

Rapid Test Results: Kevin Hillstrom: President, MineThatData

For many multichannel catalog and retail organizations, improved profitability and customer understanding is just a mail/holdout test away.

Matchback algorithms provide great insight, but the algorithms *always overstate the true effectiveness of marketing activities*. For this reason, multichannel catalog and retail organizations should execute mail/holdout tests. The incremental difference between a representative sample of customers mailed a catalog/e-mail, and those not mailed a catalog/e-mail, provide a picture of the true impact of a marketing activity.

Many organizations are able to execute tests. However, staffing levels and programming challenges limit the ability of the organization to analyze results in a comprehensive and rapid manner.

What is needed is an analysis process that *allows underfunded or undermanned marketing teams to obtain results for tests in a rapid manner*. Analytical insights should allow the multichannel catalog or retail organization to better understand the incremental impact of a catalog or e-mail marketing campaign, to become more profitable, to better serve customers.

I call this process “*Rapid Test Results*”. At the end of the document, I outline the steps the multichannel catalog or retail organization follow in order to receive test results in a rapid manner, along with specific cost information.

Let’s review the results of a sample Rapid Test Result for a catalog mailed to housefile customers. E-Mail marketers, the concepts of your craft easily fit in this structure.

Rapid Test Results: Acme Corporation

Test Objective: To understand the incremental benefit of the January catalog mailing, sent by Acme Corporation to existing housefile customers on January 4, 2007.

Test Design: 30,000 0-24 month housefile customers were randomly split into two groups. The first group of 15,000 customers, called the “mailed group”, received the January catalog on January 4. The second group of 15,000 customers, called the “holdout group”, should have received the January catalog on January 4. Instead, this segment of customers was not mailed the catalog.

Test Results: A series of eleven tables illustrate the incremental benefit of this mailing. Let’s review Figure 1, where overall test results are analyzed.

Figure 1: Overall Test Results				
	Phone/Mail Totals	Website Totals	Retail Totals	Total Volume
Mailed Group	\$15.00	\$17.00	\$0.00	\$32.00
Holdout Group	\$12.00	\$16.00	\$0.00	\$28.00
Incremental Results	\$3.00	\$1.00	\$0.00	\$4.00
Incremental Profit/Cust.				\$0.60

In total, the catalog generated \$3.00 of incremental volume via telephone/mail channels, and \$1.00 of incremental volume in the online channel. Acme Corporation does not have a retail channel, therefore, there are no sales in that channel. In total, the catalog mailing generated \$4.00 of incremental online volume. In total, this mailing generated \$0.60 of incremental profit, per customer mailed the catalog. In total, this mailing was a success!

Figure 2 outlines the results of the test in the phone/mail channel.

Figure 2: Phone/Mail Results						
	Phone/Mail, Catalog Tested	All Other Catalogs, Week 1	All Other Catalogs, Week 2	All Other Catalogs, Weeks 3-4	All Other Catalogs, Weeks 4+	Total Phone/Mail Volume
Mailed Group	\$4.00	\$2.00	\$2.00	\$3.00	\$4.00	\$15.00
Holdout Group	\$0.00	\$2.50	\$2.50	\$3.00	\$4.00	\$12.00
Incremental Results	\$4.00	(\$0.50)	(\$0.50)	\$0.00	\$0.00	\$3.00

An interesting story is told here. The catalog drove \$4.00 of incremental volume. However, across all other catalogs that the customer could have purchased from, \$0.50 were cannibalized during week one (the in-home week), with another \$0.50 cannibalized during week two. Therefore, only \$3.00 of phone volume is incremental to the business.

Figure 3 illustrated how this catalog mailing impacted the online channel.

Figure 3: Online Results					
	Website Week 1	Website Week 2	Website Weeks 3-4	Website Weeks 4+	Total Website Volume
Mailed Group	\$5.00	\$3.00	\$4.00	\$5.00	\$17.00
Holdout Group	\$3.00	\$4.00	\$4.00	\$5.00	\$16.00
Incremental Results	\$2.00	(\$1.00)	\$0.00	\$0.00	\$1.00

During the in-home week of the catalog, an incremental \$2.00 of volume, per customer, were driven to the online channel. However, the mailing actually cannibalized online sales across this

audience during the second week. After two weeks, the catalog mailing did not influence online results. In total, \$1.00 of volume, per customer, was generated online.

If a retail channel exists (or telemarketing or any other channel), additional tables will be created, and modifications to existing tables will occur to accommodate the additional channels.

Figure 4 illustrates the incremental benefit of the mailing across “best customers”, the third of the housefile that have spent the most money during the past twenty-four months.

