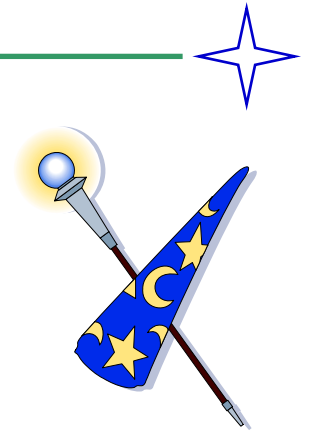

Discrete-Choice Wizards

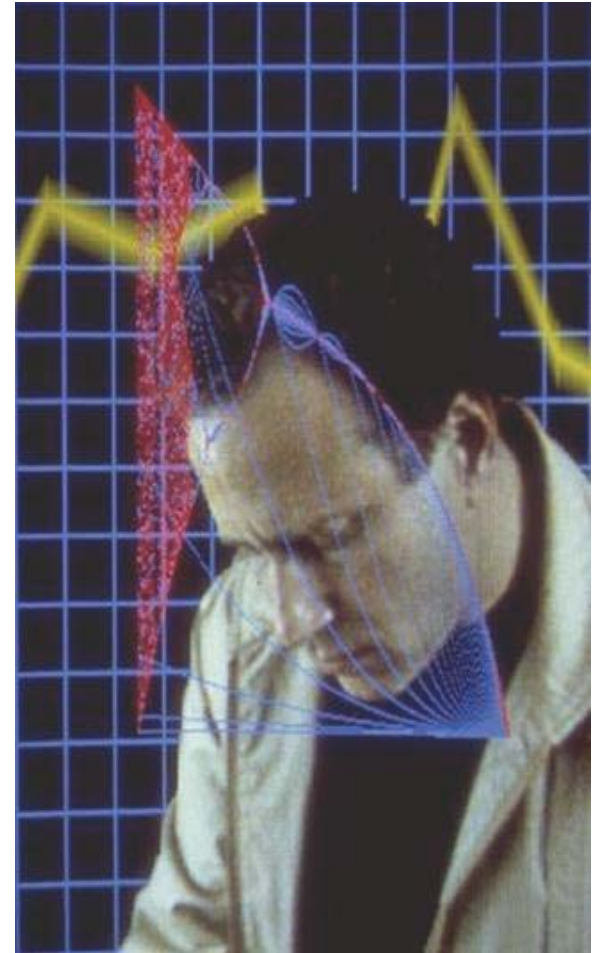


Microsoft Excel add-ins that facilitate discrete-choice projects

What Are StatWizards[®]?

Quantitative tools
for solving
critical business
problems.

For example ...





Let's Take Some Common Business Questions

1. What features should we include in our products?
 2. Given present and future competition, how should we price our products?
 3. Should we re-brand our product?
 4. Do our customers fall into segments based on differing needs from our products?
 5. What penetration rates should we expect?
-

1. What features should we include?

- Alternative form factors
- Re-branding
- Styling
- Functional options
- Bundling options
- Payment plans
- Advertising messages
- Rebate programs

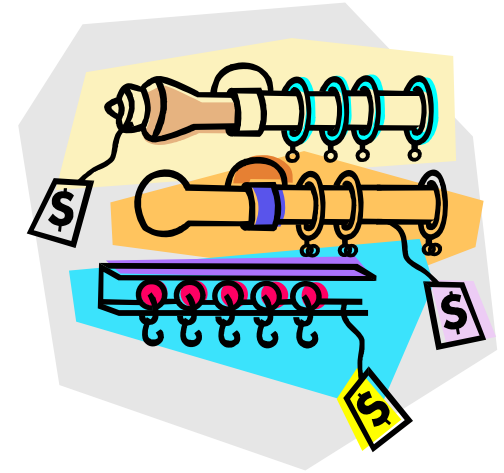
We can include anything that affects the customer's choice:

- To buy your product vs. a competitor's product
- To buy any product at all
- To buy now or later



2. What price should we set?

- What price would maximize revenues?
- What price would maximize profits?
- Should we price to gain market share?
- Which of these strategies should we follow?



3. Should we re-brand?

- How much is our brand worth?
- What are customers willing to pay for competing brands?
- Does this vary by feature set or customer group?



