

Research Sharing Session

New Tools for Marketing Research

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Topics we'll cover

- Social Media (SM)
 - Reliability
 - Validity
 - Best Practices

- Mobile Data Collection
 - 5 Things you Need to Know



Reliability and Validity of Social Media

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People increasingly rely on information from each other, not companies



Consumers are using SM to:

- Communicate/interact with others
 - Share information about products and service levels
 - Educate themselves about products and services
 - Advocate or dissuade others
- Shop around



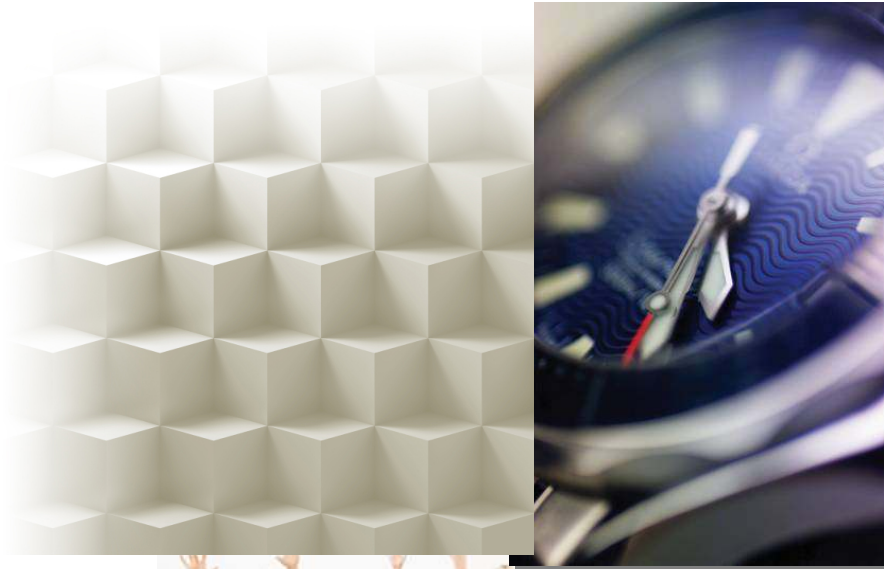
A person wearing a dark suit jacket, a white shirt, and a yellow and blue striped tie stands on a light-colored wooden floor. A yellow sign with the letters 'CEO' in black is placed on the floor in front of them. The image has a halftone or dithered texture.

But....

“Can it be used to direct
business decisions?”

CEO

What is needed to direct decisions...

