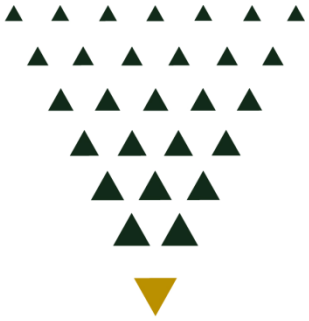


VERNON

RESEARCH GROUP

Conjoint Capabilities

Conjoint Analysis

What is a "conjoint" and what can it do?

- Conjoint methodology models human selection behavior and mirrors how individuals **con**sider **jointl**y-grouped attributes of a product or a service – the process they go through when they purchase
- With a conjoint, we can determine how much value individuals place on each attribute or element inside of a theoretical bundle
- Better/nearly-perfect products or services can be built by combining the most highly-valued attributes
- Conjoint exercises also show what features consumers might be willing to trade away in order to get the features they really want
- Study data can be used to create market simulations that predict the impact of a new product offering or price changes on existing market share

Conjoint Analysis

Excellent for:

- Determining the best combinations of product or service features
- Setting the best pricing for products or services
- Gauging brand equity
- Understanding a new product's impact on the current market, including potential cannibalization issues
- Finding utility values for all features tested, even those which may be hypothetical or merely being planned
- Forecasting sales in future markets

Conjoint Analysis

Setup for conjoint:

- "Factors" and "Levels" are determined
  - Factors are general areas for examination
  - Levels add detail to the factors and should reflect the range of possibilities for the product or service

- Different brands and price levels are often included

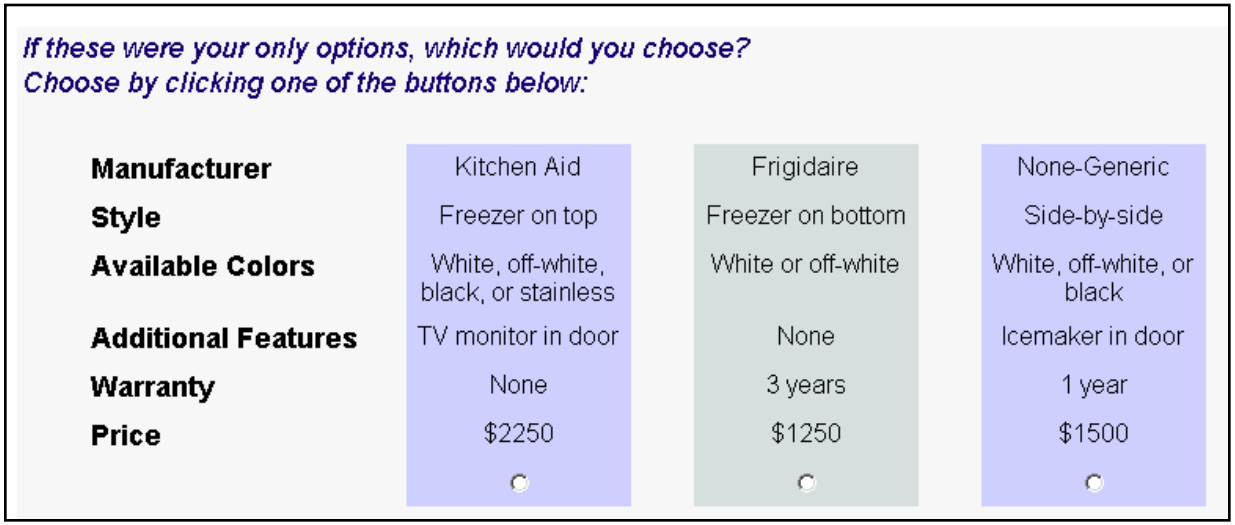
- Factors should reflect the most important parts of the product or service

Factor/Level Example

Factors	Levels						
Manufacturer	None-Generic	Whirlpool	Frigidaire	Kenmore	GE	Kitchen Aid	
Style	Freezer on top	Freezer on bottom	Side-by-side	French doors			
Available Colors	White	White and off-white	White, off-white and black	White, off-white, black and stainless			
Additional Features	None	Icemaker in door	Filtered water dispenser	TV monitor in door			
Warranty	None	1 year	3 years	5 years			
Price	$750	$1000	$1250	$1500	$1750	$2000	$2250

Choice-based Conjoint (CBC)

- Respondents choose which bundle of random features they would purchase, all else being equal.
- Respondents typically complete 8-12 sets of choices, with 3-4 product bundles per choice.
- The maximum number of factors is generally 6.
- The maximum number of levels per factor is determined by how large the sample will be and the number of interactions necessary between levels.

