IMPACTS OF THE MOBILE REVOLUTION ON ADVERTISING DATA COLLECTION METHODS

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Abstract

It is vital for marketers to accommodate the needs of today's survey respondent when conducting research, both mobile and online. Without addressing things like shortened attention span and device limitations, marketers will start to lose important data when conducting research and end up with inaccurate and skewed results. By conducting research on mobile survey-taking behaviors and the impact of segmentation on online survey taking, we are able to make recommendations for designing and executing surveys that will meet respondents' needs.

This session is based on Decipher's review of nearly 100 separate studies, representing data from more than 2 million survey respondents over the last two years. The studies, which included three waves of data and two published white papers, tracked the participation of mobile users in traditional online studies. The first set of data reviewed more than 50 traditional online studies, representing over half a million individuals. A follow-up study, added nearly a half a million additional data points - tracking the same surveys and supplementing an additional 30 more. Data is weighted toward consumer studies deploying client-supplied customer lists for sample. One significant early trend was the migration of survey takers to mobile devices. Recent data from 2013 showed that trend is now slowing, among other behavioral shifts among respondents over the two-year period.

The conference presentation will discuss the findings of the studies, investigating the volume of mobile users accessing surveys and how their behaviors might differ from PC users. Results of the research ultimately demonstrated that mobile users' impact on survey data will be unique from study to study, indicating a growing need for researchers to profile this population in their online surveys. Luck will share ideas and conclusions with session participants on how this can be done successfully. The session also includes action steps to help improve response rates among mobile survey takers and best practices for survey design.

Introduction

IDC projects smartphone shipments to grow to 1.5 billion in 2017. For market researchers, this poses questions. How does the mobile population impact survey data? Do they display different survey-taking behaviors? How many mobile users take online surveys? Just as the internet transformed market research over a decade ago, mobile growth is challenging the way we think about survey design, how our surveys are being taken and the quality of data that we collect from the mobile user.

At Decipher we've been tracking many of our client studies to get a better understanding of the online mobile survey taking population. Since 2011, we've reviewed nearly 100 separate studies, representing data from over 2 million survey respondents. These studies were consumer-centric and largely sampled customers from eCommerce firms like eBay. They range from the very short to the very complex. Furthermore, we confined our investigation to traditional online studies--surveys that were compatible with, but not optimized for the mobile platform. No special design considerations were given for mobile users, but respondents could access the surveys using either a PC or mobile device. Without designing a study that caters to the mobile user, the results presented here thus represent a baseline of sorts. How many mobile users would we encounter? And how would this emerging population react to our online surveys?

How many are accessing online surveys using a mobile device?

As the online consumer increasingly becomes more mobile, we are seeing the survey-taking population follow in kind. Since late 2011, the percentage of survey starts (i.e. click-throughs) coming from a mobile device has continued to grow. The current period shows the mobile user represents nearly a quarter of all survey starts. Clearly the mobile user has arrived, and they are accessing our surveys whether we've designed it with them in mind or not. (Figure 1)