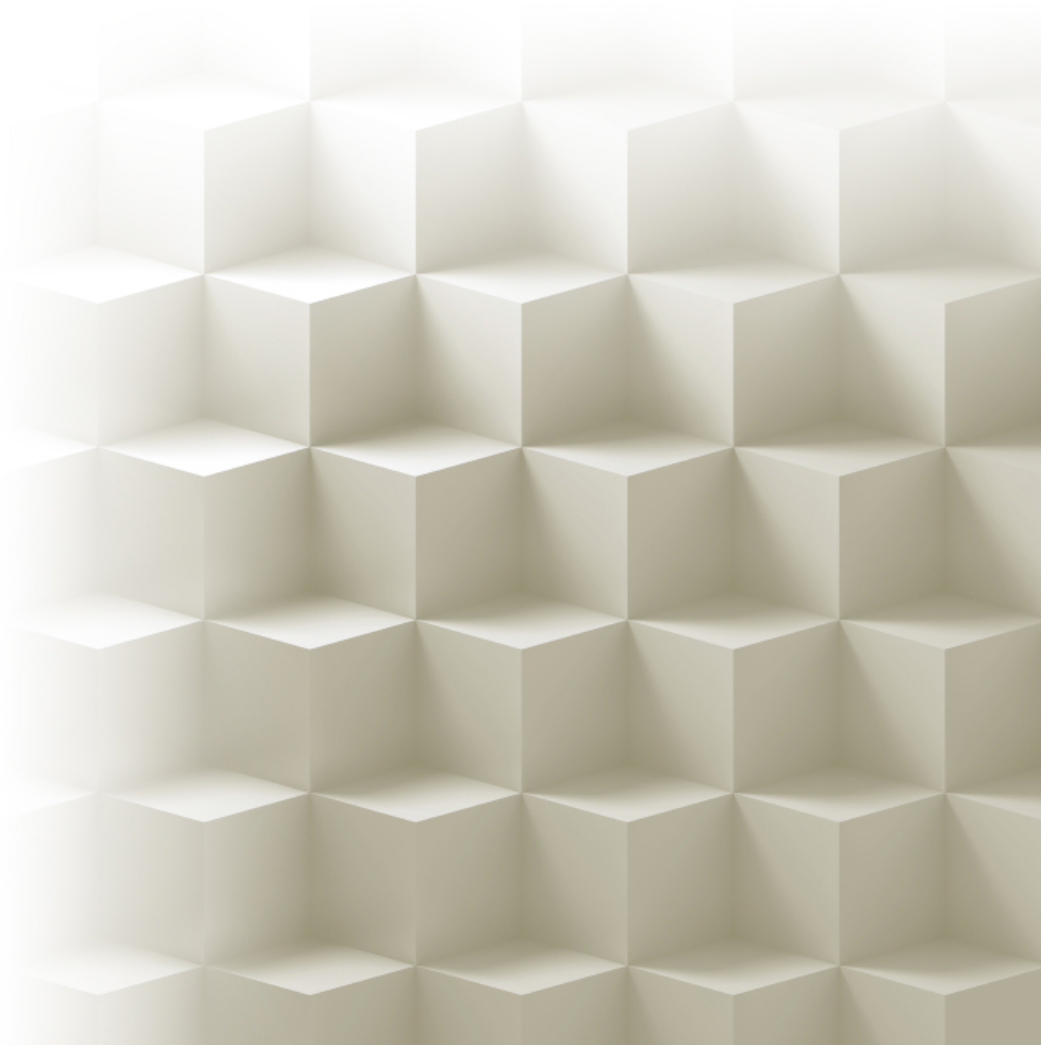


- Reliability
- Validity
- Generalizability



Reliability

Is the Measurement Consistent/Stable?



- Across different:
 - Time points
 - Tools
 - Sites
 - Raters/Analysts



Reliability: Inter-analyst agreement

Do different people produce the same results?



Group 1



Group 2



Group 3

- Same instructions
- Same time period
- Same tools
- Same time to complete

- Volume & sentiment
- Outcome measure: Intra-class correlation (ICC)

Each team was tasked with 3 different topics that varied in complexity: Hotels, Baggage Fees, Telecom 5 P's



Summary of results

Significant variations in results between/across teams

Group 1

Group 2

Group 3

	Total Volume	Net Sentiment		Total Volume	Net Sentiment		Total Volume	Net Sentiment	
Hotels: Brand	0.97	0.95		0.40	0.71		0.91	0.90	
Airline: Bag fees	0.92	0.90		0.29	0.70		0.95	0.9	
Telecom: People	0.79	0.58		0.17	0.53		0.04	0.96	
Telecom: Product	0.79	0.75		0.77	0.43		0.47	0.40	
Telecom: Price	0.78	0.94		0.58	0.63		0.22	0.86	
Telecom: Present...	0.94	0.70		0.82	0.8		0.70	0.78	
Telecom: Process	0.08	0.45		0.29	0.42		0.09	0.43	



Starting with the Right Data

- Results from initial queries showed that only about 35% of total volume was consumer generated
 - While non-consumer generated media would be important for some outcomes, given our focus on the SM relationship to survey outcomes, using only CGSM was important
- The queries were subsequently refined to eliminate news and informational sources
 - Reliability improved some—but still differences in teams were found



Validity

Some might agree, but are they right?



Different Types of validity

- Face Validity
 - Do the findings “seem right”?
- Construct Validity
 - Does the concept relate to the “real” issue being measured?