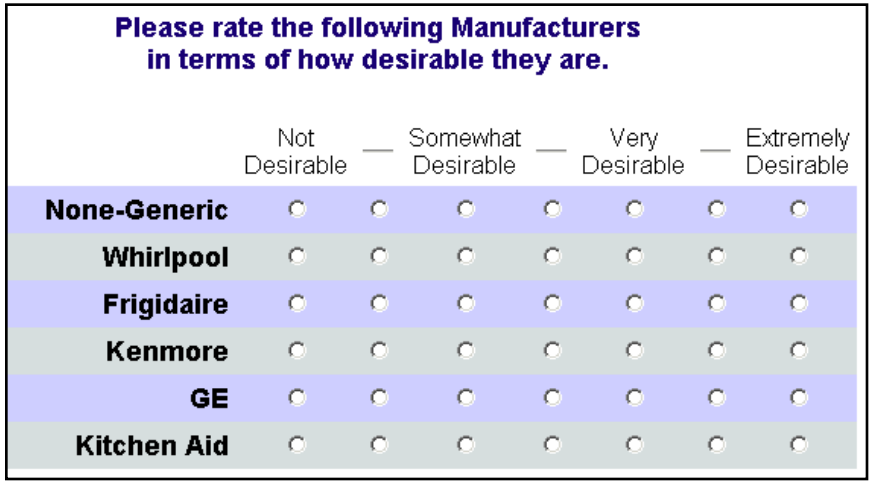


If these were your only options, which would you choose?
Choose by clicking one of the buttons below:

Manufacturer	Kitchen Aid	Frigidaire	None-Generic
Style	Freezer on top	Freezer on bottom	Side-by-side
Available Colors	White, off-white, black, or stainless	White or off-white	White, off-white, or black
Additional Features	TV monitor in door	None	Icemaker in door
Warranty	None	3 years	1 year
Price	$2250	$1250	$1500
	○	○	○

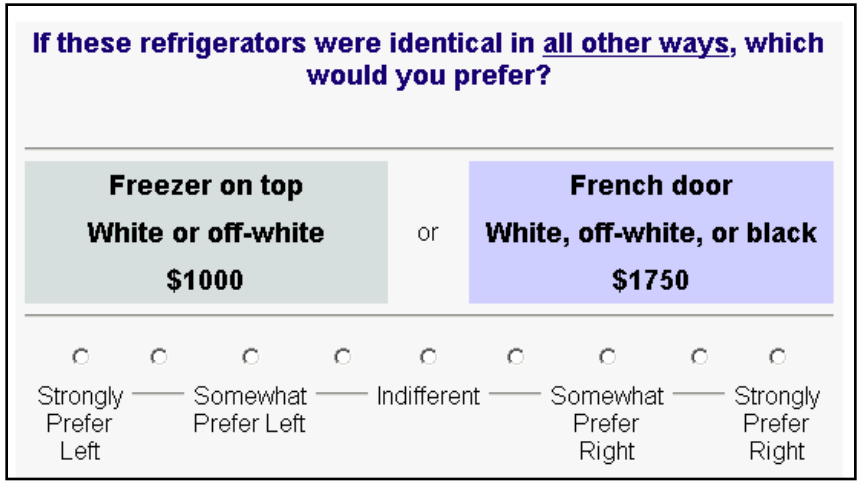
Adaptive Conjoint Analysis (ACA)

- Instead of choice between product bundles, Adaptive Conjoint measures respondent ratings between individual levels and groups of levels.
- This method is good for exercises with a large number of attributes/features.
- This method is also good for examining new product categories.
- This method is not suited to examine price sensitivity.



Please rate the following Manufacturers in terms of how desirable they are.

	Not Desirable		Somewhat Desirable		Very Desirable		Extremely Desirable
None-Generic	○	○	○	○	○	○	○
Whirlpool	○	○	○	○	○	○	○
Frigidaire	○	○	○	○	○	○	○
Kenmore	○	○	○	○	○	○	○
GE	○	○	○	○	○	○	○
Kitchen Aid	○	○	○	○	○	○	○



If these refrigerators were identical in all other ways, which would you prefer?

