

Parallel Study

Back to Basics:

Impact of Questionnaire Design Comparing Telephone and Internet Methods

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Overview & Summary

The purpose of this paper is to provide researchers with some background for considerations when designing and scripting an online questionnaire. Moreover, the paper provides information on the similarities and differences in responses when the same survey is conducted over the telephone and through the Internet via Lightspeed Research's online panel, namely the Lightspeed Consumer Panel.

Note that this study was conducted in the United States. Additional research will be conducted in Europe, specifically, the UK, to understand the influence of data collection mode in other cultures.

Three phases of research were conducted:

- **Phase 1** - 1,000 interviews via the telephone (RDD method) and 1,000 interviews online via the Lightspeed Consumer Panel using the same questionnaire.
- **Phase 2** - Approximately 200 interviews with the online panel using a redesigned version of the questionnaire (i.e., using an 'active' approach to the questionnaire layout).
- **Phase 3** - Approximately 200 telephone interviews with pre-recruited members of the Lightspeed Consumer Panel.

Results were analyzed through normalizing the data and filtering the telephone survey data set by those who were recorded as having both PC access and Internet access at home. This could be compared to the data collected through the online panel.

Key findings are:

- In this study, patterns of responses were found overall to be similar for data collected via telephone and online via the Lightspeed Consumer Panel. Thus, decision-making would not be mainly affected by data collection mode (assuming the sampling frames are comparable).
- Questionnaire design and format play a significant role in the actual response levels. This study highlights the importance of considering design when migrating a telephone study to the Internet. For stand-alone Internet studies, the researcher should consider the options outlined in this paper, and can base decisions on the task at hand.
- Overall, responses collected online from the Lightspeed Consumer Panel closely resemble telephone responses when an 'active' questionnaire design is used. This design is prevalent in list questions. Essentially, online respondents give an answer for each question listed in a grid, rather than just checking those that apply.
- The Lightspeed Consumer Panel members are not different from respondents recruited on the telephone via RDD. When online panelists participated in a telephone version of the study, their responses were closely aligned to those of telephone participants who were recruited using RDD.

More specifically,

- The researcher must choose between an 'active' or 'passive' design for multi-punch questions. There are pros and cons to each method, but the study suggested that if the client wishes to compare results for work previously conducted on the telephone, then the 'active' approach gives the best fit.
- There appears to be no consistency in the differences between different sets of questions, e.g., different scale/grid styles produce different sets of comparative results.
- The impact of either including or not including a 'don't know' option online cannot be estimated accurately, i.e., it is not consistent between different types of scales.
- Taking into account the last two comments, in order to establish the impact of moving a tracker currently conducted over the telephone to online, it is strongly recommended that the study is run in parallel for at least three reporting periods or for a period of time such that enough interviews have been completed to allow similarities and differences to be identified.
- For surveys about technology related products, additional measures may need to be added to control for the profile of the panelists by time spent on the Internet.
- The members of the Lightspeed Consumer Panel tended to respond to questions in similar fashion to the respondents with similar characteristics (e.g., PC and Internet access, time spent on the Internet) who completed the telephone interview.

Introduction

There is a general understanding that results from a market research study conducted via the Internet will vary to some degree with those collected over the telephone. The overriding question is whether the difference will be significant, and whether decisions based on the data will be impacted. The purpose of this paper is to:

- Isolate differences caused by the data collection techniques (rather than those caused by different populations).
- Review whether the type of people who participate in an online panel, (in this case the Lightspeed Consumer Panel), or their responses, differ from the phone respondents.
- Determine considerations of best practices for asking questions over the Internet.

In order to identify and understand any differences, a series of Internet and telephone parallel studies were conducted in the US using the same questionnaire as the base of the interview. In total, there were three phases to this project. The following outlines the methods for each phase.

Methodology - Phase 1 - Telephone RDD & Internet (Passive)

Sample Size

1,000 interviews were carried out over the telephone and the Internet. Millward Brown (sister company of Lightspeed Research) conducted the telephone study using standard RDD. The 1,000 online interviews were conducted through the Lightspeed Consumer Panel in the US. The interviews were conducted during November 2001.

Question Design

The questionnaire was designed to cover most of the common research questions. More detail on the question format and content is discussed later in this paper. The survey also contained similar questions for different subject matter (e.g., technology products, financial products and services and consumer products).

The formats for the Internet questions were set up as 'passive' where the respondents use check boxes only for answers that apply. A detailed description of 'passive' questioning follows in the 'question set' later in the paper.

