

Altogether, these appear to capture the main drivers of Hispanic sales as a share of any given store's sales volume for each specific product. Logical, but unvalidated.

The progress here is great, but we need to recognize that we are at the very early stages of the roll-out of these new, advanced, Hispanic sales estimates. It's essential that marketers and

modelers appreciate the importance of the new sources and demand them ... and be willing to pay for them.

We unearthed another very technical issue associated with Hispanic sales modeling. Hispanic buyers account for a certain share of total brand buyers – and that share differs by brand, by store, and presumably by week, depending on marketing activity. But the way things stand right now, the share of brand sales attributed to Hispanic buyers is does not vary on a week to week basis. It is flatter than it should be – because the brand share of sales attributed to Hispanic is a factor in a complicated estimating procedure updated only monthly (IRI) or quarterly (Nielsen.)

If a marketer had a gang-buster promotion or a heavy-up on Spanish language TV, it would be safe to assume most, if not all, of the sales increase associated with that effort would be attributable to Hispanics. However, because a constant estimating factor is imposed over the time period, only a fixed share of sales would be attributed to Hispanics. The factor could dramatically under-estimate the effects of the campaign or promotion among Hispanics.

Modelers are aware of this issue and believe they deal with it in the modeling process. We've spent some time on this topic with the modelers, but are not yet certain the application of an "interaction factor" overcomes the limitation of the fixed, constant factor that potentially under-estimates sales lift of a Hispanic campaign. It is clearly an area of further exploration for those technically capable and thusly inclined.

For perspective, it is worth noting that these same issues would apply to any attempt to use store sales data to read the impact of a tightly segmented ad campaign. Campaigns addressed to women 18-49 may not suffer much because the behavior of such a large segment wouldn't be that much different from the total population. But looking a smaller segment – women 18-24 for instance, will be hindered by some of the same challenges we articulate for the Hispanic market.

We know actual measured consumer sales data should solve this problem for small segments of the population as well as Hispanics. But the current sources, while promising, are not there yet.

National Consumer Panel

Hispanic measurement in the IRI/Nielsen shared National Consumer Panel has been improved dramatically just this year. Panelists have been added in four more high density Hispanic markets for a total of eight. These represent about half the Spanish language preferred population in the US. High-quality sampling and recruitment techniques have been employed.

The data is projected to the total US as well as total populations of specific segments such as language preference. In addition, English language-preferred, self-identified Hispanic households are drawn from the total panel.

These recent investments are commendable, but limitations remain due to the cost of further improvements. The panel size remains limited – with just 2,100 Spanish preferred/dominant , 8,282 English preferred/dominant Hispanics, for a total of 10,382. Hispanic English preferred/dominant and bilingual Hispanic households are present in all markets, but representivity issues remain because half of the Spanish preferred/dominant population is excluded from the sampling frame – those who live outside the 8 markets.

Further, the sample is too small for modeling purposes. However, many of the modelers we spoke with have used the panel for special analyses or triangulation purposes. It can be useful for estimating purchase dynamics – especially penetration and loyalty in support of growth strategies aimed at Hispanics.

Despite these improvements some marketer are still concerned. One said, *“We use Homescan, but it is not sufficiently representative of low income and unacculturated Hispanics. We don’t use it for modeling.”* This comment may reflect outdated information; the panel improvements are relatively recent.

Continued growth of the household panel would be helpful, but that will require sufficient customer demand and significant financial support.

Single Source

Single-source data, with very large samples of individual households with ad exposures directly linked to purchases, might seem ideal. Existing services have not seen much demand for their Hispanic analyses. They face two major issues.

- First, frequent shopper cards and credit cards, the source for purchase data, suffer low participation rates among Hispanics. And Hispanics tend to have high mobility, which means sample bias is very likely.
- Second, set top box data, the source of television exposures, is far from ideal because much of Hispanic viewing is over the air.

Could these data sets be improved sufficiently to deliver accurate Hispanic consumer purchase data linked directly to media exposures – both Spanish and English language? There is no simple solution, but the potential value is so great that we believe it is well worth striving for.

One marketer said, *“We want a bigger purchase panel with a bigger Hispanic sample. Best would be Hispanic Frequent Shopper Data.”*

Could Hispanics be selectively sampled from massive frequent shopper databases and weighted to achieve better representivity? Or must they be supplemented with a focused, Spanish language preferred shopping card, or credit card, that appeals specifically to those under-represented segments of the population to “fill in the blanks” for the frequent shopper or credit card data?

Could set-top box data be supplemented with a large sample of over-the-air-only metered households?

It’s all possible. The barriers are perceived need, perceived value of the solution, and time and money. And perceptions are changing – *“Most marketers only worry about getting the revenue and profit targets, not as much about the right volume from the right segments. But that conversation seems to be changing.”*

Brand Tracking Data

Some modelers also looked at attitudinal data as a part of their ROI evaluation process. Most often for corroboration and diagnostics, not as a model input. One said, *“We look at metrics like awareness, brand favorability, and purchase intent as independent corroboration.”* Another used brand tracking data to better understand the advertising results—*“As a diagnostic – creative efficacy, relevance. Helps us to understand and explain outcomes.”*

In a few cases brand tracking data was used to provide a longer term perspective of brand building among loyal Hispanic consumers – *“Lately, brands that want to justify Hispanic spending want to use brand metrics to get a less subjective perspective.”*

Modeling Technique

A surprise finding in this study was very little agreement on the best way to model Hispanic sales lift and ROI. And after due consideration, we conclude there is work to be done here!