Although Not Completely Reliable SM Findings have been Valuable in Many Instances

- **Weekend box-office receipts:** Asur & Huberman (2010) demonstrate that “a simple model built from the rate at which tweets are created about particular topics can outperform market-based predictors”; model predicts opening box office receipts with 97% accuracy
- **Consumer confidence:** O’Connor et al. (2010) show a 73% correlation between sentiment of tweets about “jobs” and the Gallup daily measurement of consumer confidence
- **Presidential approval:** O’Connor also found a 72% correlation between sentiment in tweets about Obama and presidential job approval polls
- **Congressional elections:** *The Daily Beast* and *WiseWindow* built a social media model that correctly predicted 97% of Senate races and 87% of the House races that it tracked (the 77 most competitive races)



Construct Validity: SM Volume and Market Share



	# of Subscribers at end of 3 rd Quarter of 2011	Total sound bite volume	Consumer Generated Media (CGM)	CGM/N
AT&T	100,735	1,578,073	514,996	33%
Sprint Nextel	53,109	1,120,105	435,233	39%
T-Mobile	33,711	876,014	320,098	37%
Verizon Wireless	107,695	2,260,426	691,907	31%

	# of Subscribers with total # of sound bites	# of Subscribers with CGM only
Correlations	0.92	0.91

Both consumer-generated SM volume and SM volume overall are correlated with market share, defined as number of subscribers



Construct Validity: What about other VOC

■ Social Media Sentiment Measures:

- Percent of Negative posts – including and excluding ‘unknowns’
- Percent of Positive posts – including and excluding ‘unknowns’
- Net sentiment – including and excluding ‘unknowns’

■ Survey Scores:

- JDPA Ownership Index (aggregated customer satisfaction)
- Advocacy (average likelihood to recommend in the future)
- # of positive recommendations
- # of negative recommendations (dissuasions)
- Switching Intention (likelihood to switch provider in the next 12 months)



Construct Validity: SM and Survey Data

	Overall Ownership Experience	Advocacy	# Positive Recommendations	# Negative Recommendations	Switching Intention
High precision SM data	0.78	0.90	0.50	0.86	0.67
Overall SM data	0.53	0.71	0.23	0.78	0.33

The correlations between Social Media sentiment data and survey data are considerably higher when high precision sound bites are selected than when overall social media data are used

Based on these findings, the remaining analyses focused only on high precision data



Does SM Sentiment Correlate With Survey Outcomes?

SM Sentiment Measure	Overall Ownership Experience	Advocacy	# Positive Recommendations	# Negative recommendations
Negative/total	-0.90	-0.84	-0.78	0.68
Negative/(total-unknown)	-0.77	-0.94	-0.44	0.88
Net Pos	0.85	0.97	0.55	-0.92
Net Pos (ex unknown)	0.85	0.97	0.55	-0.91
Positive/total	0.41	0.71	0.00	-0.82
Positive/(total-unknown)	0.91	0.99	0.65	-0.92
Average Corrected Correlation	0.78	0.90	0.50	0.86

Data suggests that SM sentiment has a stronger correlation with stated advocacy than it does with overall experience scores