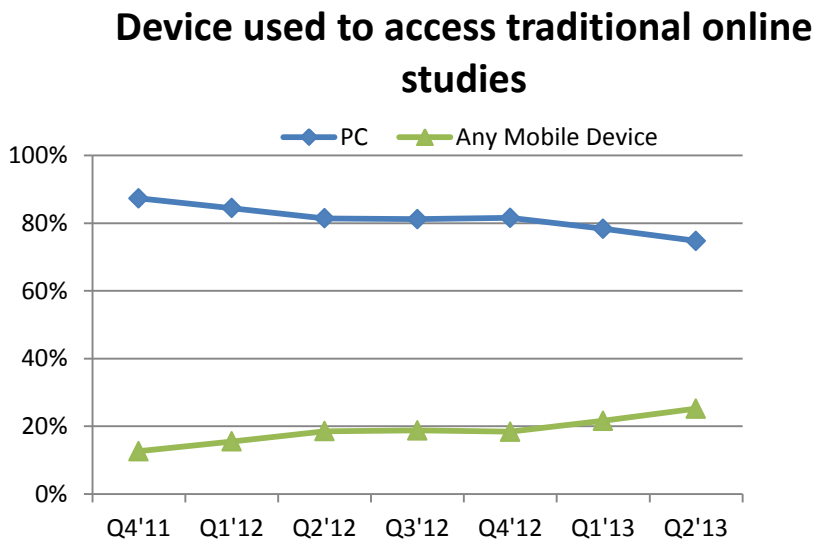


Figure 1. Survey starts by PC and mobile devices

Figure 2 breaks out these survey starts by different mobile devices. The majority of survey starts are made on a smartphone but tablet usage has shown strong growth, more than doubling since late 2011. Tablets now account for 7% of all survey starts in our studies. (Figure 2)

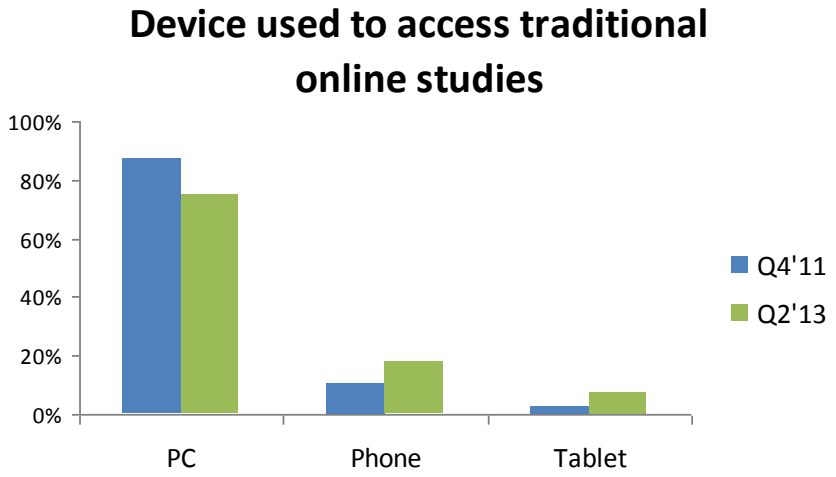


Figure 2. Survey starts by PC and mobile devices

Client and panel supplied samples

In reviewing individual studies, we noticed that the level of mobile participation can vary greatly. Not surprisingly, the determining factor is generally the nature of the sample.

Studies relying on a client supplied list of customers had a higher level of mobile participants than studies relying on panel sample. This year, over 20% of survey starts in our client list-based studies came from a mobile device. Contrast that to about 10% in our panel sample studies. (Figure 3)

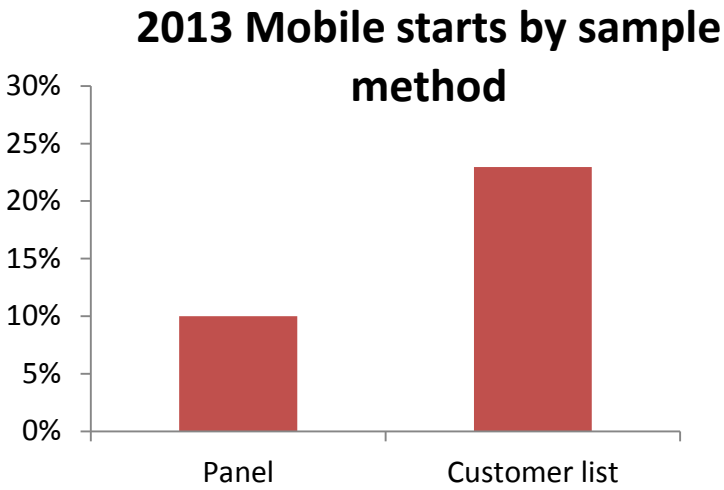


Figure 3. 2013 Mobile starts by sample method

We suspect that in a panel sample, respondents have a greater expectation for receiving surveys, therefore, they are more prepared to start it on their preferred device---usually on a PC, for the best user-experience on a larger screen. In contrast, in a study involving a client customer list, respondents often don't have any prior expectations about taking a survey. They may take a "what's this?" approach when receiving an email invitation and access their survey while on the go.