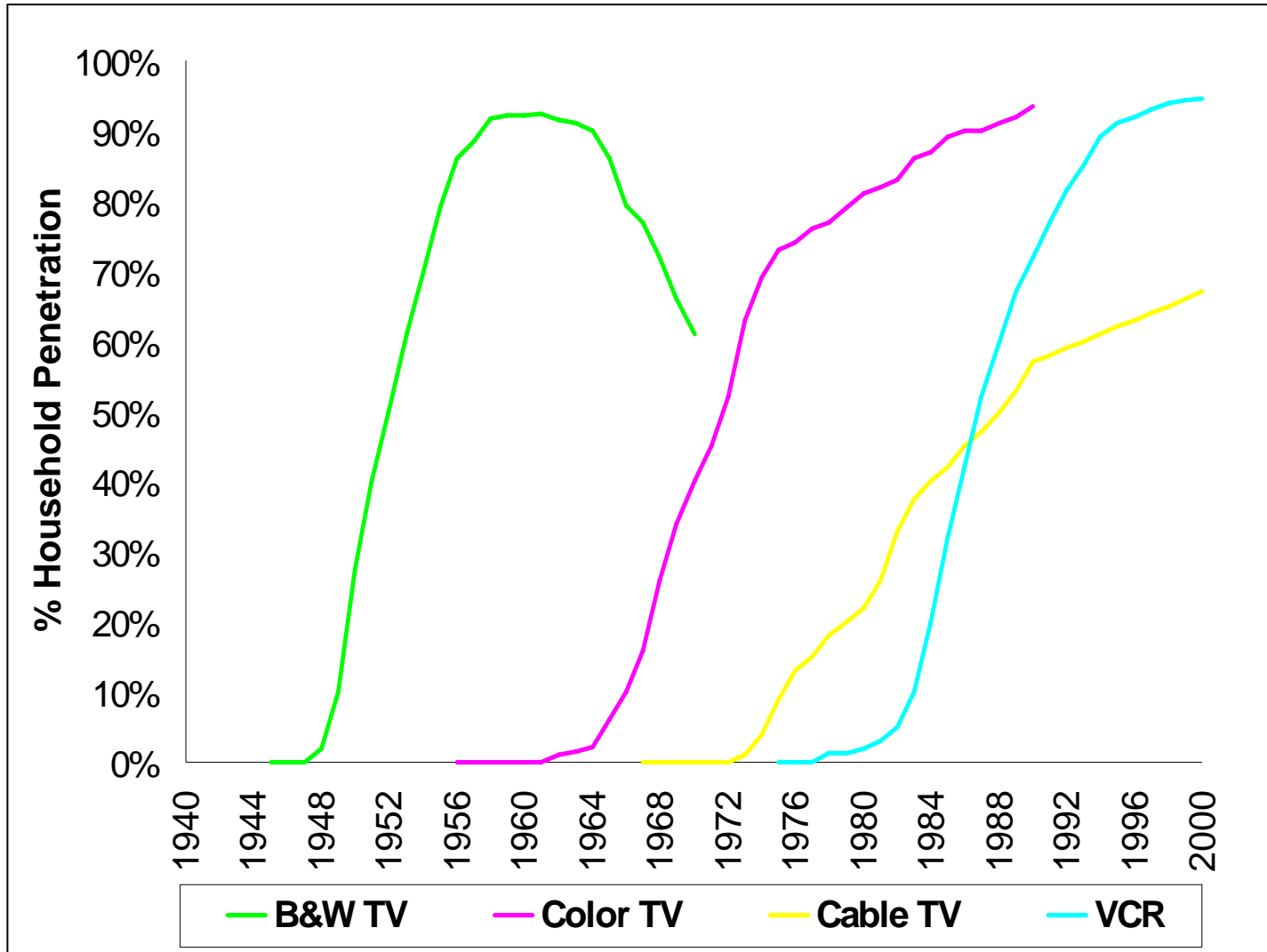
4. Do Customers Fall into Segments?



- Do different groups want different things from our products?
- Do our customers fall into segments with different price sensitivities and purchase behavior?
- Do different advertising messages resonate with different types of people?
- Would designing new products for different segments cannibalize existing products?



5. What Penetration Rates Should We Expect?



Theory behind Discrete-Choice Models



- All transactions involve choice
 - By looking at choices people make, we can understand how they trade off elements of the marketing mix
 - Price
 - Features
 - Advertising
 - Channels
-



Steps in Constructing a Discrete Choice Questionnaire - 1

- Break the product or service into attributes, including brand and price
- This example is based on a study of cellular telecommunications services.