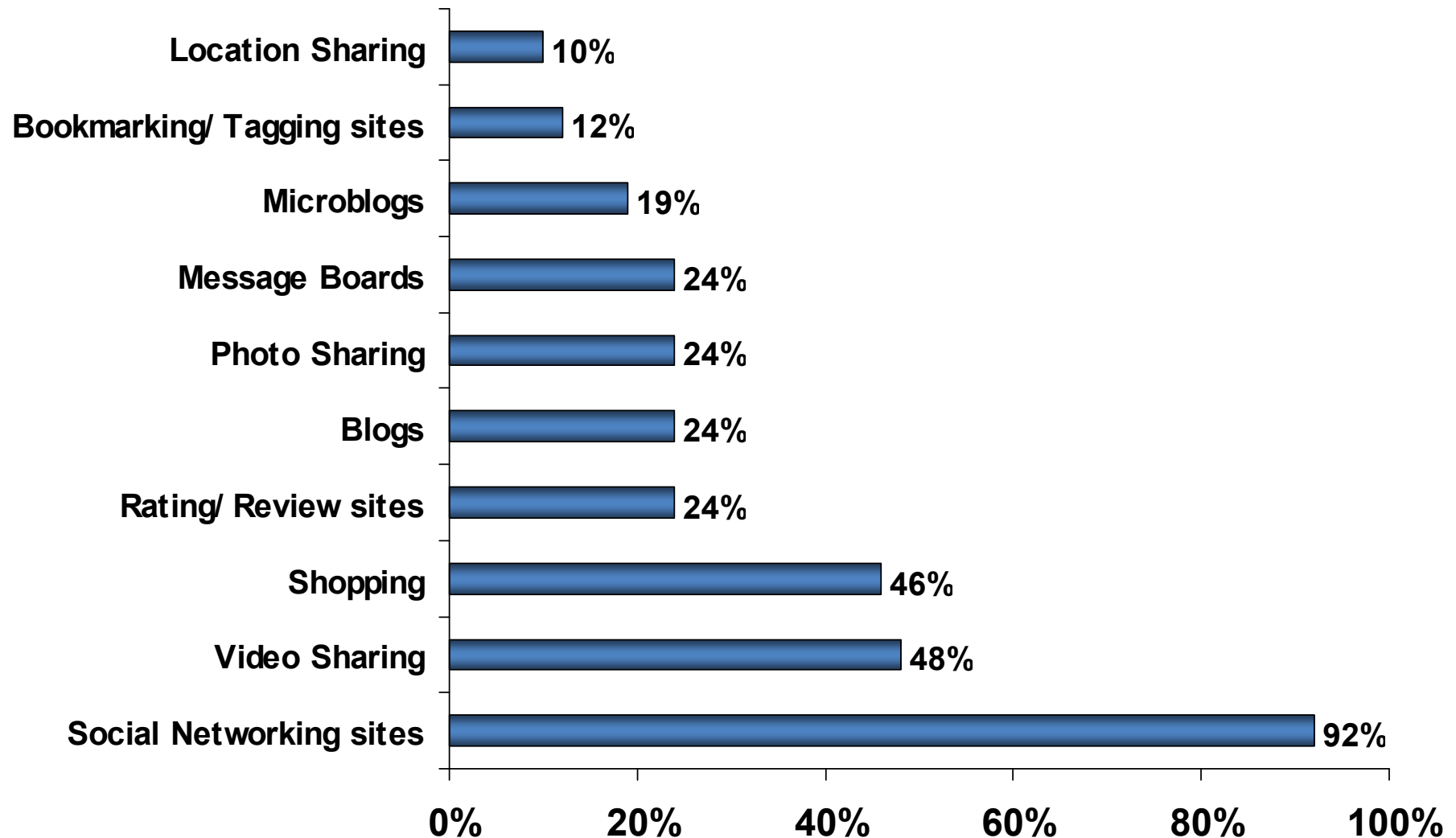
Are Results Generalizable?

- 3,000 consumers were administered an online survey to assess:
 - Types of social media used
 - Information posted and read
 - Types of interactions with businesses across various industries



Are Results Generalizable?

- The majority of online consumers utilize at least one form of social media



Are Results Generalizable?