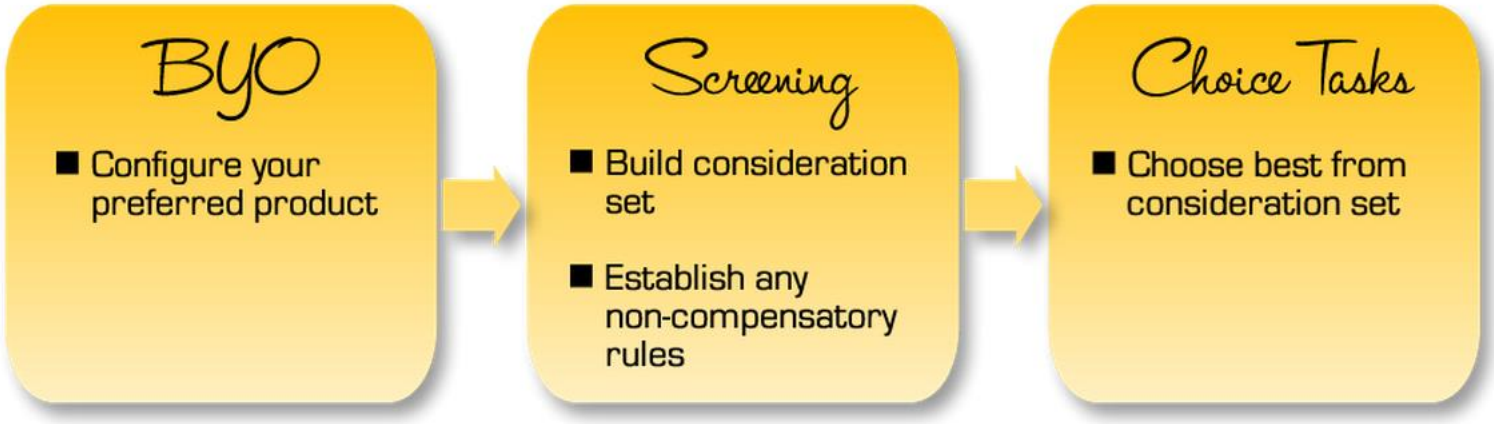
Freezer on top **White or off-white** **$1000**	or	**French door** **White, off-white, or black** **$1750**

○ ○ ○ ○ ○ ○ ○ ○ ○

Strongly Prefer Left — Somewhat Prefer Left — Indifferent — Somewhat Prefer Right — Strongly Prefer Right

Adaptive CBC (ACBC)

- ACBC leverages the best aspects of CBC and ACA.
- ACBC is an interactive experience, customized to the preferences and opinions of each individual.
- This method is based on solid behavioral theory (first consider, then choose) which directly incorporates non-compensatory decision-making to obtain strong individual-level estimates and can even work with small sample sizes.
- This method also provides more accurate market simulation data than CBC.



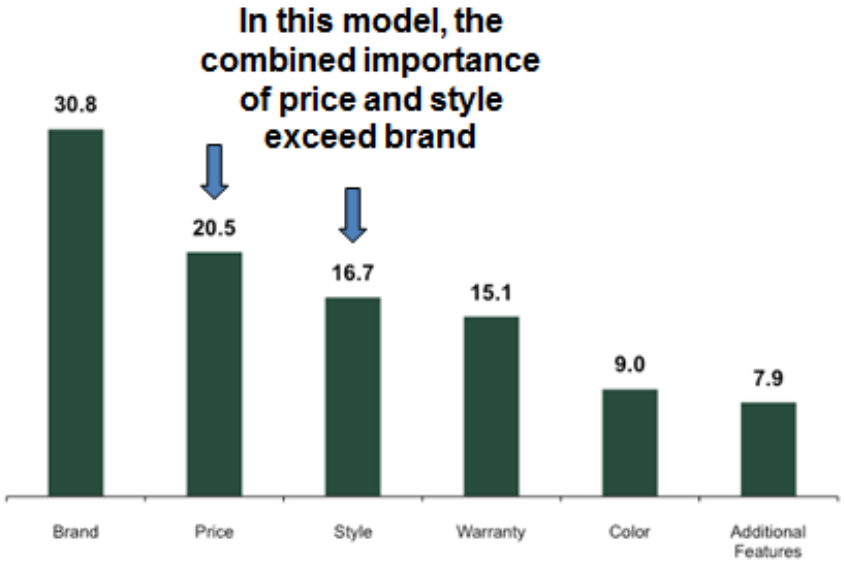
Menu-based Conjoint (MBC)

- MBC is an advanced modeling methodology.
- MBC mimics the real-world experience of choosing among a variety of options when configuring a preferred product.
- Studies with MBCs are useful in situations where end-users may select pre-designed bundles **as well as** items *a la carte*.
- Respondents generally enjoy these exercises due to the freedom provided them during the customization process.
- Examples of products and services when MBC might be preferred:
  - choosing options to put on an automobile
  - selections from a restaurant menu
  - banking options
  - configuring an insurance policy
  - mobile phone plans
  - home phone, Internet and/or cable bundles with options

Output

Importance (of factors)