Apart from the different question sets on the particular products, additional questions were asked regarding the users Internet habits; for example, where the Internet is accessed from, hours spent on the Internet, and how often the Internet is accessed. The respondent was also asked to monitor their agreement to a series of behavioral statements regarding their views on technology in general.

The questionnaire length averaged 15 minutes on the telephone and 10 minutes over the Internet.

Sample Design

The same non-interlocking quotas were established for each method by age, gender and income.

Screeners questions were used to establish that the respondent was a) one of the main decision makers regarding products and services purchased for the household, and b) aged between 18 and 64. Only those respondents who gave both their age and household income were allowed to complete the survey. Quota controls were included to ensure the sample drawn was representative of the U.S. population.

Data processing

On reviewing the composition of the final samples, the data was normalized by age, gender, income and education to account for differences in "interlocking" cells. The Internet data was 'normalized' using the cell profile of the telephone sample characteristics.

The next stage was to segment the two samples such that results could be reviewed on a similar basis. To this end, the telephone data was segmented as:

- Both PC and Internet access at home (70% of telephone sample)
- PC at home, but no Internet access (7% of telephone sample)
- No PC at home (23% of telephone sample)

The data from the 'both PC and Internet access at home' segment from the telephone study became the basis for comparison to the Internet panel.

Methodology - Phase 2 - Internet (Active)

The objective of phase 2 was to ask questions on the Internet in a way that was more in line with the phone methodology rather than the approach typically used on the Internet. We wanted to understand differences in "passive" questioning used on the Internet (check only boxes that apply) versus phone questioning (check a box for every question).

194 interviews were conducted using the LSR online panel in January 2002.

The quotas were set up as interlocking cells to match the profile of the telephone survey from Phase 1.

The questionnaire was modified in the following ways:

- Insert check boxes so that a response is required for each item in multiple list questions.
- Excluded 'don't know' options where applicable in the phase 2 Internet survey.

Methodology - Phase 3 - Telephone survey with Lightspeed Consumer Panel Members

In phase 3, members of the Lightspeed Consumer Panel participated in the survey by phone using the original phone questionnaire. In this third phase of research, the purpose was to understand if there are differences between the RDD respondents and the online panel responses, and to determine if difference are caused by the actual question execution or through variation in the respondent characteristics. For example, one could hypothesize that there is a pre-disposition for panel members to give different responses to questions with scales because they are 'warm' to market research questions.

193 telephone interviews were conducted using pre-recruited Lightspeed Consumer Panel members in March 2002.

The quotas were set up as interlocking cells to match the profile of the telephone survey from Phase 1.

The questionnaire was identical to the original phone survey.

Question Set and Design

In designing the survey, various standard question sets were included in the questionnaire. The following are the main question set areas.

Question Set 1: *'yes/no' response to a list (see below for more detail)*

Question Set 2: *'yes/no' response to a single question*

Question Set 3: *'yes/no' response to a list by recall period*

Question Set 4: *5-point scale satisfaction list*

- Completely satisfied
- Moderately satisfied
- Neither satisfied nor dissatisfied
- Moderately dissatisfied
- Completely dissatisfied

Question Set 5: *4-point scale consideration list*

- Definitely consider
- Would seriously consider
- Might consider
- Would not consider

Question Set 6: *5-point scale likelihood to try*

- Definitely would try it
- Probably would try it
- Might or might not try it
- Probably would not try it
- Definitely would not try it

Question Set 7: *5-point rating scale*

Give a score between '1' and '5' where '5' means extremely different and '1' means not at all different.

Question Set 8: *Open-ended question*

Detail on Question Set 1:

Within the survey we asked the respondent about ownership and usage of particular products within certain product areas.

The following products were surveyed for each product area:

Technology - Do you currently own...?

- DVD
- PDA
- Cellular phone
- Digital camera
- Computer game console

Financial - Have you used in the past 3 months ...?

Credit cards
Online trading
Online banking
Financial advisor
Checking account

Consumer - Do you currently use...?

Film
Vitamins
Soft drinks
Frozen yogurt
Furniture polish

The telephone method integrated a standard design, that is:

Which of the following products do you currently buy or use?(Read list, accept multiple responses.)

1. Vitamins or mineral supplements
2. Carbonated soft drinks
3. Furniture cleaner, polish, or wax
4. Frozen yogurt
5. Photographic film
6. None of the above **(Do not read.)**

We tested the questions in two ways on the Internet - phase 1 (passive) and phase 2 (active).