Attributes:	Brand:	Phone type	Features	Device price:	Monthly fee, services:
Levels:	Motorola	Standard	Send fax	\$50	\$10.00/month
	Ericsson	Flip b&w	Receive fax	\$100	\$20.00/month
	Nokia	Flip color	E-mail	\$250	\$30.00/month
	Sony	Touchscreen		\$500	\$40.00/month



Steps in Constructing a Discrete Choice Questionnaire - 2

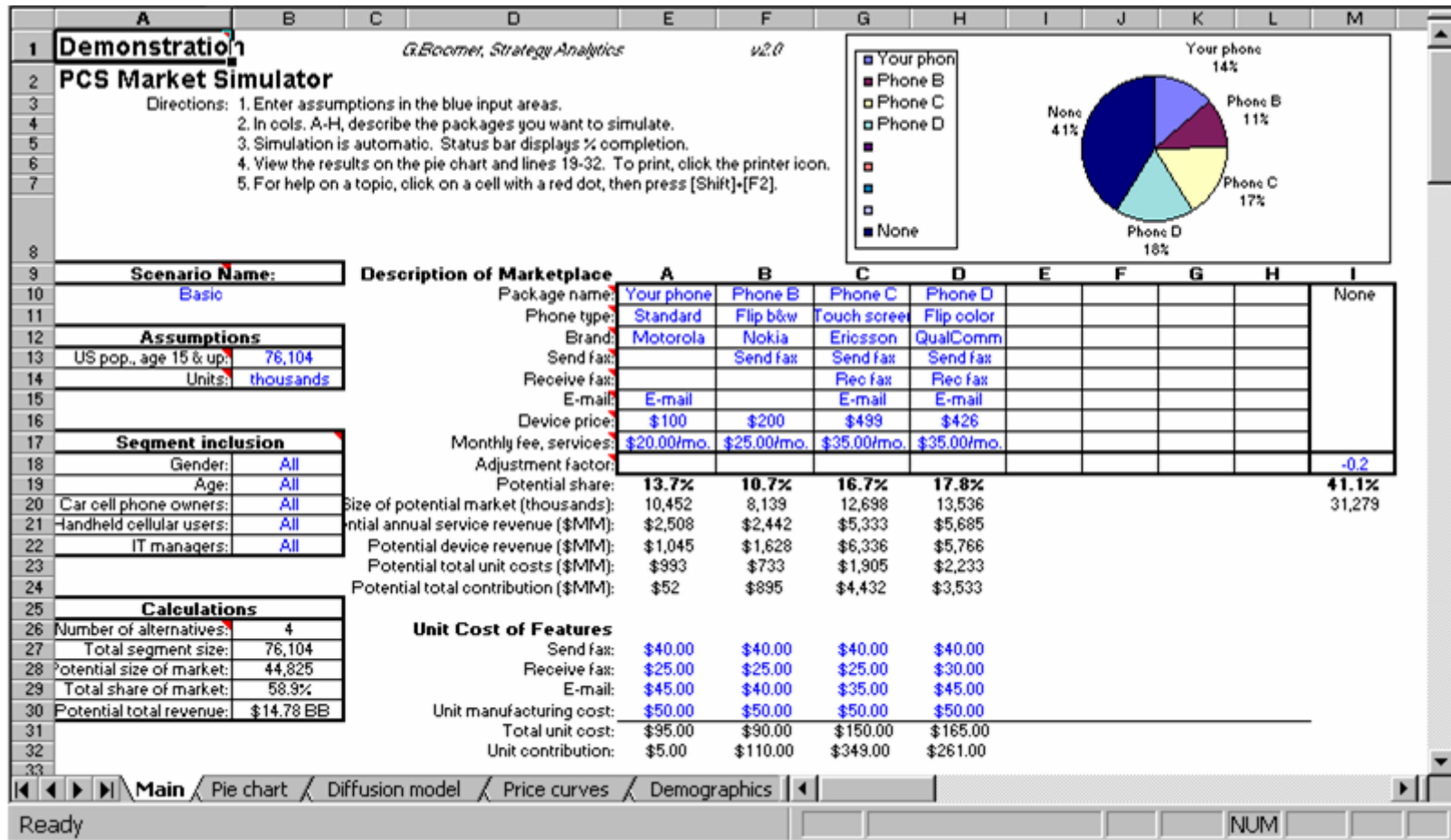
- Generate question sets by varying attribute levels according to a formal experimental design
- Respondents visit a number of hypothetical stores and choose what they would do.

Store 1

Directions: Please choose from among the following products, or specify "None of these".
COMPLETELY fill in the circle corresponding to your choice.

Choice:	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
Brand::	Motorola	Ericsson	Nokia	Sony	None of these
Phone type:	Standard	Flip b&w	Touchscreen	Flip color	
Features:		Send fax			
		Receive fax	Receive fax		
		E-mail	E-mail		
Device price::	\$250	\$250	\$100	\$500	
Monthly fee, services::	\$10.00/month	\$20.00/month	\$30.00/month	\$30.00/month	

The End Result is an Excel Market Simulator that Answers These Questions



Solution 1: Feature Evaluation



The impact of adding fax reception to Phone A...