Our panel studies included a mix of river sample, which further creates a PC bias (banner ads targeted full design websites, not mobile websites). Even so, "pure" panel sample (i.e. no river sample) has been shown to yield about half the level of mobile survey starts than our client customer list-based studies (Comer 2013).

When we further split out the data in Figure 3 to look at screen size, something interesting emerges. About 5% of mobile starts from our panel studies come from smartphones (Figure 4). This is far less than what we see for our client customer list based studies. The implication is that with panel studies, there isn't as much impact from smartphone users. With minimal cost (at least in the short term), they may even be excluded from panel studies if a researcher has challenges designing a mobile friendly survey or faces questions about data quality from the smartphone user. As we will show, they do display different survey behaviors than PC users, given the usability challenges of taking a traditional survey on a smaller screen. (Figure 4)

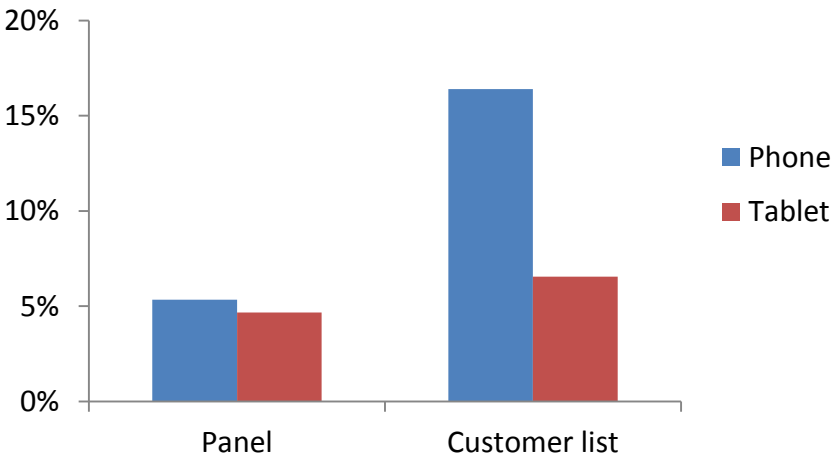


Figure 4. 1H'13 Mobile starts by device

What percentage of mobile users are completing surveys?

We investigated completion rates for the mobile users that started our studies. Specifically, we counted the number of terminates, over quotas, and qualified completes as a percentage of click- throughs.

What did we find?

Screen size matters. Respondents on a smartphone are more likely to drop out of a survey than someone coming through a PC or tablet device – in some cases more than 1.5 times as likely. This makes sense, considering that our surveys were not optimized for the smaller screen size. Also, smartphone users face more potential distractions that could cause them to break away from a survey. They may engage a survey only during idle time---waiting for the subway or for a movie to start.

Tablet users, on the other hand, are nearly identical to PC users when it comes to completion rates. At least on this measure, the screen sizes and input methods for tablets provide a sufficient user experience for survey respondents in traditional online surveys. (Figure 5)

	Q2'13
PC	74%
Phone	59%
Tablet	75%

Figure 5. Completion rates by device

What causes mobile users to drop out?

To investigate how to provide an engaging survey experience for mobile users, we took a deeper dive into several of our studies and analyzed where mobile users are prone to dropout.

Grids

Grids are well known dropout triggers. This is especially true for users on a smaller screen. One of our studies sampling eBay members contained a fairly complex grid: 12 columns X 10 rows. Mobile respondents showed a high propensity to dropout at this question. (Figure 6)