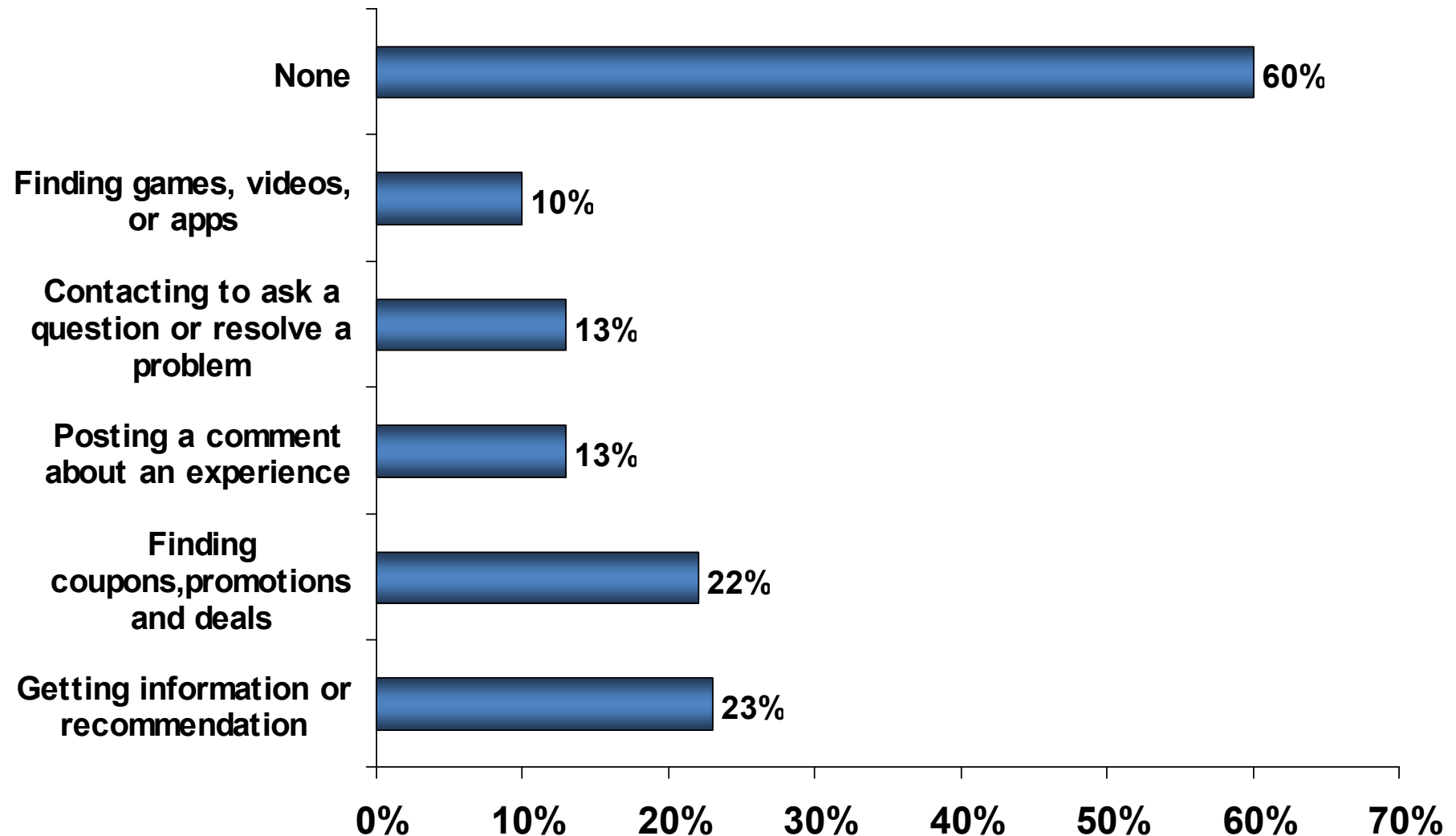
- While social networking site usage is similar, usage of other types of social media are more prevalent among younger consumers

Social Media Sites Used by Age Groups	18-29 years-old	30-49 years-old	50-64 years-old	65+ years-old
Location Sharing	19%	13%	3%	2%
Bookmarking/Tagging sites	17%	13%	6%	5%
Microblogs	33%	21%	11%	4%
Message Boards	33%	29%	15%	9%
Photo Sharing	30%	30%	16%	11%
Blogs	38%	27%	15%	9%
Rating/Review sites	29%	30%	17%	12%
Shopping	51%	50%	39%	33%
Video Sharing	73%	52%	32%	19%
Social Networking sites	94%	89%	94%	94%



Are Results Generalizable?

- Although most online consumers use social media, the majority do not often use it to interact with businesses...



Are Results Generalizable?