	C	D	E	F	G	H
	Description of Marketplace		A	B	C	D
9						
10		Package name:	Phone A	Phone B	Phone C	Phone D
11		Phone type:	Standard	Flip b&w	Touch screen	Flip color
12		Brand:	Motorola	Nokia	Ericsson	QualComm
13		Send fax:		Send fax	Send fax	
14		Receive fax:			Rec fax	Rec fax
15		E-mail:	E-mail		E-mail	
16		Device price:	\$100	\$200	\$499	\$426
17		Monthly fee, services:	\$20.00/mo.	\$25.00/mo.	\$35.00/mo.	\$35.00/mo.
18		Adjustment factor:				
19		Potential share:	15.0%	11.7%	18.3%	9.9%
20		Size of potential market (thousands):	11,447	8,923	13,941	7,571
21		Potential annual service revenue (\$MM):	\$2,747	\$2,677	\$5,855	\$3,180
22		Potential device revenue (\$MM):	\$1,145	\$1,785	\$6,957	\$3,225
23		Potential total unit costs (\$MM):	\$916	\$803	\$2,091	\$606
24		Potential total contribution (\$MM):	\$229	\$981	\$4,865	\$2,619
25						
26		Unit Cost of Features				
27		Send fax:	\$40.00	\$40.00	\$40.00	\$40.00
28		Receive fax:	\$25.00	\$25.00	\$25.00	\$30.00
29		E-mail:	\$30.00	\$40.00	\$35.00	\$45.00
30		Unit manufacturing cost:	\$50.00	\$50.00	\$50.00	\$50.00
31		Total unit cost:	\$80.00	\$90.00	\$150.00	\$80.00
32		Unit contribution:	\$20.00	\$110.00	\$349.00	\$346.00

Navigation: Main / Pie chart / Diffusion model / Price curves / Demographics

Solution 1: Feature Evaluation



The impact of adding fax reception to Phone A...

	C	D	E	F	G	H
		Description of Marketplace	A	B	C	D
9		Package name:	Phone A	Phone B	Phone C	Phone D
10		Phone type:	Standard	Flip b&w	Touch screen	Flip color
11		Brand:	Motorola	Nokia	Ericsson	QualComm
12		Send fax:	Send fax	Send fax	Send fax	
13		Receive fax:	Rec fax		Rec fax	Rec fax
14		E-mail:	E-mail		E-mail	
15		Device price:	\$100	\$200	\$499	\$426
16		Monthly fee, services:	\$20.00/mo.	\$25.00/mo.	\$35.00/mo.	\$35.00/mo.
17		Adjustment factor:				
18		Potential share:	17.3%	11.4%	17.8%	9.7%
19		Size of potential market (thousands):	15,193	8,681	13,572	7,367
20		Potential annual service revenue (\$MM):	\$3,166	\$2,604	\$5,700	\$3,094
21		Potential device revenue (\$MM):	\$1,319	\$1,736	\$6,773	\$3,138
22		Potential total unit costs (\$MM):	\$1,385	\$781	\$2,036	\$589
23		Potential total contribution (\$MM):	(\$66)	\$955	\$4,737	\$2,549
24						
25		Unit Cost of Features				
26		Send fax:	\$40.00	\$40.00	\$40.00	\$40.00
27		Receive fax:	\$25.00	\$25.00	\$25.00	\$30.00
28		E-mail:	\$30.00	\$40.00	\$35.00	\$45.00
29		Unit manufacturing cost:	\$50.00	\$50.00	\$50.00	\$50.00
30		Total unit cost:	\$105.00	\$90.00	\$150.00	\$80.00
31		Unit contribution:	(\$5.00)	\$110.00	\$349.00	\$346.00
32						

... is to boost share but generate losses.

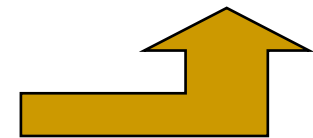
Solution 2: Pricing



Describe a competitive situation ...

Description of Marketplace	A	B	C	D
Package name:	Phone A	Phone B	Phone C	Phone D
Phone type:	Standard	Flip b&w	Touch screen	Flip color
Brand:	Motorola	Nokia	Ericsson	QualComm
Send fax:		Send fax	Send fax	Send fax
Receive fax:			Rec fax	Rec fax
E-mail:	E-mail		E-mail	E-mail
Device price:	\$100	\$200	\$499	\$426
Monthly fee, services:	\$20.00/mo.	\$25.00/mo.	\$35.00/mo.	\$35.00/mo.
Adjustment factor:				
Potential share:	13.7%	10.7%	16.7%	17.8%

... and calculate potential market share

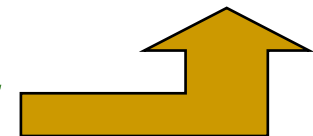


Solution 2: Pricing

Change an assumption ...