In phase 1, questions were asked in a way considered typical or normal for this type of question over the Internet. This is the 'passive' approach where respondents check only boxes that apply.

Which of the following products do you currently buy or use?(Choose all that apply.)

- Vitamins or mineral supplements
- Carbonated soft drinks
- Furniture cleaner, polish, or wax
- Frozen yogurt
- Photographic film
- None of the above

For phase 2, the questions were asked in the style more like the telephone method. This is the 'active' approach where respondents check a response box for every question.

Which of the following products do you currently buy or use? (Choose 'buy/use' or 'do not buy/use' for each item.)

| | Buy/Use | Do Not Buy/Use |
|-----------------------------------|--------------------------|--------------------------|
| Vitamins or mineral supplements | <input type="checkbox"/> | <input type="checkbox"/> |
| Carbonated soft drinks | <input type="checkbox"/> | <input type="checkbox"/> |
| Furniture cleaner, polish, or wax | <input type="checkbox"/> | <input type="checkbox"/> |
| Frozen yogurt | <input type="checkbox"/> | <input type="checkbox"/> |
| Photographic film | <input type="checkbox"/> | <input type="checkbox"/> |

Results

The results of the phone respondents with a PC and Internet access at home were compared to those from the Internet survey.

Question Set 1: 'yes/no' response to a list

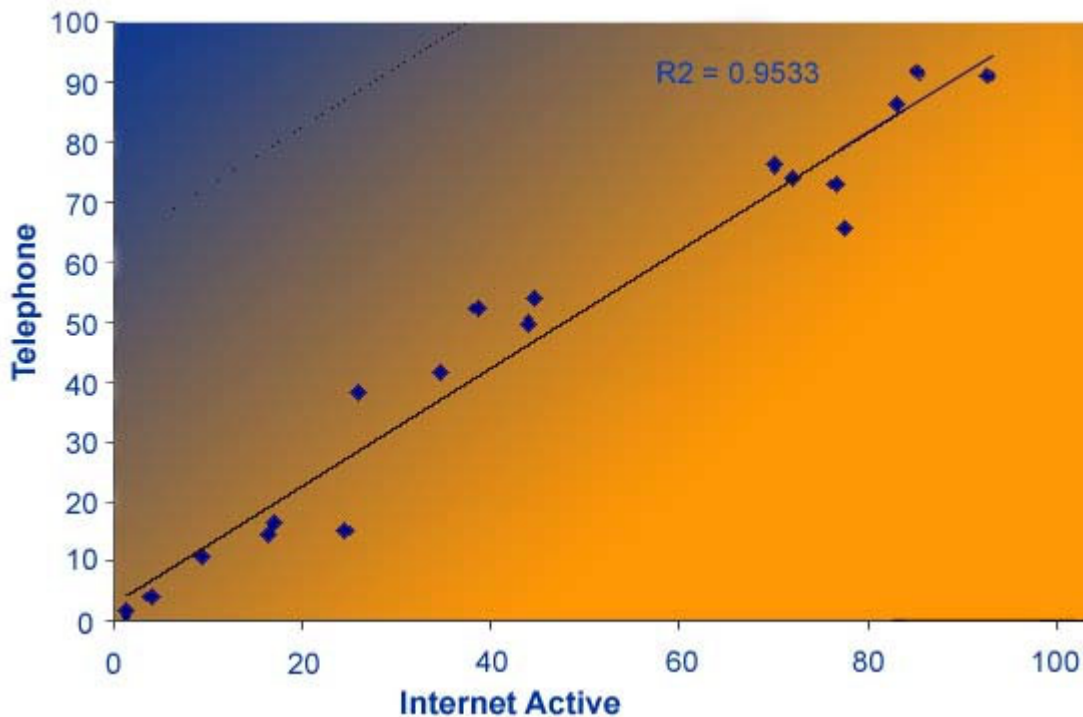
Comparing results for the Internet (active and passive) and telephone responses, we focused on the aggregation of mentions for each product area.

Table 1: Average number of mentions per product area

| Product or Service Type | Phase 1 | | Phase 2 |
|-------------------------|------------------------------|----------------|----------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel |
| | | Passive | Active |
| Technology | 2.18 | 2.05 | 2.28 |
| Financial | 2.55 | 2.35 | 2.60 |
| Consumer | 3.31 | 3.09 | 3.57 |

The average number of mentions for the Internet 'passive' and phone are significantly different. The difference between the levels is fairly consistent with the telephone sample being 6% higher for technology, 9% for financial and 7% for consumer. However the figures between the Internet active and the phone figures are not significant, suggesting that the two 'active' approaches result in similar response levels.