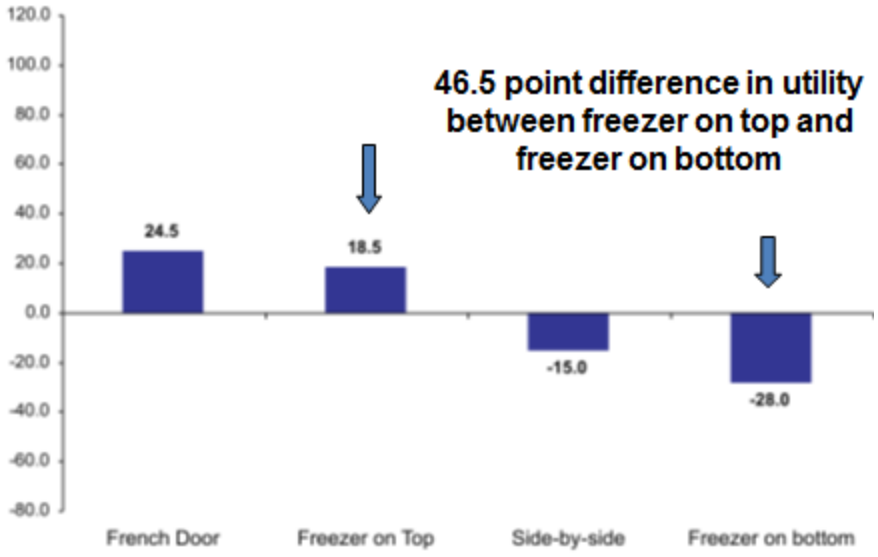
- The relative weight respondents give each factor when making purchasing decisions.
- Importance is not consciously assigned; instead, weights are calculated based on how each choice decision was made.
- Importance is also additive, so the sum total of two factors of lesser importance may exceed a factor of higher importance.



Output

Utility (of levels)

- This is a measure of each level's usefulness on an integer scale.
- Utility values are created through effects coding, where the sum of all values equals zero.
- Negative scores do not necessarily translate into an unattractive evaluation.
- Another way of thinking about utility is as *level preference* within the same factor.



Output

Market simulations

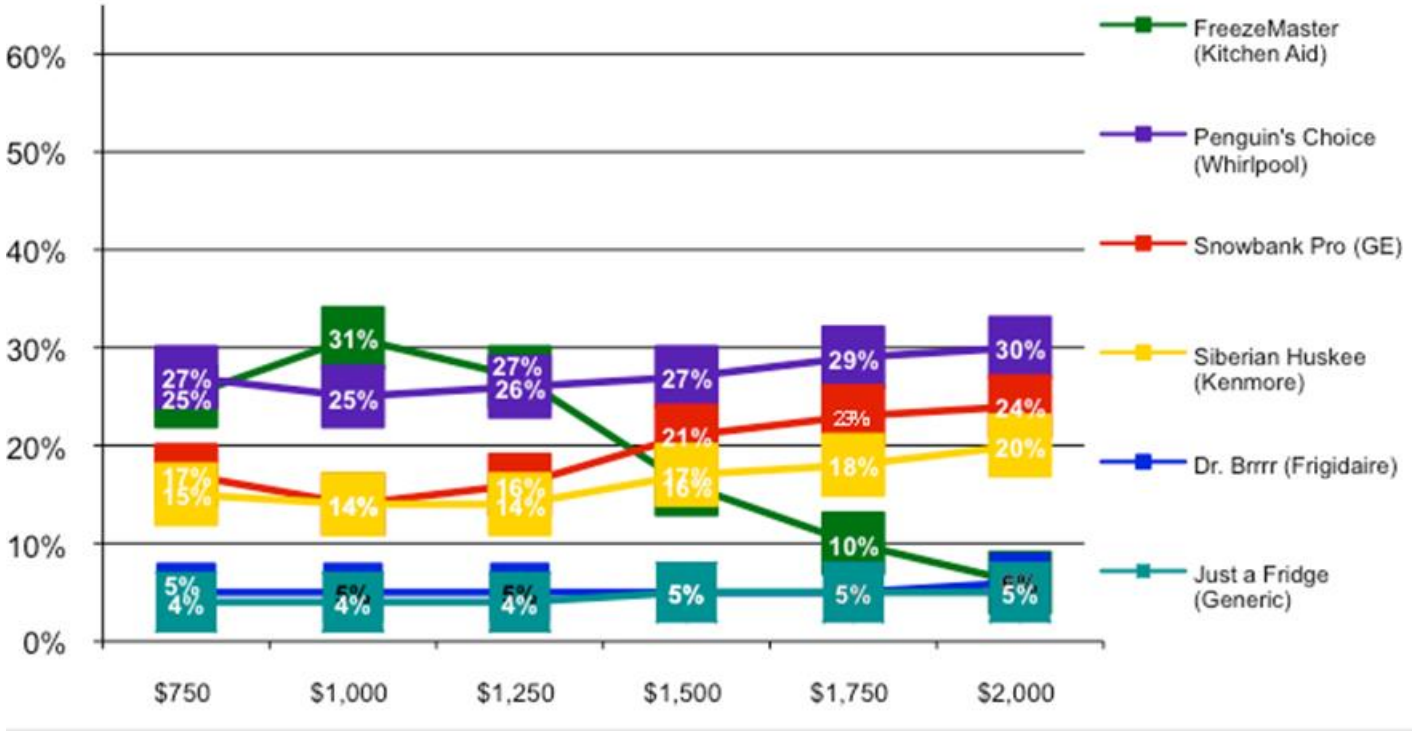
- This is the most powerful tool derived from conjoint data.
- Market simulations can predict the impact on market share of new products or new level combinations of current products.
- By changing one level of a single factor, market share gains and losses can be measured.
- The reliability of simulations depends on how accurate the exercise mirrored reality.