Figure 4: Best Customer Results				
	Phone/Mail Totals	Website Totals	Retail Totals	Total Volume
Mailed Group	\$18.00	\$20.00	\$0.00	\$38.00
Holdout Group	\$14.00	\$18.00	\$0.00	\$32.00
Incremental Results	\$4.00	\$2.00	\$0.00	\$6.00
Incremental Profit/Cust.				\$1.20

For best customers, this mailing was worthwhile, generating an incremental \$4.00 in the phone/mail channels, \$2.00 in the online total, for a total of \$6.00 incremental volume. This volume converts to \$1.20 of incremental profit.

Figure 5 illustrates the incremental benefit of the mailing across “average customers”, the third of the housefile that spent an “average” amount of volume during the past twenty-four months.

Figure 5: Average Customer Results				
	Phone/Mail Totals	Website Totals	Retail Totals	Total Volume
Mailed Group	\$15.00	\$17.00	\$0.00	\$32.00
Holdout Group	\$12.00	\$16.00	\$0.00	\$28.00
Incremental Results	\$3.00	\$1.00	\$0.00	\$4.00
Incremental Profit/Cust.				\$0.60

Notice that mailing average customers was a profitable activity, generating \$4.00 of incremental volume that yielded \$0.60 of incremental profit, per customer.

Figure 6 illustrates the incremental benefit of the mailing across “marginal customers”, the third of the housefile that spent the least volume during the past twenty-four months.

Figure 6: Marginal Customer Results				
	Phone/Mail Totals	Website Totals	Retail Totals	Total Volume
Mailed Group	\$12.00	\$14.00	\$0.00	\$26.00
Holdout Group	\$10.00	\$14.00	\$0.00	\$24.00
Incremental Results	\$2.00	\$0.00	\$0.00	\$2.00
Incremental Profit/Cust.				\$0.00

Notice that this group of customers, comprising a third of the customer file, did not generate any incremental profit. This audience should be monitored, because it is very likely that half of this audience was unprofitable, comprising close to twenty percent of the total housefile catalog circulation.

Maybe we can understand the type of customer that did not generate profit. Let's analyze phone/mail customers, "multichannel" customers, and online customers. Figure 7 illustrates the results for phone/mail customers.

Figure 7: Phone/Mail Customer Results				
	Phone/Mail Totals	Website Totals	Retail Totals	Total Volume
Mailed Group	\$32.00	\$2.00	\$0.00	\$34.00
Holdout Group	\$24.50	\$2.00	\$0.00	\$26.50
Incremental Results	\$7.50	\$0.00	\$0.00	\$7.50
Incremental Profit/Cust.				\$1.65

Notice that this segment of the customer file is wildly profitable! These customers generated a lot of incremental volume in the phone/mail channel. In total, this segment of the audience generated \$7.50 incremental volume, and \$1.65 incremental profit.

Figure 8 illustrates the results for "multichannel" customers, those who purchase via the online and phone/mail channel.

Figure 8: Multichannel Customer Results				
	Phone/Mail Totals	Website Totals	Retail Totals	Total Volume
Mailed Group	\$11.00	\$22.00	\$0.00	\$33.00
Holdout Group	\$10.00	\$20.00	\$0.00	\$30.00
Incremental Results	\$1.00	\$2.00	\$0.00	\$3.00
Incremental Profit/Cust.				\$0.30

These customers are not nearly as profitable. Notice that about 2/3 of their volume occurs online. In total, these customers generated an incremental \$1.00 of phone/mail volume, \$2.00 of incremental website volume, for a total of \$3.00 incremental volume. This volume yields \$0.30 incremental profit.

Figure 9 illustrates how online customers performed, when they were mailed this catalog.

Figure 9: Online Customer Results				
	Phone/Mail	Website	Retail Totals	Total
	Totals	Totals		Volume
Mailed Group	\$2.00	\$27.00	\$0.00	\$29.00
Holdout Group	\$1.50	\$26.00	\$0.00	\$27.50
Incremental Results	\$0.50	\$1.00	\$0.00	\$1.50
Incremental Profit/Cust.				(\$0.15)

In this case, online customers did not respond to the catalog mailing, generating only \$1.50 of incremental volume, losing \$0.15 incremental profit. My recommendation is to not mail this customer segment, unless there is a positive long-term sales benefit to mailing this segment of the housefile.

The analysis ends with two additional tables. Let's understand how this catalog mailing drove sales volume by product classification.

Figure 10: Results By Product Classification, Phone/Mail						
	Product #1	Product #2	Product #3	Product #4	Product #5	Total Phone/Mail Volume
Mailed Group	\$4.00	\$2.00	\$2.00	\$3.00	\$4.00	\$15.00
Holdout Group	\$3.00	\$2.50	\$2.50	\$2.00	\$2.00	\$12.00
Incremental Results	\$1.00	(\$0.50)	(\$0.50)	\$1.00	\$2.00	\$3.00

Product classifications one, four and five benefitted from this mailing. Product classifications two and three were not featured in the catalog. As a consequence, these classifications experienced sales decreases when the catalog was mailed. Let's see what happened online, by product classification.