The comparability of product usage/ownership data collected via telephone and active Internet method is clearly demonstrated in the following correspondence graph. The ownership levels of the 15 products plus the percentage of respondents who did not use or own the products were plotted for the values attained over the phone compared to the Internet (active).



The diagram shows a very strong correlation between the ownership/usage levels found through the Internet as compared to those interviewed over the phone with Internet and PC access.

Question Set 2: 'yes/no' response to a single question

In order to understand the impact of the 'active' and 'passive' on responses, we reviewed the question set that contained a simple single response question such that all three surveys asked the question in an 'active' way.

For those who owned cellular phones, the question was asked: 'Does the cellular phone have web access, email or text messaging features?'

Of course, the question for the two Internet surveys remained the same. Given the level of 'don't knows' found in the first phase, we felt that we had to keep the option for phase 2 so that the survey would continue as smoothly as possible.

Table 2: Responses to 'Does cellular phone have web access, email and messaging features?'

| | Phase 1 | | Phase 2 |
|------------|------------------------------|----------------|----------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel |
| | | Passive | Active |
| Yes | 49% | 45% | 44% |
| No | 49% | 49% | 44% |
| Don't know | 2% | 6% | 12% |

The only significant difference is for the 'don't know' option. However, on the telephone this is not a response that is provided by the interviewer and is reliant on the respondent actually stating 'don't know.' The 'don't know' option has to be provided for the Internet survey, and though the levels are higher, it does not effect the overall interpretation of the results.

This implies that a standard single question is less likely to be effected by the difference in interview method.

Question Set 3: 'yes/no' response to a list by recall period

Consumption by Time Period

The respondents who said that they currently drink carbonated soft drinks were asked to recall the brands that they had consumed in the past month, week and 24 hour period. For Internet phase 1, the question was asked in a passive way, i.e. as a multi-punch list, while for phase 2 the respondent had to answer 'yes' or 'no' to each brand. For both the telephone and Internet methods, only the brands mentioned as consumed in the past month were asked about for the past week, and those consumed in the past week were asked about for the past 24 hours.

Table 3: Average number of soft drink brands consumed by recall period

| | Phase 1 | | Phase 2 |
|---------------|------------------------------|----------------|----------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel |
| | | Passive | Active |
| Last month | 3.14 | 2.64 | 3.36 |
| Last week | 1.91 | 1.56 | 1.92 |
| Last 24 hours | 1.12 | 1.07 | 1.19 |

As with the analysis on ownership in question set 1, there are different levels between the two Internet techniques. Again, the differences between the Internet (passive) and the phone are significant for the longer recall periods, while the differences are not significant between the phone and Internet (active) figures.

However, levels seen for average number of drinks consumed in the past 24 hours are similar, thus it can be argued that the active and passive questioning can impact the levels when there is a longer recall period, but do not seem to have an impact for a recent recall.

Consumption of Brands

The other issue is that of the actual brands that are recalled. Do the Internet respondents recall a different brand profile to that of the phone respondent?

The following tables show the percentage of mentions for each brand, rather than the percentage by the sample base.

Firstly, over the past month, there is a strong correlation in rank order and percentages of the brands across all three methods. Linking this to the previous chart implies that the overall percentage of the brand is driven by the question execution.

For instance, the percentages of Coca Cola by the sample bases are:

| | |
|-------------------|-----|
| Telephone phase 1 | 62% |
| Internet phase 1 | 51% |
| Internet phase 2 | 62% |

Table 4: Percentage of total mentions for each brand consumed in last month

| Brand Consumed | Phase 1 | | Phase 2 |
|----------------|------------------------------|----------------|----------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel |
| | | Passive | Active |
| Coca Cola | 17% | 17% | 17% |
| Pepsi | 15% | 15% | 15% |
| Dr Pepper | 14% | 12% | 12% |
| Sprite | 13% | 13% | 11% |
| Diet Coke | 11% | 11% | 11% |
| Diet Pepsi | 9% | 9% | 9% |
| 7-Up | 7% | 9% | 7% |
| Canada Dry | 6% | 6% | 6% |
| Sunkist | 3% | 4% | 6% |
| Diet 7-Up | 3% | 3% | 4% |
| None | 1% | 0% | 1% |
| Base Mentions | 2,200 | 2,638 | 649 |

For this example, choosing which way the question is executed has an impact on the actual brand percentage as normally reported, but underlying is that the actual percentage of mentions is stable.