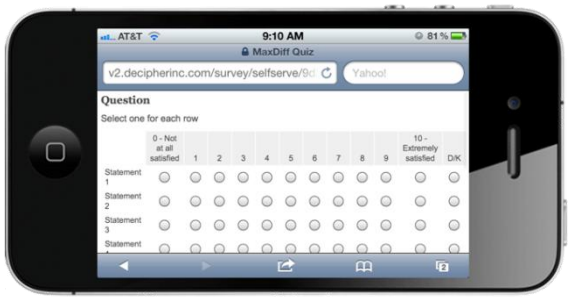
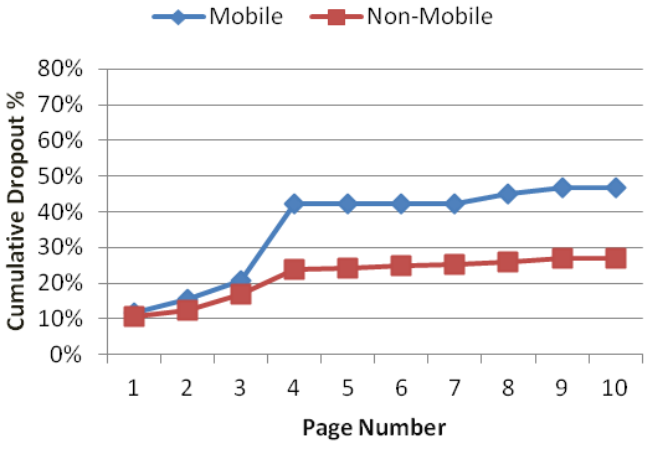


Figure 6. 12 column grid question

When PC users encountered this grid, the number of dropouts also increased, but not nearly as much as respondents that were on a mobile device. Figure 7 shows the page-by-page cumulative dropout rates for the eBay study.

Large grids are tedious for anybody, but a smaller screen poses more challenges. Users must read tiny column labels, touch tap on a small selection space, and take more time to scroll through the items. This can increase frustration leading to dropouts. (Figure 7)

Figure 7. Cumulative dropout rates by device; eBay study example 1



Does this mean all grids should be avoided for mobile users? Not necessarily. They may just need to be kept to a manageable size. In one investigation, just 1% of mobile users dropped out after being exposed to a 5 column x 9 row grid question. Reducing the number of columns helps, but we believe the nature of the sample also played a role in achieving a lower dropout in this example. The study recruited panel members that indicated a willingness to take a survey on a mobile device. We have noticed that panel members have higher participation rates than other types of sample. For them, a 5 column X 9 row grid was perfectly acceptable.

While the exact nature of a survey and sample will influence the extent of dropouts experienced, expect mobile users to be sensitive to grids. A smaller screen size makes these types of questions more difficult to respond to, so for mobile users, keep the number of columns and rows to a minimum. One rule of thumb is to make sure that the entire grid can be viewed and read on a single screen. Avoid requiring the mobile user to scroll – horizontally or vertically. A five column grid would be the maximum width, but three columns is even better.

First page

The old adage is true. First impressions count.

For any online survey, the first page will generally experience more dropouts than any other part of the survey. In a three question eBay study, we noticed that respondents were almost twice as likely to drop out at the first page if they came through on a smartphone device as opposed to a PC. Furthermore, it depended on what type of smartphone device was being used. Blackberry and Android phone users were more prone to dropping out than an iPhone user. (Figure 8)