Market Simulation Example

PRODUCTS	Brand	Style	Colors	Features	Warranty	Price
#1 – FreezeMaster	Kitchen Aid	French Door	All	Filtered water dispenser	**VARIABLE**	**VARIABLE**
#2 – Penguin's Choice	Whirlpool	French Door	White, off-white or black	Icemaker in door	1 year	$1,449
#3 – Snowbank Pro	GE	Freezer on top	All	TV monitor in door	3 years	$1,699
#4 – Siberian Huskee	Kenmore	Side by side	White or off-white	Icemaker in door	1 year	$1,599
#5 – Dr. Brrrr	Frigidaire	Freezer on top	White, off-white or black	None	1 year	$1,149
#6 – Just a Fridge	None-Generic	Freezer on bottom	White	None	None	$999

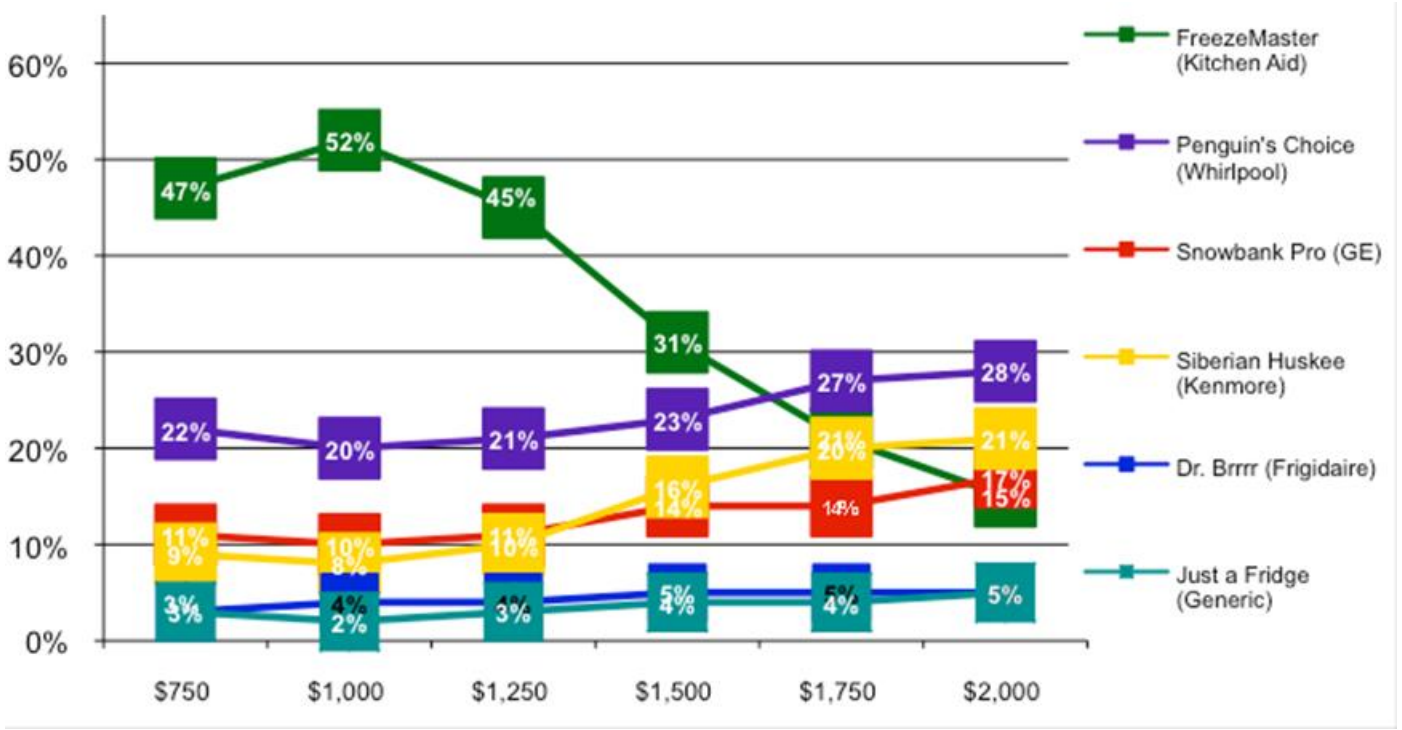
Market Simulation Example

FreezeMaster with **No Warranty**



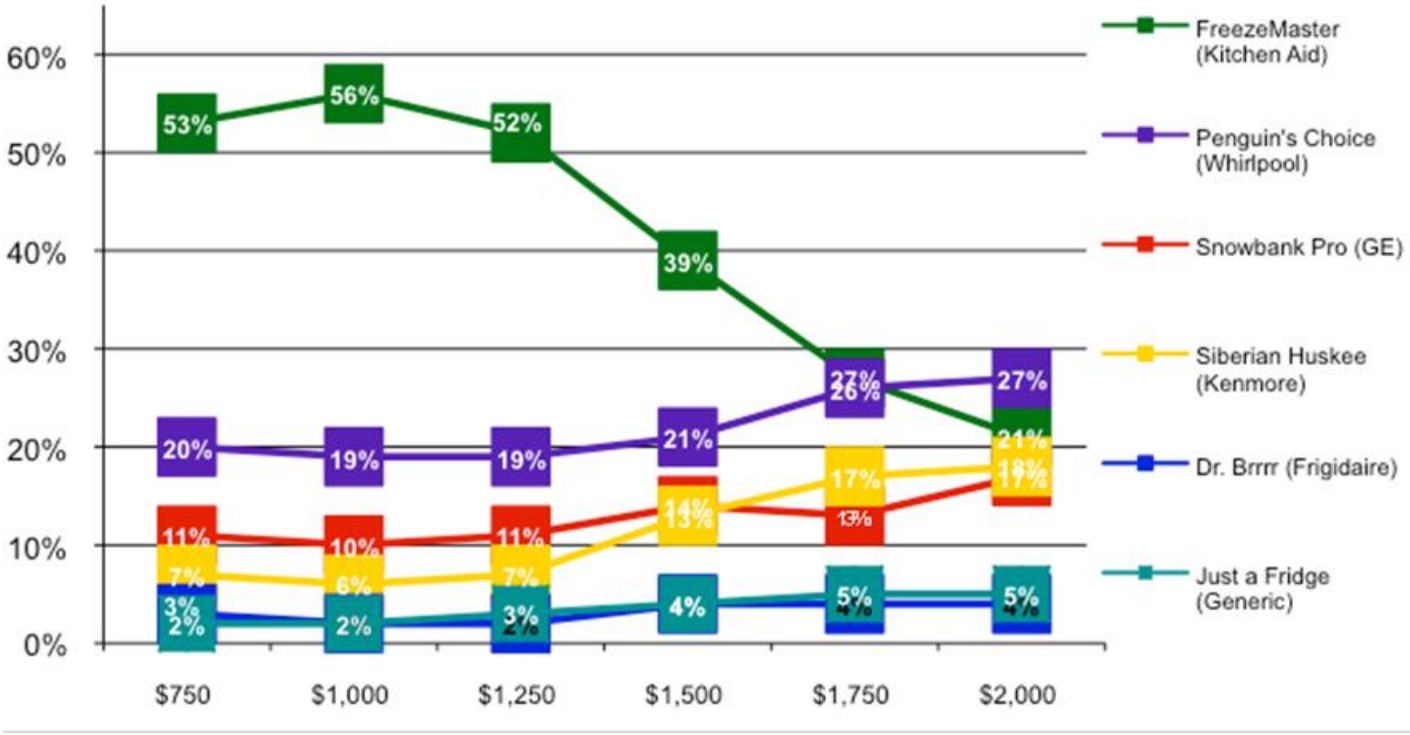
Market Simulation Example

FreezeMaster with **1-Year Warranty**