Figure 11: Results By Product Classification, Online

	Product #1	Product #2	Product #3	Product #4	Product #5	Total Website Volume
Mailed Group	\$4.00	\$3.00	\$2.00	\$4.00	\$4.00	\$17.00
Holdout Group	\$2.00	\$4.00	\$5.00	\$3.00	\$2.00	\$16.00
Incremental Results	\$2.00	(\$1.00)	(\$3.00)	\$1.00	\$2.00	\$1.00

We see similar results in the online channel. Products two and three, not featured in the catalog, experienced an actual decrease in sales volume.

Test Conclusion: Overall, this catalog mailing was profitable, and should be continued next year. However, a significant portion of the circulation was at or below break-even. On average, unprofitable customers included infrequent customers who tend to only purchase in the online channel. I would advise reduced circulation across this customer audience.

In total, the mailing drove an average of \$4.00 incremental volume. The mailing drove \$4.00 volume to phone/mail key codes associated with the January catalog. The mailing cannibalized \$1.00 of phone/mail volume in other catalogs. The mailing drove \$1.00 of incremental volume to the online channel.

When grossed-up to the actual circulation of 1,000,000 households, we observe the following:

- Housefile Volume in the January catalog = \$4,000,000.
- Housefile Volume in surrounding catalogs = (\$1,000,000).
- Housefile Volume in the online channel = \$1,000,000.
- Total Housefile Volume = \$4,000,000.
- Total Housefile Profit = \$600,000.

Rapid Test Results: Analysis Requirements

Two files are needed to conduct a Rapid Test Results analysis.

File #1: Think of this file as a spreadsheet with just two columns.

- **Column A** = Household ID or Customer ID or E-Mail ID, the unique number that describes each customer/household in an anonymous manner.
- **Column B** = Test group. If the customer was in the “mailed” group, place a “1” in this column. If the customer was in the “holdout” group, place a “0” in this column.

File #2: Think of this file as a spreadsheet that, for every customer in the mailed and holdout group, lists each item the *customer ever purchased*. Each row represents an item that the customer purchased. This information is essential to conduct the analysis, and the data should include orders for as far back as the customer data warehouse keeps information.

- **Column A** = Household ID or Customer ID or E-Mail ID, the unique number that describes each customer/household in an anonymous manner.
- **Column B** = Order Date, the date that this customer purchased merchandise.
- **Column C** = Product Classification, the department/classification that represents the type of merchandise the customer purchased (Mens Shirts, Womens Dresses, Computers, HDTVs).
- **Column D** = Quantity of items purchased.
- **Column E** = Price of item.
- **Column F** = Volume (Quantity * Price).
- **Column G** = Disposition (Shipped, Returned, Not Available, Etc)
- **Column H** = Channel Item Was Purchased In (Mail, Phone, Online, Retail Store).
- **Column I** = “1” if the item was attributed to the catalog/e-mail campaign being analyzed, “0” otherwise.

These two files should be burned onto a CD or DVD, depending upon how many customers are in the mail and holdout segments. The vast majority of tests can be burned onto a CD.

In addition to each file, the following information is needed to analyze the test.

- The unit cost of the marketing activity (i.e. each catalog costs \$0.60, each e-mail delivered costs \$0.002).
- The rate at which demand/sales/volume is converted to profit (sometimes called the “profit factor”). This rate is used to calculate profit, where applicable.
 - Example: 32% of volume is converted to profit.
 - Net Sales = 80% of Demand/Volume.
 - Gross Margin = 50% of Net Sales.
 - Pick/Pack/Ship Expense = 10% of Net Sales.
 - Profit Factor = $0.80 * (0.50 - 0.10) = 0.32$.

The two files (usually saved in comma-delimited format), coupled with cost/profit information, are send next-day to me. If we agree that the bandwidth exists on my end, prior to the start of the

project, I should be able to complete the analysis and deliver results within 24-48 hours of receiving the files.

Project Cost = \$1,900.

The project cost must be paid on or before the date when I receive test information, unless otherwise negotiated prior to the start of the analysis.

Should information not arrive in the format specified in this document, or should ad-hoc requests or additional information be needed in the analysis, an increased project cost will be determined jointly.

Deliverable

The test analysis will be delivered as either a Microsoft Word or Adobe PDF document. I can e-mail the document to you, or I can deliver the document via next-day mail.

Expectations

If my workload allows, a Rapid Test Results project should be completed and delivered within 24-48 hours upon receipt of the information. If this expectation is not reasonable, we will pre-arrange a reasonable timeframe for receipt of the deliverable.