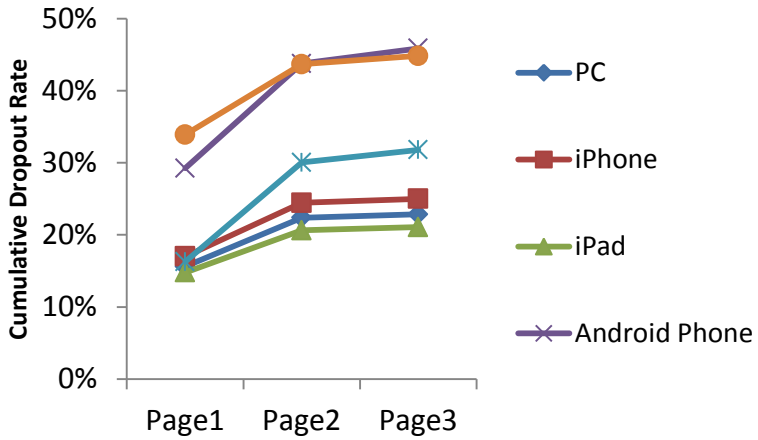


Figure 8. Cumulative dropout rate by device; eBay study example 2

In many of our studies, we've noticed that users of Apple devices tend to have higher completion rates than Blackberry or Android users. Part of this might be due to the way a survey renders on a particular device. In a study conducted with researchers at Maritz, iPhone users were twice as positive as Android users in their rating of the overall survey experience (Chrzan, Saunders, and Brazil 2012). Yet comScore also reports iPhone and Android smartphone display different user characteristics (Travis 2013). Not only do iPhone users engage more with mobile online content, but they report higher device satisfaction and device loyalty.

We cannot say for sure whether the device or profile of the users causes completion rates to differ in this instance. What is clear is the initial impression is where it matters most. Dropout rates for PC users can be twice as high in the first 90 seconds of a survey compared to later on (Brazil et al. 2006). Smartphone users are going to be even more vulnerable to dropout at the initial stages of a survey. What this means is that it's a good idea to check and see whether a survey renders well on the most popular mobile devices --iPhones, iPads, and Androids. Make sure the first page looks clean and is easy to read. Since this is a critical point where respondents are deciding whether to continue with a survey or not. In our example, the first page included a horizontal rating scale that was 11 columns long, and included scale labels which looked very small on a smartphone. That's probably not the best impression with which to start out.

Open ends

Open ends are another dropout trigger. It is more cumbersome to type in text using a small screen device. For many of our studies, we found that to be true. In one survey, smartphone users were more than 1.5X likely to drop out at an optional open end than PC users. Tablet users, on the other hand, were just as likely as PC users to drop out when encountering an open end question type (Figure 9).

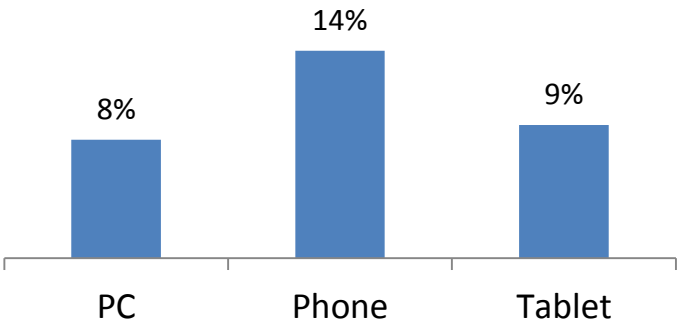


Figure 9. Frequency of dropouts at an optional open end

Tablet and smartphone users typed a fewer number of characters than those on a PC device--but on average, not by much. PC users typed just 5 more characters than mobile users. That's a difference of about a word. (Figure 10).

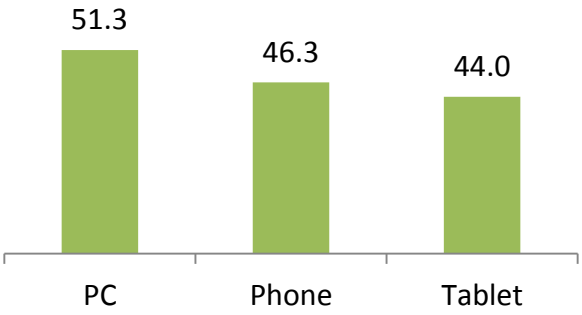


Figure 10. Average number of characters entered at optional open end (blanks included)

Although more investigation is needed to assess the quality of open ends from mobile users, the differences in character count aren't great enough to be meaningful to us. But the increased dropouts on smartphones suggest open ends should be used sparingly for this population.

Longer completion times

Longer surveys can translate to increased dropouts.