- ...however, that trend will likely shift over time

Business-related Social Media Activities by Age Groups	18-29 years-old	30-49 years-old	50-64 years-old	65+ years-old
Getting information or recommendations	34%	25%	17%	11%
Finding coupons, promotions, and deals	29%	26%	15%	9%
Posting a comment about an experience	20%	16%	7%	5%
Contacting to ask a question or resolve a problem	15%	13%	11%	9%
Finding games, videos, or apps	15%	11%	6%	4%
None	45%	55%	71%	79%

Six Things to Increase Reliability and Validity

Best Practices

Developing improved internal processes and procedures to ensure continued improvement

1. Be specific in defining your topic
2. Establish the right balance between precision and coverage
3. Avoid sentiment expressions in queries
4. Employ well-trained analysts
5. Utilize separate QA teams
6. Ensure proper feedback



Five Things You Should Know About Mobile Data Collection

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Results From Three Separate Pilot Tests

Executed customer experience surveys in three different industries:

- Case Study 1: Credit Card (n=10,000)
 - Mobile, outbound SMS, inbound SMS, and traditional online
- Case Study 2: Handset (n=9,000)
 - Mobile, outbound SMS, and traditional online
- Case Study 3: Residential Electric (n= 4,500)
 - Mobile, outbound SMS, and traditional online



1

Opt-in Profiles are Different



- Mobile opt-ins are
 - Younger
 - More likely to be employed full-time
 - Higher income
- Some providers are better able to recruit African-American and Hispanic-American



1

Mobile Respondents are Different



- Mobile responders skew younger and female

	SMS	Mobile	Traditional
Age			
<i>Credit Card Study</i>	36	35	39
<i>Handset Study</i>	37	39	41
% Male			
<i>Credit Card Study</i>	36%	35%	38%
<i>Handset Study</i>	46%	43%	40%

Source: J.D. Power and Associates



2

Mobile Web Response Rates are Lower

Credit Card Study Response Rates

Outbound SMS Survey	55%
Inbound SMS Survey	33%
SMS Invite to Mobile Web	32%
Traditional Web	78%