Description of Marketplace	A	B	C	D
Package name:	Phone A	Phone B	Phone C	Phone D
Phone type:	Standard	Flip b&w	Touch screen	Flip color
Brand:	Motorola	Nokia	Ericsson	QualComm
Send fax:		Send fax	Send fax	Send fax
Receive fax:			Rec fax	Rec fax
E-mail:	E-mail		E-mail	E-mail
Device price:	\$100	\$200	\$499	\$200
Monthly fee, services:	\$20.00/mo.	\$25.00/mo.	\$35.00/mo.	\$35.00/mo.
Adjustment factor:				
Potential share:	11.6%	9.1%	14.3%	30.2%

... and immediately see the impact



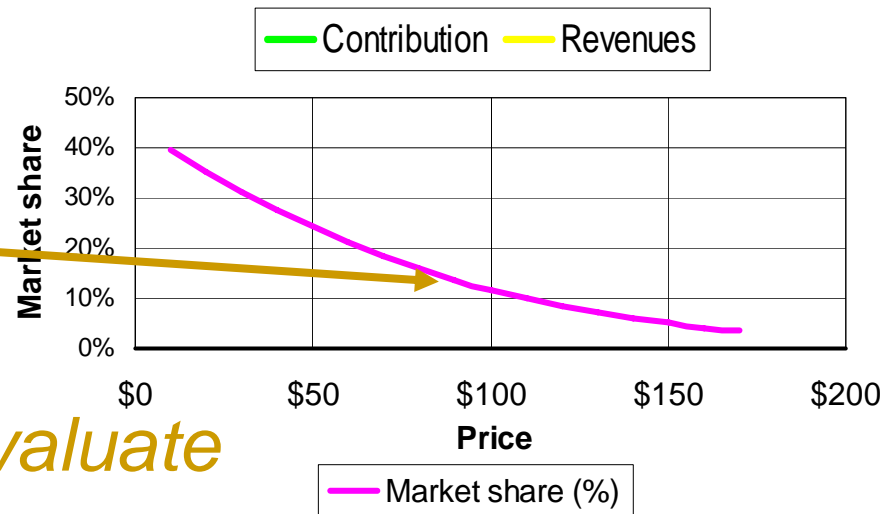
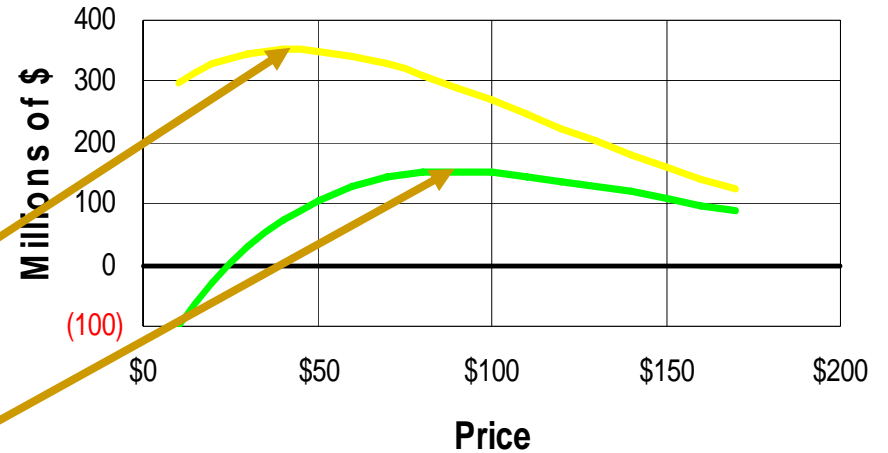