The same exercise was repeated for the recall of brands consumed in the past 24 hours.

Table 5: Percentage of total mentions for each brand consumed in last 24 hours

| Brand Consumed | Phase 1 | | Phase 2 |
|----------------|------------------------------|----------------|----------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel |
| | | Passive | Active |
| None | 22% | 24% | 20% |
| Coca Cola | 18% | 16% | 18% |
| Pepsi | 15% | 14% | 17% |
| Diet Coke | 13% | 13% | 15% |
| Dr Pepper | 10% | 8% | 9% |
| Diet Pepsi | 9% | 10% | 10% |
| Sprite | 6% | 6% | 5% |
| Canada Dry | 3% | 3% | 2% |
| 7-Up | 2% | 2% | 0% |
| Diet 7-Up | 2% | 1% | 1% |
| Sunkist | 1% | 2% | 2% |
| Base Mentions | 781 | 1,067 | 230 |

Again, when analyzing the percentage of mentions, the profile is highly correlated across the three methods. In terms of percentage based on sample size, the percentage for Coca Cola is 21% from the phone, and for the Internet phase 1 and phase 2, 22% and 24%, respectively. The percentages are close for all 3 surveys suggesting that the recall over a short period of time is not affected by any halo effect in quizzing respondents about their soft drink consumption over longer periods of time using the active and passive approaches.

Question Set 4: 5-point scale satisfaction list

As with question set 2, the respondents were asked to rate their satisfaction with their cellular phone. The question asked was 'What is your overall satisfaction with the quality of cellular phone calls.'

Table 6: Responses to 'What is overall satisfaction with the quality of cellular phone calls?'

| | Phase 1 | | Phase 2 | Phase 3 |
|------------------------------------|---------------------------------------|-------------------|-------------------|------------------------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel | Phone (Internet Panel) |
| | | Passive | Active | |
| Top 2 boxes | 82% | 77% | 85% | 75% |
| Completely satisfied | 37% | 24% | 35% | 26% |
| Moderately satisfied | 45% | 53% | 50% | 49% |
| Neither satisfied nor dissatisfied | 8% | 9% | 5% | 14% |
| Moderately dissatisfied | 9% | 12% | 7% | 8% |
| Completely dissatisfied | 2% | 2% | 3% | 3% |
| Don't know | 0% | 0% | 1% | 0% |

The results show a fairly high score for the top boxes across all of the phases. There are some inconsistencies for the actual levels between the methods such that no pattern can really be determined. This scale question is different from others in the survey as it is only asked for one particular aspect, i.e., satisfaction with cellular calls whereas other questions with scales have a number of elements that are asked. With a number of elements being questioned, there will be inconsistencies in the way different telephone interviewers will approach the repeating of scales after the response to the first element has been recorded. It is therefore possible in this case, where we have only one element, that any potential interviewer bias may be negated. Further investigation is required.

Question Set 5: 4-point scale consideration list

For products and services that the respondents did not currently own or use, we asked:

For the technology products:

'In the next three months how likely are you to consider purchasing..?'

For the financial products:

'In the next three months how likely are you to consider using..?'

For the consumer products:

'In the next three months how likely are you to consider purchasing..?'

The response list was as follows:

- Would definitely consider
- Would seriously consider
- Might consider
- Would not consider

In terms of analysis, the results were aggregated across the five products within each area. Also included in the analysis is the aggregated ownership/usage level.

The tables below summarize the average number of mentions for each product area by likelihood to buy.

Table 7a: Total mentions percentaged across the 5 technological product areas

| | Phase 1 | | Phase 2 | Phase 3 |
|---------------------|---------------------------------------|-------------------|-------------------|------------------------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel | Phone (Internet Panel) |
| | | Passive | Active | |
| Own | 44% | 41% | 46% | 47% |
| Definitely consider | 3% | 5% | 4% | 2% |
| Seriously consider | 2% | 7% | 6% | 4% |
| Might consider | 12% | 18% | 17% | 13% |
| Would not consider | 39% | 25% | 28% | 33% |
| Don't know | 0% | 5% | 0% | 0% |