Handset Study Response Rates

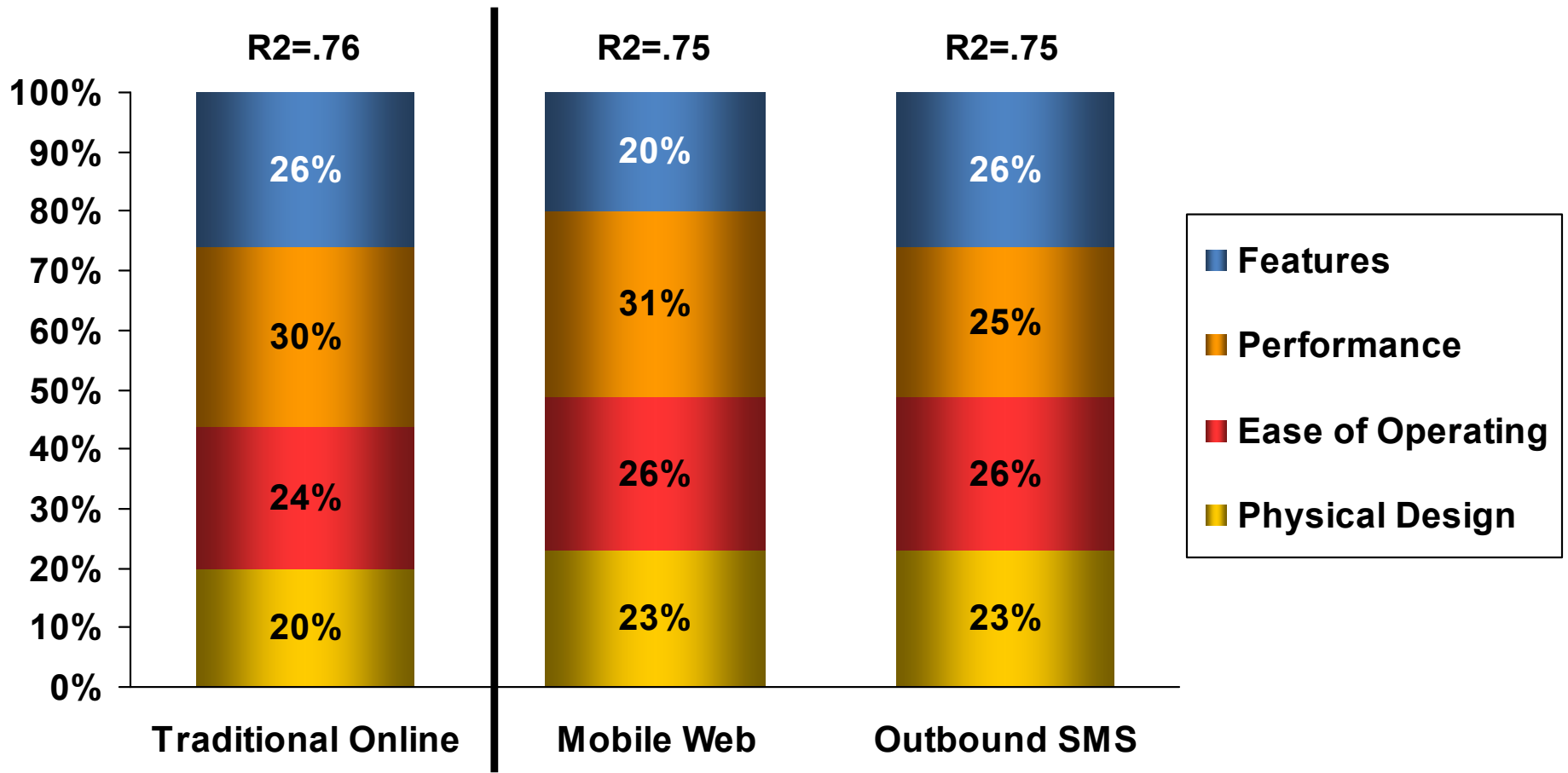
SMS Survey	60%
SMS Invite to Mobile Web	40%
Traditional Web	45%



3

Mobile Surveys Yield Similar Results

Handset Mobile Study



Source: J.D. Power and Associates

Credit Card: Are the scores the same?

	Outbound SMS	Inbound SMS	Mobile Web	Traditional Web
Label				
<i>Credit Card Overall</i>	702	720	706	727
<i>Terms & Conditions</i>	605	633	604	654
<i>Rewards</i>	670	698	683	714
<i>Benefits</i>	615	631	663	691
<i>Billing</i>	774	785	756	768
<i>Customer Service</i>	758	771	754	760

- Traditional web yields higher scores
 - Inbound SMS reports higher satisfaction than other mobile collection methods
 - Outbound SMS and Mobile Web show somewhat similar scores



Handset: Are the scores the same?

	SMS	Mobile Web	Traditional Web
Label			
<i>Handset Overall</i>	761	759	717
<i>Physical Design</i>	8.00	7.99	7.42
<i>Ease of Operating</i>	7.74	7.66	7.22
<i>Performance</i>	7.09	7.02	6.93
<i>Features</i>	7.71	7.81	7.18

- Data collected via either mobile method have higher scores than data collected via the traditional web
 - 23 points due to handset brand
 - 3 points due to demographics
 - 16 points due to method of collection