Solution 2: Pricing Strategy

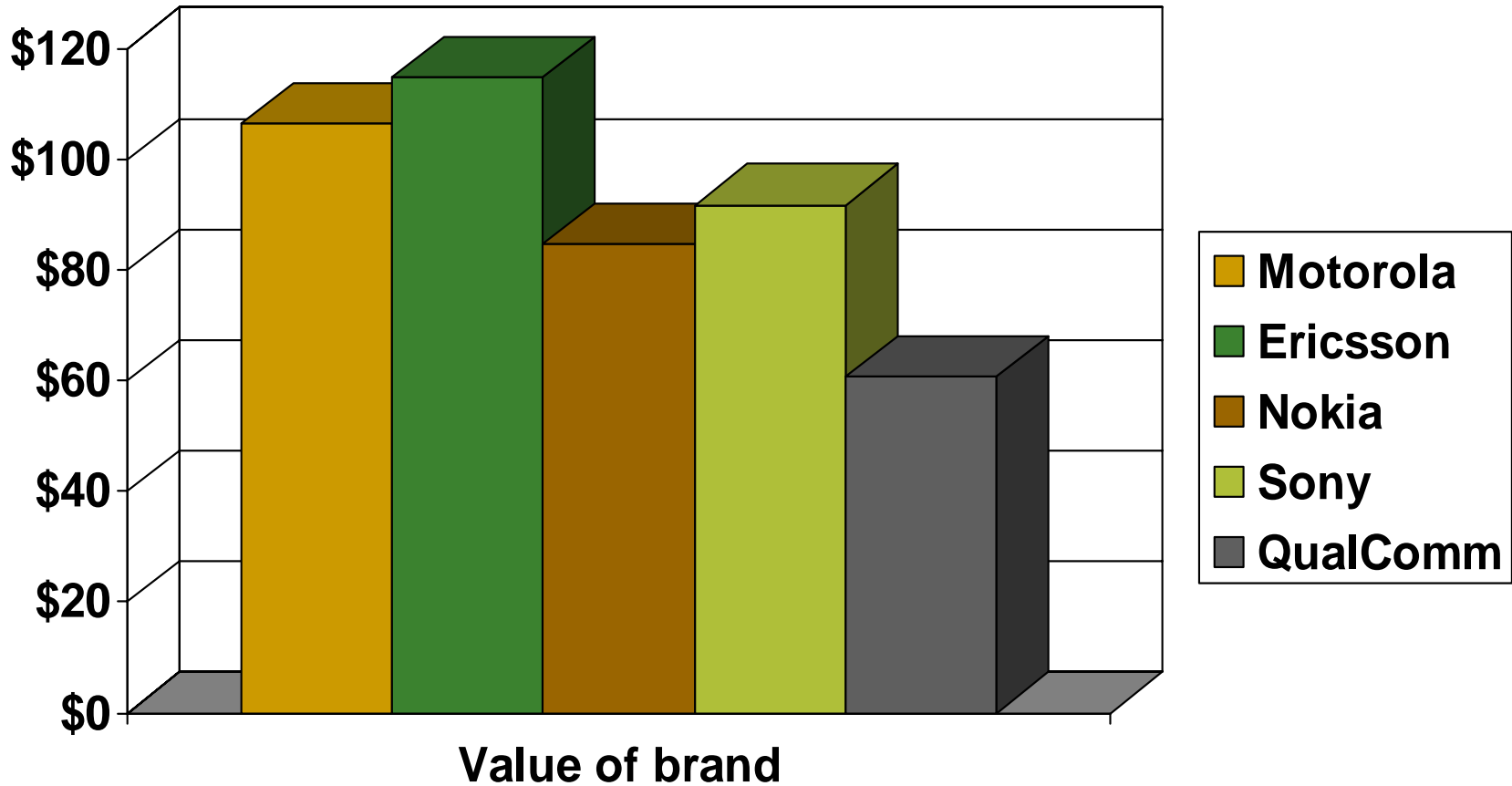
A built-in feature conducts price simulations, revealing that the price that maximizes revenues is not the same as that which maximizes profits.

Yet maximizing profits sacrifices market share.

The simulator helps you evaluate these strategic tradeoffs.