Table 7b: Total mentions percentages across the 5 financial product/service areas

| | Phase 1 | | Phase 2 | Phase 3 |
|---------------------|---------------------------------------|-------------------|-------------------|------------------------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel | Phone (Internet Panel) |
| | | Passive | Active | |
| Own | 51% | 47% | 52% | 51% |
| Definitely consider | 3% | 2% | 1% | 3% |
| Seriously consider | 1% | 4% | 2% | 1% |
| Might consider | 10% | 14% | 14% | 12% |
| Would not consider | 35% | 27% | 31% | 35% |
| Don't know | 0% | 5% | 0% | 0% |

Table 7c: Total mentions percentages across the 5 consumer product areas

| | Phase 1 | | Phase 2 | Phase 3 |
|---------------------|---------------------------------------|-------------------|-------------------|------------------------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel | Phone (Internet Panel) |
| | | Passive | Active | |
| Own | 66% | 62% | 71% | 65% |
| Definitely consider | 2% | 2% | 1% | 1% |
| Seriously consider | 1% | 4% | 2% | 1% |
| Might consider | 9% | 16% | 11% | 12% |
| Would not consider | 22% | 14% | 14% | 21% |
| Don't know | 0% | 3% | 0% | 0% |

The first comment pertains to 'don't knows' for the Internet surveys. In phase 2, the 'don't know' option was removed. With this option removed, it looks like the majority of the 'don't knows' have migrated to 'would not consider,' which makes logical sense if someone is forced to choose one of the remaining options.

The second comment pertains to the difference in level of 'would not consider' between the Internet and phone methods. Comparing the Internet (active) and phone (phase 1) figures, there is a significantly higher number of 'would not consider's for the phone. That is out of the possible total of 5 responses, 39% of mentions were for non consideration of the technology products when interviewed on the phone compared to 28% via the Internet, and similarly for the financial products where the levels are 35% to 31%, while consumer products show the same pattern with scores of 22% compared to 14%.

The question is raised again whether the difference is caused by question execution or from differences in the respondents. The results for phase 3, show that for financial and consumer products that the differences seen between the Internet (active) and phone (phase 1) are more likely to be caused by question execution rather than behavioral differences in the respondents.

The other interesting difference is between the phase 1 and phase 3 telephone surveys for technology products. As mentioned, the financial and consumer results are nearly identical for these data sets but for the technology products there is a difference. Further analysis showed that that these results could be influenced by how 'technology friendly' the respondent was, and could be estimated by reviewing the amount of time spent on the Internet. Not surprisingly, the members of the Internet panel spend more time online than average.

Reviewing that frequency of access to Internet during a typical week, it was apparent there were three bands of usage:

- Light users (9 hours or less per week)
- Medium (10 to 29 hours per week)
- Heavy (30 plus hours per week)

Analysis of the technology product highlighted that similar levels were seen when comparing the Internet usage groups across the telephone respondents and online panelists, i.e., the less the time spent on the Internet, the less the consideration levels would be.

Similar analysis was conducted for the financial and consumer products and the results were relatively flat across the Internet usage groups.

Question Set 6: *5-point scale likelihood to try*

For this question set, the respondent was read or shown a paragraph of text outlining a new concept. It should be noted that the concept was still visible on screen to the online respondent while they made their decision. The respondent was asked how likely they would be to try this new concept. The exercise was repeated three times for a) a new juice beverage, b) a cellular mobile personal assistant, and c) a new financial management service.

Table 8a: Likelihood to try new juice beverage

| | Phase 1 | | Phase 2 | Phase 3 |
|-----------------------------|---------------------------------------|-------------------|-------------------|------------------------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel | Phone (Internet Panel) |
| | | Passive | Active | |
| Definitely would try | 20% | 24% | 24% | 17% |
| Probably would try it | 31% | 40% | 34% | 42% |
| May or May not try it | 24% | 26% | 26% | 24% |
| Probably would not try it | 14% | 7% | 11% | 12% |
| Definitely would not try it | 10% | 4% | 5% | 5% |
| Mean | 3.4 | 3.7 | 3.6 | 3.6 |

Table 8b: Likelihood to try new cellular mobile assistant

| | Phase 1 | | Phase 2 | Phase 3 |
|-----------------------------|---------------------------------------|-------------------|-------------------|------------------------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel | Phone (Internet Panel) |
| | | Passive | Active | |
| Definitely would try | 6% | 5% | 5% | 5% |
| Probably would try it | 13% | 17% | 15% | 15% |
| May or May not try it | 22% | 35% | 28% | 27% |
| Probably would not try it | 26% | 27% | 33% | 28% |
| Definitely would not try it | 33% | 16% | 19% | 25% |
| Mean | 2.3 | 2.7 | 2.5 | 2.5 |

