Case: Television Retailing
Optimal Product Line Designs

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1 Background

Wal-Mart, the world's largest retailer, operates more than 5,700 stores on four continents[1]. The chain follows a strategy of selling a wide range of products at low prices. Wal-Mart's successful execution of this strategy has made it a top contender in consumer product categories as diverse as toys and health products.

Another such category is consumer electronics, which accounts for about 9% of Wal-Mart's sales[2] (which totaled more than $285 billion in 2005[1]). The consumer electronics department at a typical Wal-Mart sells televisions, stereos, computer gaming consoles, DVD players, and other "brown goods." While Wal-Mart pursues a low-cost strategy, it does not exclusively sell products at the low-cost end of their respective categories. Wal-Mart consumer electronics departments also sell high-end goods, albeit at some of the lowest prices to be found for those particular products.

Darryl Biggins[3], Director of Consumer Electronics for Wal-Mart's Southeast division, is evaluating the range of products available for sale in his department. In particular, he is trying to decide what should be the assortment of televisions Wal-Mart should carry in a new outlet that they are planning to open shortly? A competitor

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[3] This case is purely hypothetical and does not describe any real event. All names and references to the decisions at Wal-Mart are entirely fictitious. It is developed purely for instructional purposes.

research in the 25 mile radius showed that a limited set of television brands and models were being carried by the two small local retailers in the catchment area.

An investigation of the different models available indicated that there was a limited set of attributes that played a key role in the consumer decision making process in purchasing a new television in this market area. The specific attributes and levels of the attributes that are considered relevant are provided in Table 1 below.

Brand	Screen	Sound	Parental Controls	Program Guide	Price
JVC	30" CRT	Mono Sound	No Parental control	No Program Guide	$300
RCA	36" Plasma	Stereo Sound	Parental controls	On-screen Program Guide	$400
Sony	32" LCD	Surround Sound			$500
					$750

Table 1: Attributes and Attribute Levels for Televisions

2

Market Study (See Appendices A & B)

To help him determine the optimal product mix that this new store should carry, Mr. Biggins commissioned a market research firm to find out what the typical Wal-Mart customers might want. Customer preferences for six attributes of televisions were collected: brand, screen type, sound quality, parental controls, on-screen program guide, and price. The results of this conjoint analysis[4] are located in the file containing the idiosyncratic part-worths for the 200 customers. The Utility file provides information is called ***[TV-NewUtility File.01b]***. This file provides you with the part-worths for each individual customer for each level of each of the six attributes.

A market area research discovered that there were only a few models that accounted for the bulk of the sales. Many of the other smaller brands were not competitive or did

[4] The conjoint data presented here are are not meant to be representative of the actual attributes employed.

not have the features needed to register on the scale. The specific models customers typically ended up purchasing are provided in the competitive matrix data file. The specific levels of the attributes describing each one of these currently available products from the competitors can be found in the Competitors file [***TV-NewCompetition File.01c***].

Mr. Biggins has made these files available to you. It would be terrific to have you come up before the product planning groups' meeting with the Buying Team the specific television models that this new store should carry. This will enable the buyers to meet with the suppliers to negotiate the details in order to have the television models on hand prior to store opening. Among the issues that Darryl is wrestling with is the marginal benefit of selling multiple different models. He is prepared to carry as many as four different television models given the amount of store space that he has for the consumer electronics division at this new store. Preparing to go into the Saturday conference, he would like to analyze whether the additional market share warrants additional research on the incremental merchandising cost. Prior the next round of intensive negotiations with the manufacturers he would like to prep his buying team. Specifically, he knows that the questions that would come up are: should we terminate our relationship with JVC, or work with them to improve their TVs?

Among other issues that have come up for attention is the one relating to the explosive growth of Best Buy [3]. Darryl is aware of the work done by leading market researchers in segmenting the market. This has enabled the leading consumer appliance chains to customize their stores to the local market rather than use a cookie cutter. Any insights that you can provide prior to the planning meeting on addressing this issue may of some help in the successful opening of the new store.

References

[1] Hoover's Inc. Wal-mart stores, inc. overview. Retrieved 3/8/3006 from http://premium.hoovers.com/subscribe/co/overview.xhtml?ID=11600, March 2006.

[2] Hoover's Inc. Wal-mart stores, inc. products & operations. Retrieved 3/8/3006 from http://premium.hoovers.com/subscribe/co/ops.xhtml?ID=11600, March 2006.

[3] "Minding the Store: Analyzing Customers, Best Buy Decides Not All Are Welcome; Retailer Aims to Outsmart Dogged Bargain-Hunters, And Coddle Big Spenders; Looking for 'Barrys' and 'Jills'," *Gary McWilliams*. **Wall Street Journal**. (Eastern edition). New York, N.Y.: Nov 8, 2004. pg. A.1.

Appendix A:

FILE: TV-NewUtility File.01b

- The first line indicates the number of consumers in the data set (200); the number of attributes (6); and the number of levels for each of these attributes.
- The next set of lines indicates the idiosyncratic preferences (scaled to sum to 1.0) for each individual for each attribute level.
- The last set of lines indicates the names of the attribute levels.

200,6,3,3,3,2,2,4,,,,,,,,

0.176,0.057,0.097,0.240,0.006,0.000,0.000,0.070,0.077,0.192,0.000,0.009,0.000,0.027,0.000,0.024,0.025
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0.227,0.032,0.000,0.000,0.020,0.037,0.000,0.118,0.129,0.227,0.000,0.057,0.000,0.071,0.051,0.030,0.000
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JVC,,,,,,,,,,,,,,,
RCA,,,,,,,,,,,,,,,
Sony,,,,,,,,,,,,,,,
"30""CRT",,,,,,,,,,,,,,,
"36""Plasma",,,,,,,,,,,,,,,
"32""LCD",,,,,,,,,,,,,,,
Mono Sound,,,,,,,,,,,,,,,
Stereo Sound
Surround Sound
No parental controls
Parental controls
No program guide
On-screen program guide
$300
$400
$500
$750

Appendix B:

FILE: ***TV-NewCompetition File.01c***

- The first line indicates the number of competing products in the market place (5); the number of attributes (6); and the number of levels for each of these attributes.
- The next set of lines indicates the specific levels of each attribute in each of the competing models.
- The last set of lines indicates the names of the attribute levels.

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5,6,3,3,3,2,2,4,,,,,,,,
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1,0,0,0,1,0,0,1,0,0,1,0,1,0,1,0,0
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0,0,1,0,1,0,0,0,1,0,1,0,1,0,0,0,1
JVC,,,,,,,,,,,,,,
RCA,,,,,,,,,,,,,,
Sony,,,,,,,,,,,,,,
"30""CRT",,,,,,,,,,,,,,
"36""Plasma",,,,,,,,,,,,,,
"32""LCD",,,,,,,,,,,,,,
Mono Sound,,,,,,,,,,,,,,
Stereo Sound
Surround Sound
No parental controls
Parental controls
No program guide
On-screen program guide
$300
$400
$500
$750
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