4 Survey Length Matters

Case Study 3: Residential Electric

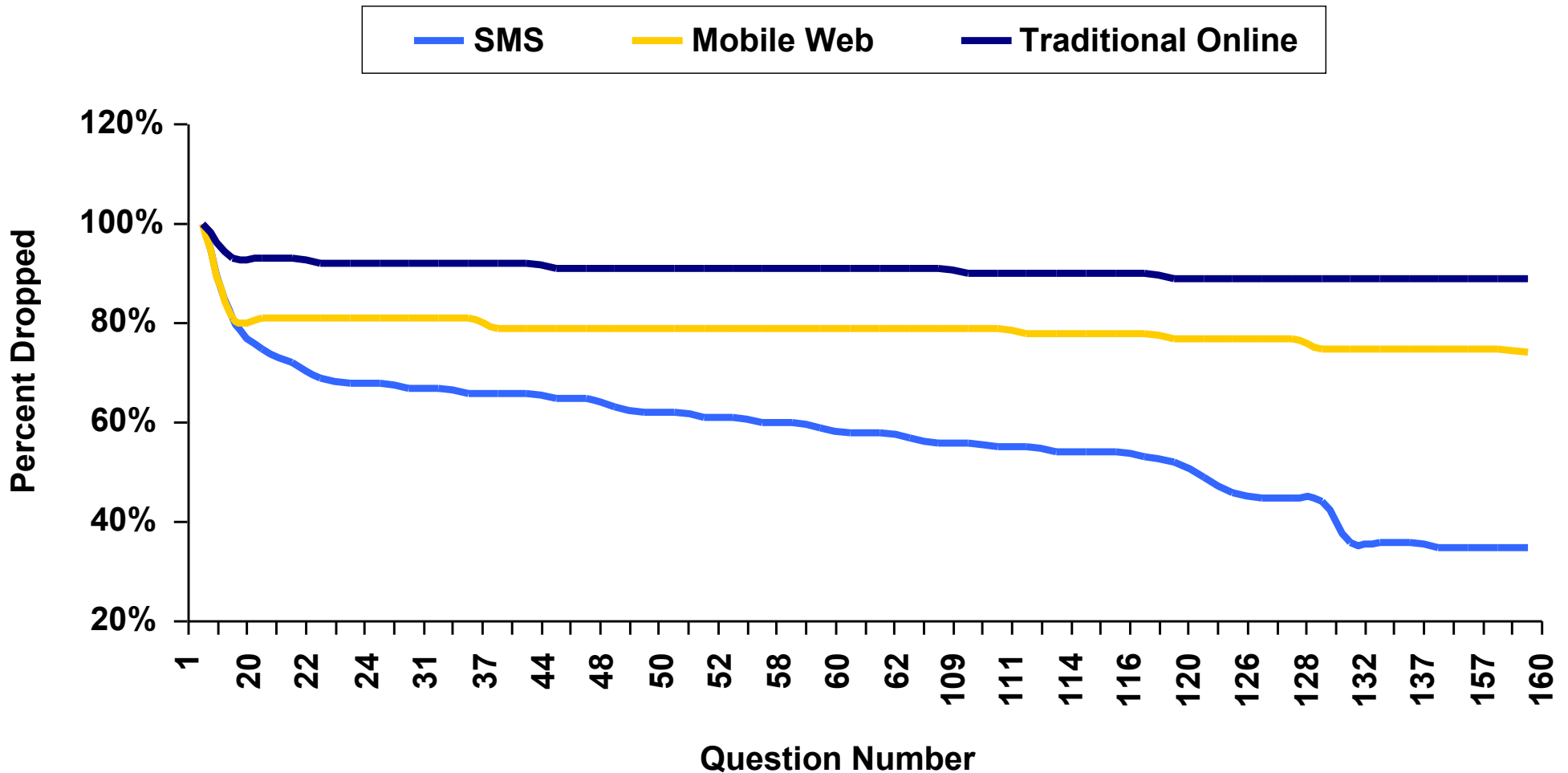
- Survey length is a key issue for any data collection method
 - How many items will respondents complete by SMS or mobile web?
- We administered a 160-item customer experience survey and used survival analysis to examine the drop-out point by data collection method



4

Survey Length Matters *(continued)*

Drop Off Rates



Source: J.D. Power and Associates

5 Location-aware Mobile Devices are the Future

- What information is collected
 - Don't profile me
 - Ask me only if I want you to
- How long is the information retained
 - How will these devices change over time?
 - How will they support increasing data demands?
- What is it used for
 - Where will consumers allow market researchers to interact with them?
 - What are consumers comfortable with?
- Fusing information
 - Must provide value to product/service providers
 - Don't just use market research to sell goods