Table 8c: Likelihood to try new financial management system

| | Phase 1 | | Phase 2 | Phase 3 |
|-----------------------------|---------------------------------------|-------------------|-------------------|------------------------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel | Phone (Internet Panel) |
| | | Passive | Active | |
| Definitely would try | 4% | 3% | 2% | 1% |
| Probably would try it | 14% | 11% | 11% | 10% |
| May or May not try it | 25% | 35% | 31% | 27% |
| Probably would not try it | 28% | 32% | 32% | 31% |
| Definitely would not try it | 29% | 19% | 24% | 31% |
| Mean | 2.4 | 2.5 | 2.3 | 2.2 |

In comparing the Internet and phone method in phase 1, we do see significant differences in the mean scores for the 'new juice beverage' and 'cellular mobile assistant,' however there are no significant differences between phase 1, 2 and 3 results for the Internet panelists. Upon further analysis there is no clear reason why the differences are significant. However, in terms of the decision making process one would have to consider the notion that though the numbers are different, what difference would it make to the decision making process? The likelihood to try the new product (definitely or probably) is similar across the data collection methods.

It should be noted that for cellular and financial products, the levels of 'definitely would not try it' is higher on the phone than the Internet. Again this may be a result of question execution rather than difference in respondent profile or could be influenced by the "technical" aspect of the concept.

Question Set 7: 5-point rating scale

For this question set, the respondent was asked about the likelihood to try the new concept, whether the new concept was different to any already on the market. The respondent was asked to rate how different the product is on a 5-point scale where "5" means 'extremely different' and "1" means 'not at all different.'

Table 9a: How different new juice beverage is to that already on the market

| | Phase 1 | | Phase 2 | Phase 3 |
|--------------------------|---------------------------------------|-------------------|-------------------|------------------------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel | Phone (Internet Panel) |
| | | Passive | Active | |
| 5 (Extremely different) | 7% | 9% | 11% | 9% |
| 4 | 14% | 17% | 22% | 23% |
| 3 | 31% | 38% | 32% | 38% |
| 2 | 18% | 26% | 32% | 17% |
| 1 (Not at all different) | 24% | 5% | 5% | 12% |
| Don't know | 5% | 6% | 0% | 1% |
| Mean | 2.6 | 3.0 | 3.0 | 3.0 |

Table 9b: How different new cellular mobile assistant is to that already on market

| | Phase 1 | | Phase 2 | Phase 3 |
|--------------------------|---------------------------------------|-------------------|-------------------|------------------------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel | Phone (Internet Panel) |
| | | Passive | Active | |
| 5 (Extremely different) | 10% | 7% | 6% | 12% |
| 4 | 19% | 15% | 19% | 27% |
| 3 | 36% | 33% | 42% | 34% |
| 2 | 15% | 23% | 29% | 16% |
| 1 (Not at all different) | 15% | 7% | 4% | 10% |
| Don't know | 5% | 16% | 0% | 2% |
| Mean | 2.9 | 2.9 | 2.9 | 3.2 |

Table 9c: How different new finance management system is to that already on market

| | Phase 1 | | Phase 2 | Phase 3 |
|--------------------------|---------------------------------------|-------------------|-------------------|------------------------------|
| | Phone (PC & Internet Access) | Internet Panel | Internet Panel | Phone (Internet Panel) |
| | | Passive | Active | |
| 5 (Extremely different) | 9% | 8% | 12% | 9% |
| 4 | 16% | 17% | 18% | 24% |
| 3 | 36% | 29% | 44% | 33% |
| 2 | 19% | 18% | 16% | 20% |
| 1 (Not at all different) | 15% | 6% | 9% | 12% |
| Don't know | 5% | 22% | 0% | 2% |
| Mean | 2.9 | 3.0 | 3.1 | 3.0 |

For this question there is a good spread of responses across the levels. The one tendency, overall, is that on the telephone, the response '1' has higher recordings than the Internet and vice versa for '2.' That aside, the results look fairly consistent to suggest that any executional differences are minimal.

The online respondent had the opportunity to re-read the concept and thus consider the response while the telephone respondent (unless they asked the interviewer to repeat the details) gave a response based on memory. This may have led to the differences. Again this is an area that should be investigated further.