Solution 3: Measuring Brand Equity

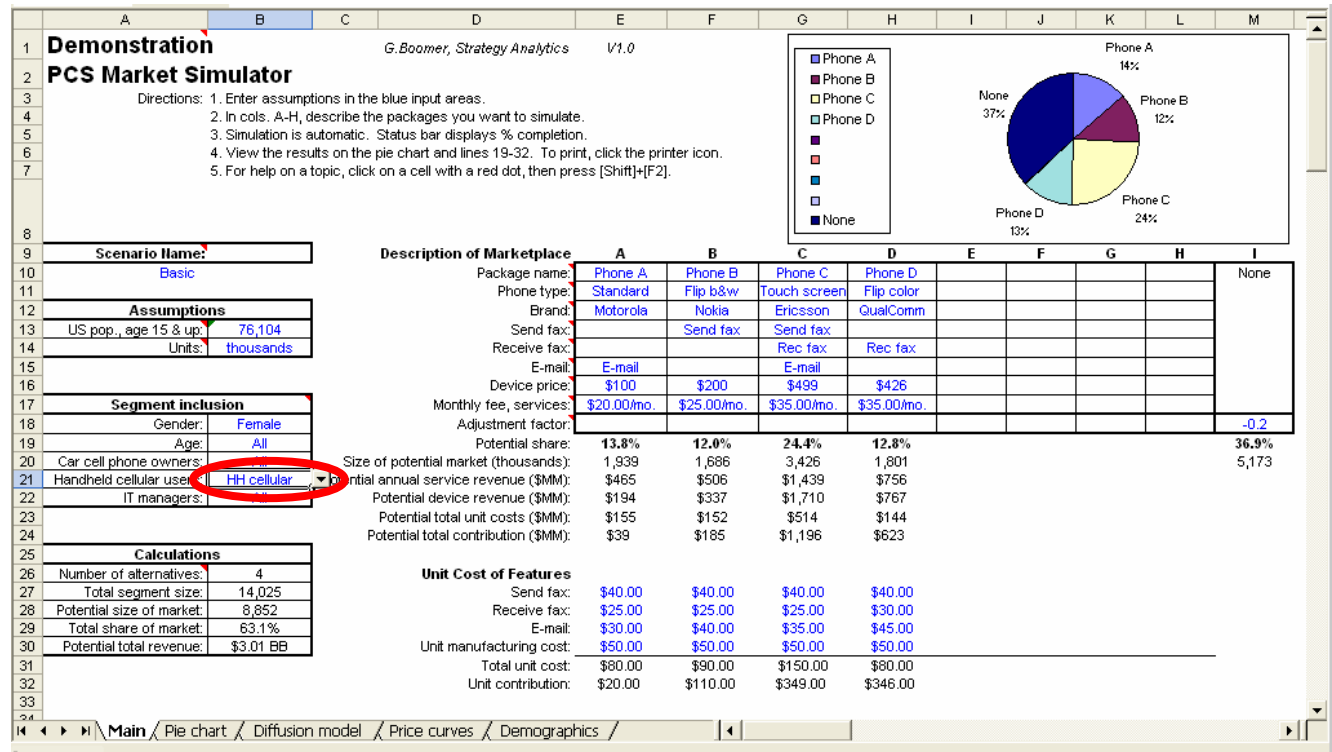


We can make similar charts for other attributes.

Solution 4: Identifying Market Segments

In building the model, we identified 5 segmentation variables.

The simulator lets us see



Solution 4: Identifying Market Segments



In building the model, we identified 5 segmentation variables.

The simulator lets us see how segment preferences differ.

Demonstration
PCS Market Simulator
 G.Boomer, Strategy Analytics V1.0

Directions: 1. Enter assumptions in the blue input areas.
 2. In cols. A-H, describe the packages you want to simulate.
 3. Simulation is automatic. Status bar displays % completion.
 4. View the results on the pie chart and lines 19-32. To print, click the printer icon.
 5. For help on a topic, click on a cell with a red dot, then press [Shift]+[F2].

Scenario Name: Basic

Assumptions
 US pop., age 15 & up: 76,104
 Units: thousands

Segment inclusion
 Gender: Female
 Age: All
 Car cell phone owners: [redacted]
 Handheld cellular use: **No HH cellular** (circled in red)
 IT managers: [redacted]

Calculations
 Number of alternatives: 4
 Total segment size: 25,335
 Potential size of market: 13,552
 Total share of market: 53.5%
 Potential total revenue: \$4.13 BB

Description of Marketplace

	A	B	C	D	E	F	G	H	I
Package name:	Phone A	Phone B	Phone C	Phone D					None
Phone type:	Standard	Flip b&w	Touch screen	Flip color					
Brand:	Motorola	Nokia	Ericsson	QualComm					
Send fax:		Send fax	Send fax						
Receive fax:			Rec fax	Rec fax					
E-mail:	E-mail		E-mail						
Device price:	\$100	\$200	\$499	\$426					
Monthly fee, services:	\$20.00/mo.	\$25.00/mo.	\$35.00/mo.	\$35.00/mo.					
Adjustment factor:									-0.2
Potential share:	15.4%	11.9%	16.6%	9.6%					46.5%
Size of potential market (thousands):	3,907	3,006	4,203	2,435					11,783
Potential annual service revenue (\$MM):	\$938	\$902	\$1,765	\$1,023					
Potential device revenue (\$MM):	\$391	\$601	\$2,097	\$1,037					
Potential total unit costs (\$MM):	\$313	\$271	\$630	\$195					
Potential total contribution (\$MM):	\$78	\$331	\$1,467	\$843					