In every study we looked at, users on a smartphone device took longer to complete a survey than those coming through on a PC. In a survey that took a PC and tablet user about 7.5 minutes to complete, smartphone users required about a minute more time. (Figure 11)

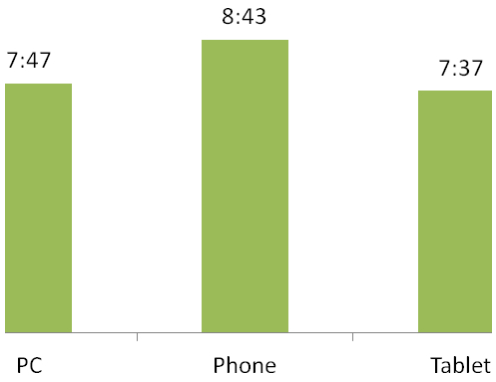


Figure 11. Median interview time

Smartphone users have adopted cellular connections while the majority of tablet users still rely on Wi-Fi (NPD Group 2011). For the former, longer download times for web pages are expected. Further complicating the issue is that mobile data plans differ from user to user, making it difficult to assess how quickly a survey is rendering on a smartphone. We know that long load times for videos can increase dropouts. This is something to especially be sensitive about for smartphone users. When possible, avoid unnecessary graphic or other media elements in surveys that will increase load times on a mobile device. Flash applications are not mobile friendly. Besides requiring extra download time, Flash does not work on most popular mobile devices. We instead recommend using HTML5 technology, which provides greater device compatibility and generally results in quicker download times.

Smartphone users also require more time to fill out a survey because of the extra navigational steps required for the smaller screen: scrolling or zooming in/out to navigate, reading small text, and selecting a radio button. Consider reducing the column length on rating scales. Increase the text font size for easier reading on mobile devices. For instance, ATM style buttons for single select questions can be useful. These give a bigger selection area that is tailored for touch input, but also look appropriate for use on a PC. (Figure 12)

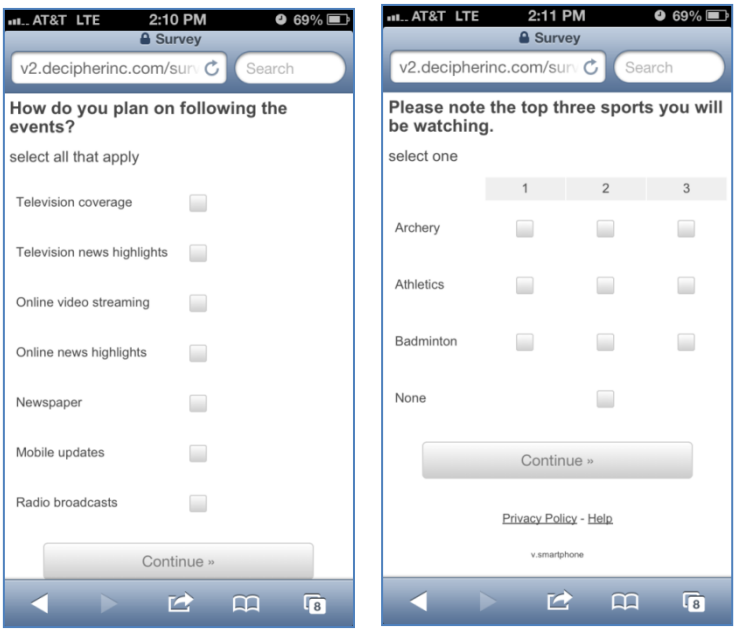


Figure 12. Mobile friendly survey design

How is data quality impacted by mobile users?

Most researcher address this question by comparing data from PC survey takers and mobile survey takers.

Data differences do exist. Researchers at Maritz note reduced acquiescence bias for mobile users (the tendency to give agreeable answers), and that this difference appears to be the result of demographic and psychographic difference between

respondents (Chrzan, Sanders, and Brazil 2012). Increased failure to pass "red herring" checks, (i.e. failure to mark a specific response when prompted to do so), among smartphone users has also been shown as well as increased straight-lining (Baker and Miller 2013). However others studies have not shown the same results (Chrzan, Sanders, and Brazil 2012).