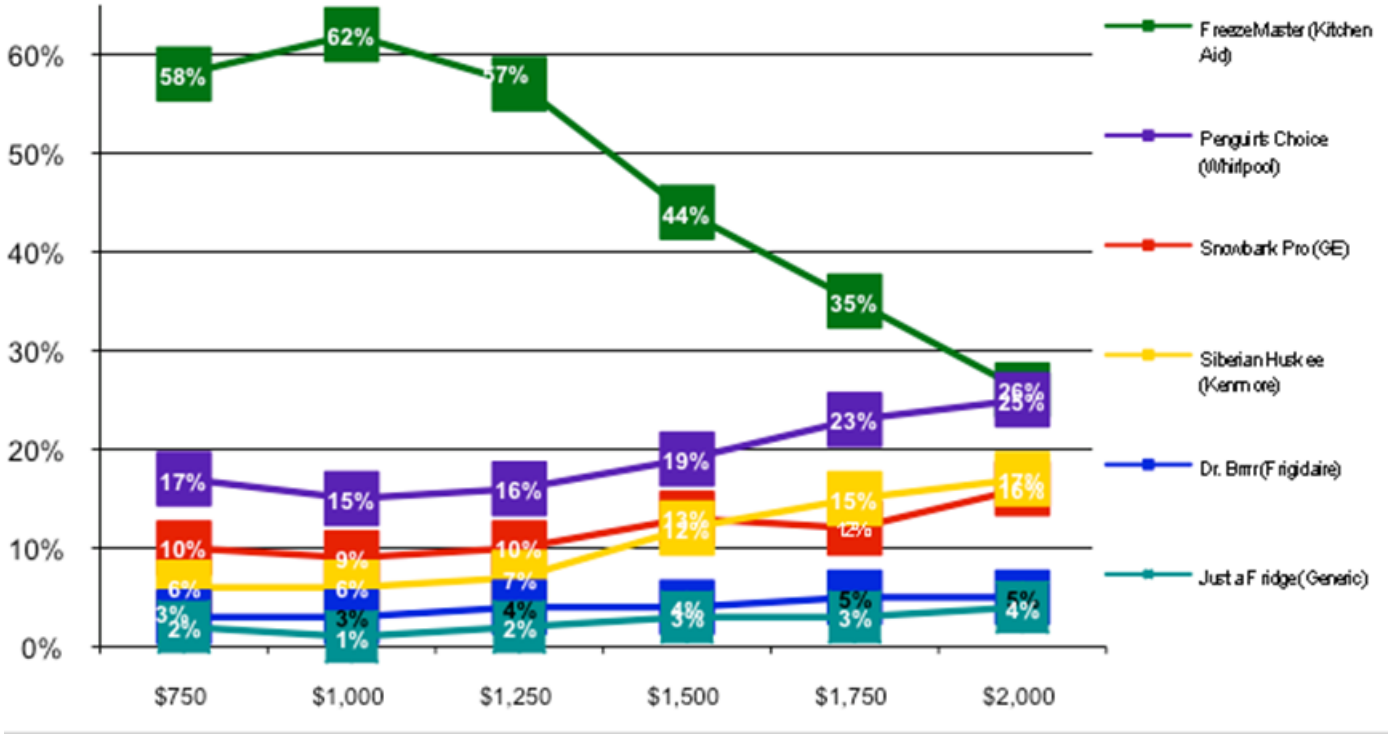
Market Simulation Example

FreezeMaster with **3-Year Warranty**

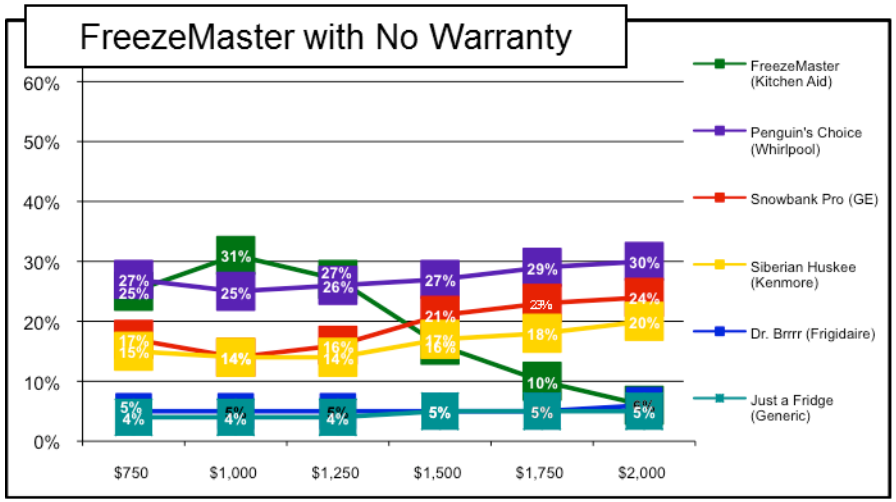


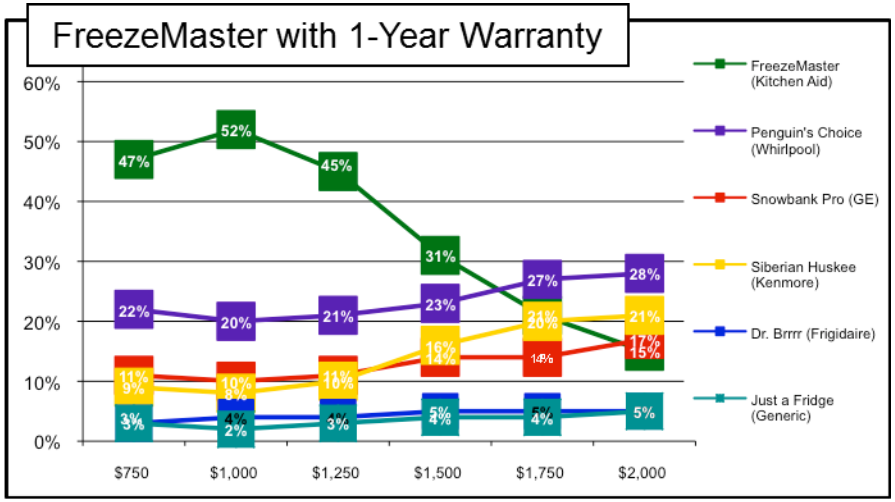
Market Simulation Example

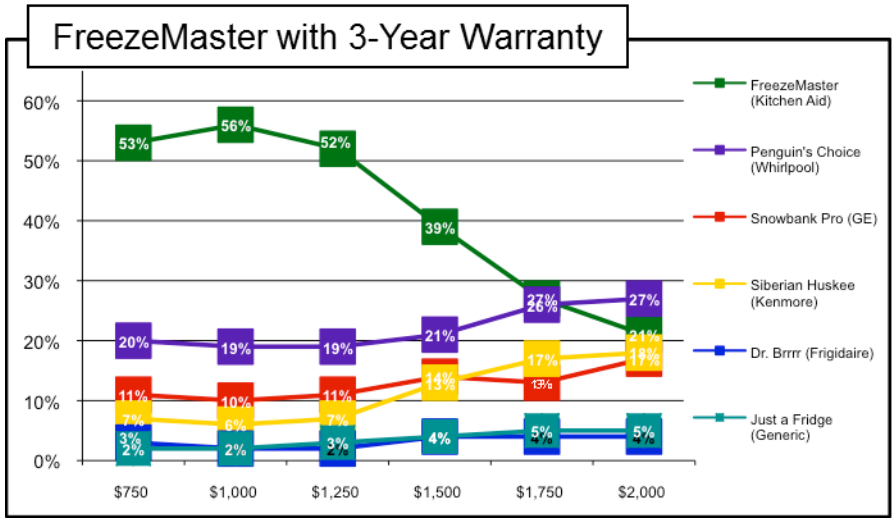
FreezeMaster with **5-Year Warranty**

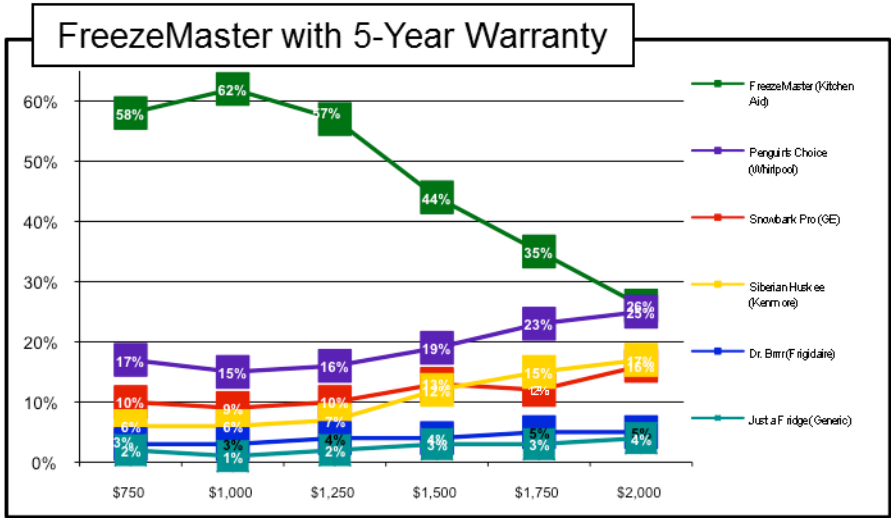


Market Simulation Example









Conjoint Analysis Summary

Conjoint analysis is…

- a great way to determine which bundles of attributes will make the best products or services.
- the most reliable means of determining the best price of a product or a service.
- extremely powerful and accurate in predicting how markets will react to modified or new products/services.
- useful in helping understand the relative importance and usefulness of various attributes during product development.