Unit Cost of Features

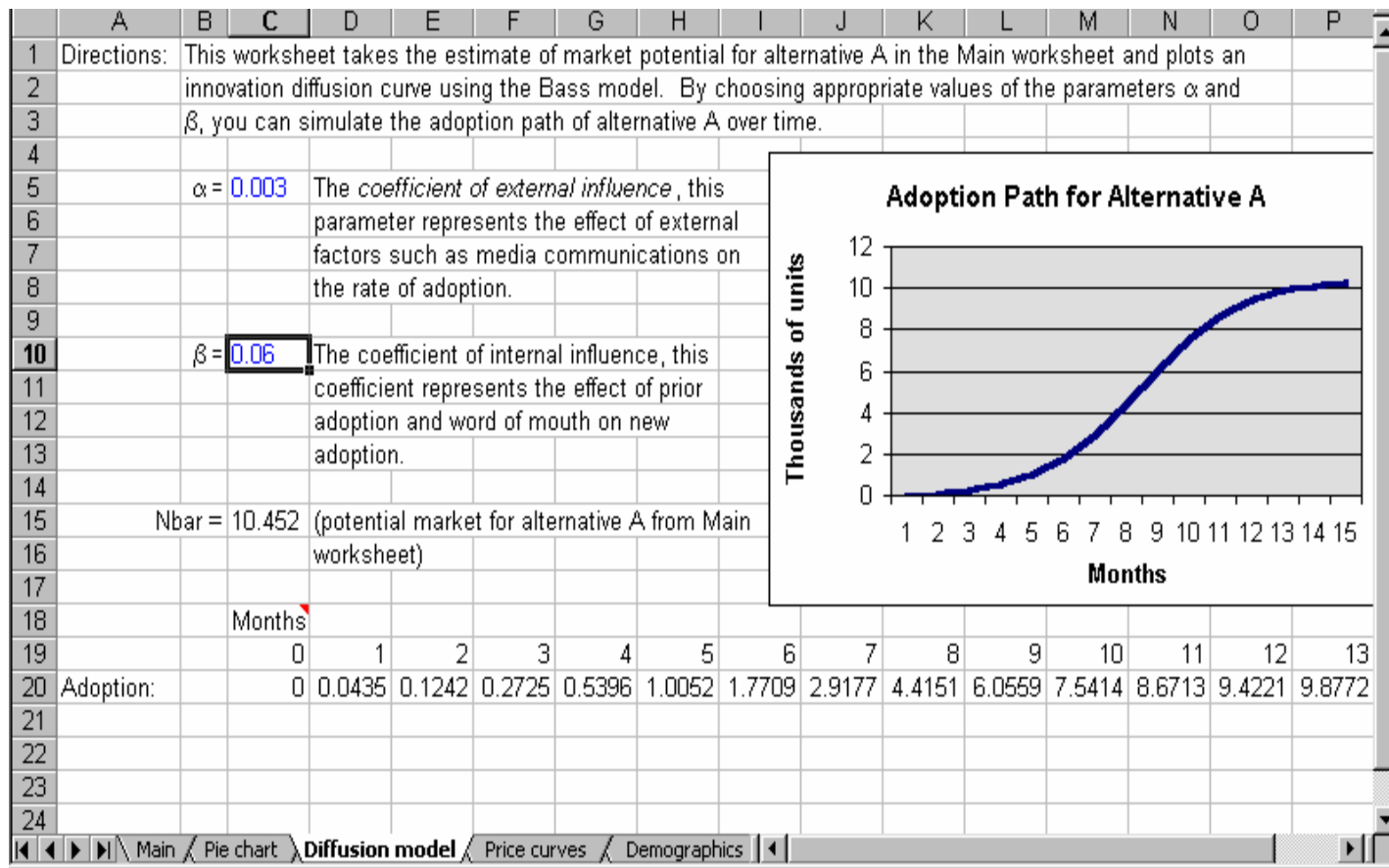
	A	B	C	D
Send fax:	\$40.00	\$40.00	\$40.00	\$40.00
Receive fax:	\$25.00	\$25.00	\$25.00	\$30.00
E-mail:	\$30.00	\$40.00	\$35.00	\$45.00
Unit manufacturing cost:	\$50.00	\$50.00	\$50.00	\$50.00
Total unit cost:	\$80.00	\$90.00	\$150.00	\$80.00
Unit contribution:	\$20.00	\$110.00	\$349.00	\$346.00

Pie Chart Data:

- Phone A: 15%
- Phone B: 12%
- Phone C: 17%
- Phone D: 10%
- None: 47%

Main / Pie chart / Diffusion model / Price curves / Demographics /

Solution 5: Product Diffusion Model



Contact Information



100 Tunapuna Lane
Coronado, CA 92118-3506
USA

(619) 423-3139
gboomer1@san.rr.com
<http://www.statwizards.com>