The other interesting issue to note is the higher levels of 'don't knows' for the technology and financial concepts, 16% and 22% respectively, for the Internet phase 1. For the other methods, 'don't know' was not a given option and thus forced to give an answer (however on the telephone the respondent could volunteer 'don't know'). Thus in this case, the high level of 'don't know' response could illustrate the difficulty in understanding the concepts or the fact that the respondent does not have the relevant exposure to that kind of product to benchmark against. Again, it is up to the researcher to decide whether or not the inclusion of the 'don't know' option gives more relevant results.

Question Set 8: Open-ended question

We asked the following open-ended question to all the respondents:

'Online banking allows you to perform many banking services using your computer, such as checking balances, transferring money between accounts, and paying bills. What concerns, if any, do you have with online banking?'

The same coding department coded the verbatims. The overcodes are outlined in the table below.

Table 10: Overcodes for responses to concerns with online banking

| | Phase 1 | |
|---------------------|------------------------------|----------------|
| | Phone (PC & Internet Access) | Internet Panel |
| | | Passive |
| Gave concerns (net) | 51% | 54% |
| Security (subnet) | 45% | 45% |
| Accuracy (subnet) | 4% | 5% |
| Fees | 3% | 3% |
| Service (subnet) | 2% | 2% |
| Neutral (net) | 9% | 9% |
| No concerns (net) | 21% | 24% |
| No answer | 14% | 14% |

The overcodes are closely correlated between the two methods. However, reviewing the actual verbatims for this particular example it was felt that there was greater richness in the telephone results than from the Internet. This is slightly different from what has typically been experienced for verbatims in other categories (e.g., CPG, Healthcare) where the verbatims via the Internet seem better.

Findings & Recommendations

Though this set of surveys is not expected to answer all of our questions regarding questionnaire format, they are invaluable in giving us an indication on how one needs to get back to basics and consider the impact of question formats when designing an online questionnaire.

The researcher must choose between an 'active' or 'passive' design for multi-punch questions. There are pros and cons to each method, but the study suggested that if the client wishes to compare results for work previously conducted on the telephone, then the 'active' approach gives the best fit.

- There appears to be no consistency in the differences between different sets of questions, e.g., different scale/grid styles produce different sets of comparative results.
- The impact of including or not including a 'don't know' option online cannot be estimated accurately, that is, it is not consistent between different types of scales.
- Taking into account the last two comments, to establish the impact of moving a tracker currently conducted over the telephone to online it is strongly recommended that the study is run in parallel for at least three reporting periods or for a period of time such that enough interviews have been completed so that similarities and differences can be identified.
- For surveys about technology related products, additional measures may need to be added to control the profile of the panelists by time spent on the Internet.
- The members of the Lightspeed Consumer Panel tended to respond to questions in similar fashion to the respondents with similar characteristics (i.e., PC and Internet access, time spent on the Internet) who completed the telephone interview.
- Another consideration is the time difference between a 'passive' and 'active' questionnaire. Making a number of questions 'active' will increase the length of the questionnaire. In this survey, changing the question format to 'active' increased the time taken by 10%. This may not be an issue with a 10-minute survey, but a 20-minute survey with a large number of 'active' response lists could easily increase by five minutes.

Another issue is the differences between the online and offline populations. There has been much written about this subject and this paper is not intended to cover this subject. However, if the parallel runs mentioned are conducted, it will allow the telephone data to be segmented by respondents with similar characteristics as to that found online and also compare this to the respondent's data for those who are not online. The researcher then has to make the decision whether this element of the offline population can be represented and weighted for using the online population as the basis.

The aim from the analysis of these results is to address the question 'Do the variations encountered make a difference to the decision making process?'

And finally, these surveys were conducted using the US Lightspeed Consumer Panel. It was encouraging to see that the data collected from the online panelists was, in the main and given the different formats, in line with the data from the RDD telephone respondents. The results that have been outlined above do not necessarily hold true for other online data collection methods or online panels.

Further investigations

For some questions, we have shown that there were significant differences in response to some questions and not to others. We are starting to understand some of the drivers of the differences and similarities. There are issues that also need to be investigated further such as:

- impact of interviewer/respondent fatigue for longer questionnaires
- the differences in responses when viewing a scale visually vs. pattern of response on the phone. There appears to be a polarization for the telephone data to be slightly weighted towards one end of a scale, and not necessarily the last mentioned variable in the scale, and it is not dependent on whether the scale goes from positive to negative or vice versa.
- What are the impacts of using the active approach if respondent is forced to answer through an extensive list. Do we see an increase in pattern by response?
- Richness of the verbatim data collected online. How can the respondent be probed further?

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