On the other hand, researchers as early as 2011 were indicating data from smartphone surveys yield a level of insight and quality that is consistent with surveys taken using a PC (Heist and McFall 2011). Maletova (2013) reported no difference in response order effects, socially undesireable or non-substantive responses. Furthermore, smartphone and PC users did not display any differences for category usage or brand awareness questions (Baker and Miller 2013).

We've looked at PC and mobile user response distribution in 11 point ratings scales for a number of our client studies. By and large, we have not found much distinction between PC and mobile users. Here is one example (Figure 13)

	PC (a)	Phone (b)	Tablet (c)
N	13094	2914	1116
Top Box	15%	14%	15%
Top 2 Box	24%B	21%	24%B
Bot Box	11%	12%AC	10%
Bot 2 Box	14%	15%C	12%

Figure 13. Response distribution in an 11 point horizontal scale

Statistically significant" differences at 95% confidence are noted, but the differences are slight and hardly something we can talk about in a meaningful way.

Mobile and PC users are most distinguishable by age – smartphone respondents are younger; tablet users skew towards the middle-age set. When we controlled for this demographic variable we didn't find much change. With a lowered base size our segment differences are no longer "statistically significant." (Figure 14)

18-34 Year Olds

	PC (a)	Phone (b)	Tablet (c)
N	6515	1576	364
Top Box	14%	14%	16%
Top 2 Box	23%	22%	24%
Bot Box	10%	12%	9%
Bot 2 Box	13%	15%	11%

55+ Years Old

	PC (a)	Phone (b)	Tablet (d)
N =	703	64	N/A
Top Box	18%	25%	N/A
Top 2 Box	25%	31%	N/A
Bot Box	14%	11%	N/A
Bot 2 Box	17%	13%	N/A

Figure 14. Response distribution for an 11 point horizontal scale

It seems prudent to always capture the demographics of the survey audience (age, income, ethnicity, and education). As the number of mobile survey takers grows, the demographics of a survey taking population may shift, so researchers need to keep a close tab on how this may impact survey data. Generally, though, we have not seen that the smaller screen size causes a change in response distribution in rating scales. Smartphone respondents, for example, don't show a greater tendency than PC users to lean to the left side of a horizontal rating scale (the part of the scale that is viewed first, reading left to right).

Recommendations: Common sense…remember that each study is unique

There's no doubt that mobile survey takers are gaining increasing attention. Our data provides some guidelines for what can be expected for mobile survey takers coming through a traditional online study. But each study is unique, and the sample method and survey design will have an impact on expected survey behavior.

If consumers are being captured without pre-notice, like many of our clients' customer-list based studies, respondents accessing the survey from mobile devices may be as high as 20%, and growing. For panel studies, that figure drops to half

the amount. In customer-list based studies, then, it becomes even more crucial to design surveys that are mobile-friendly to minimize dropouts. A large portion of a specific customer base may now be accessing surveys through a mobile device, so surveys need to be designed with them in mind.

The dropout triggers we highlighted (first page, grids, open ends, interview length) are also common dropout triggers for PC users. What frustrates a user on a bigger screen is going to frustrate a user on a smaller screen—only the results are magnified. While dropout rates for smartphone users were generally higher, tablet users showed the same dropout rates as PC users. Only until we scale down to the smartphone screen, does size matter.

When investigating mobile survey takers, it's easy to view screen size as the most crucial factor. But who is taking the survey and how they are being recruited is every bit as important. Clients regularly ask us how many mobile respondents they can expect to participate in their surveys, and the answer is 'it depends.' In our quarterly Decipher client satisfaction studies, where we send e-mail invitations to clients while they are at work, we see virtually no one coming through on a mobile device. Some studies are B2B, other surveys may sample a different demographic like teens, or pick up recruits from a product package label instead of an e-mail campaign. Research investigations on mobile surveys may yield mixed findings when there are multiple factors that influence respondent behavior.

So while the data here provide some guidelines, ultimately each researcher needs to track their own sample to understand the potential impact mobile users will have on their studies. Mobile gives us unprecedented access to respondents. With good design practice, there isn't any reason to believe that we can't achieve the level of mobile data quality that we are accustomed to for our online surveys- ideally, better.

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