We first asked marketers and modelers how important and pervasive modeling is in their organizations. No surprises here. Marketers told us: *“We use modeling to understand the ROI and effectiveness of the media vehicles so we can allocate or re-allocate funds.”* *“80% of our sales volume is modeled and the metrics go to the Board of Directors.”* *“Our CMO is holding*

brands and agencies accountable to marketing effectiveness metrics.” “ROI is a significant factor in budget allocations and budget cuts.”

And there was no lack of experience with Hispanic ROI modeling. Modelers reported that about 50%- 70% of their projects include Hispanic activity, depending upon their mix of clients. They have evaluated Hispanic marketing in many categories: retail, telecom, fast food, automotive, pharmaceuticals, financial services and CPG.

Marketers take a variety of approaches to assessing the short-term contribution of Hispanic consumers to brand sales

- Some create models for Spanish language media and high-density Hispanic stores. This provides greater sensitivity in the read of Hispanic sales. But the projection of these sales to total Hispanic population and then to total sales is required, creating the potential for under or over representation. Here’s what one modeler told us, *“There is probably some sensitivity upside to a separate Spanish language media model. There’s a little more error around the total store sample. But then you need to integrate the findings into total sales picture.”*
- Others use only one overall model. Hispanic efforts are read through their total sales impact, along with all their other initiatives. This creates the potential for under and over estimation of Hispanic ROI due to colinearity and misattribution.

A modeler moving from the first to the second approach expressed a common sentiment of uncertainty, *“We model Hispanics with a separate model, and just focused on Spanish language media. We realize this is antiquated and should move to more of a Total Market approach. We need to look at the impact of all media on the Hispanic segment, but it’s hard to know how to do that right.”*

The pros and cons of each modeling approach relate to model sensitivity, in the case of the first approach, and completeness of the measure of sales impact, in the case of the second. The care taken and resources allocated vary case-by-case and generally depend on the size of the Hispanic investment and the brand’s strategic goals. One marketer told us, *“When we switched to total store sales and total GRPs, we saw similar results. When we used Hispanic sales, we were unable to calibrate or check results versus shipments data.”*

There seems to be a movement toward a single model because as one marketer said, *“Brands want to see everything from one model.” “We use one model, reading results in overall sales. Campaigns are broken out so that the Hispanic ROI can be identified.”* Another modeler said *“Our modeling is integrated from the start with Hispanic and non-Hispanic stores so we can read the impact of both Spanish language media and English language media on Hispanic stores.”*

This trend aligns with the Total Market Approach. And marketers recognize that. *“We need to put together the total perspective – English media’s effect on Hispanics as well as Spanish language media’s effect on non-acclimated Hispanics.”*

Sometimes developing only one model has been motivated by a lack of confidence in measures of Hispanic sales, *“We are modeling the impact of Spanish language media on total market sales. We do not model the impact on Hispanic stores because we don’t have a perfect measure of Hispanic sales.”* Recent developments in estimating Hispanic sales may change attitudes like these and enable modelers to look at both Hispanic and total sales to get a more complete picture.

In fact there is some interest in a hybrid modeling approach involving simultaneous models of the general market sales and Hispanic sales. This enables marketers to assess the effects of Spanish language media on Hispanic stores as well as Hispanic volume within the total market. *“We would like to have both approaches – Spanish language media impact on Hispanic stores and total market with Hispanic rolled in”.*

One important last thought on modeling approaches. Hispanic marketing investments are best evaluated on a long-term basis due to the projected growth of this population and its spending power. Some advertisers are more focused on the growth rate of the segment, *“Hispanic ROI is not always as strong as general market segments, but as an investment it makes sense.”* Another marketer noted, *“Brands that invest in brand building activities can drive growth more so than short-term sales. They drive penetration and customer lifetime value.”* Many brands have experienced a higher loyalty among Hispanics than the general market. One said, *“Despite the (modest) ROI, we see our Hispanic dollar sales growing. We want to create brand loyalty among this growing population.”*

In summary, we believe a fact-fueled conversation about modeling approaches could lead to a best-practice that can be broadly adopted. That said, there would be lots of proprietary points of difference among the modeling firms. But marketers would benefit from the discussion and the general recognition of minimum best practices that will ultimately elevate the practice everywhere.

Summary and Recommendations

This study found 3 areas for potential improvement in Hispanic ROI measurement:

1. Insufficiently accurate, precise and granular media data; media data blurs model read.
2. Sales data may undercount; Hispanic sales are projected estimates – not measured.
3. Lack of agreed best modeling practice; it's hard to get a sensitive read and count the full contribution of Hispanic marketing.

We recommend a number of steps to continue the progress that has been made in the past year:

1. Work with Nielsen Media in a step-by-step, collaborative, process toward improved television data for MMMs.
2. Evaluate the business case for improved coverage of unmeasured retail outlets by both Nielsen and IRI.
3. Call for industry efforts towards better consumer purchase data (frequent shopper, credit card, CRM databases).
4. Lead an industry evaluation of the long-term importance of Hispanic marketing.
5. Convene a dialogue among modelers toward an accepted set of best practices for modeling Hispanic marketing.
6. Continued communication and education.

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