



Smartphones and Smart Surveys: Are Handheld Devices up to the Challenge of Complex Data Collection?

By Elaine Zanutto, Ph.D.

Device-agnostic Surveys: The New Holy Grail

With the ubiquity and indispensability of smartphones, it's no surprise that as many as 30% of survey respondents respond via smartphone when given the chance. Even so, many online surveys still exclude smartphones altogether based on the assumption that mobile optimization and respondent attention aren't necessarily up to the challenge. While the industry has been making its peace with *simple* mobile surveys – and, in fact, relies heavily on mobile to reach customers "in the moment" – there is far less confidence in the viability of mobile for surveys that involve complex stimuli and equally complex judgments like tradeoffs and conjoint share allocations. Survey designers worry that respondents are unable to manage all that complexity on a single screen. They also fear that respondents are not in a reflective frame of mind when using their mobile phones, and simply won't or can't take complex tasks seriously enough.



Individuals who rely most heavily on smartphones for online access have tended to be younger, lower-income, and non-white (<http://www.pewinternet.org/fact-sheet/mobile/>). Although it is technically possible to adjust for demographic bias by quota-sampling and/or by weighting to census targets, research protocols that exclude 30% of the population exacerbate the problems of already low response rates by altering the *psychographic* representativeness of our surveys. Increasingly, however, we are finding that older generations and well-educated professionals prefer to use whichever device is at hand when it suits them to respond. In an era when survey research is being challenged to defend its relevance, we need to be as inclusive as possible – but also attentive to the implications of smartphone participation. We've been investigating them whenever the opportunity presents itself.

Good News – Some of it Surprising

The case for excluding smartphones from certain types of demanding surveys is premised on the argument that there is simply no point in capturing poor-quality data and no point in building complicated models on survey sand. All quite reasonable. However, our own analyses suggest that concerns about smartphones, though plausible, may be either misplaced or overstated.

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Speaking, first, to the most basic issue, we're happy to confirm that we found no significant, systematic differences in product satisfaction or NPS metrics when rating scales were presented horizontally in both desktop and smartphone versions of the survey. This was good news but essentially confirmatory. On the other hand, we found that in surveys where the desktop version of the rating scale was presented horizontally and the smartphone version presented *vertically*, there *were* some differences in responses between the two devices, and they ran in a predictable direction: smartphone responses were generally lower than desktop. This was consistent with evidence from other research that people tend not to scroll on mobile devices.

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But the real “new news” came when we looked at conjoint models built on smartphone survey data. *There, we observed no difference in data collected on smartphones, even where:*

- (1) *consumers* were required to evaluate six or more product profiles with as many as twelve attributes, and
- (2) *physicians* were required to assess treatment profiles and allocate share of prescriptions across five products.

In these instances, not only were the data similar for profiles tested by respondents using computers and smartphones; we also found that separate conjoint models built on data from smartphone users and computer users had similar accuracy in predicting outcomes. *This was not consistent with our hypotheses.* In fact, some of us were quite surprised.

Scrolling to the Bottom Line

With so much focus on “democratizing” access to survey findings and other enterprise data throughout business organizations, there needs to be an equal trend toward *democratizing respondent access* to surveys by being more inclusive. We must take respondents when and how we find them. Evidently, smartphone users – especially those who make little or no use of other devices – are remarkably proficient with them, and there is evidence that they’re prepared to take survey tasks as seriously as respondents who have the extra “elbow room” of computer screens and keyboards. Ironically, allowing respondents to take more complex surveys on their mobile phones may catch them at times when they are able to give us more and better attention, not less. Consider the commuter with 30 minutes of uninterrupted morning train time to kill; imagine that same commuter at his or her desktop late at night. Survey respondents are scarce resources. We need to dance to *the rhythm of their lives*, not make them dance to ours.

That still leaves us with the challenge of deciding what we can and can't expect of smartphone survey respondents and how to help them help us. The industry is experiencing pressure to scale back the length of surveys – in effect, capture less data from more people, often in real time. Nonetheless, many companies are unwilling to forego complex survey data entirely.

The bottom line is that we ought to be more flexible in making assumptions about what smartphone respondents are capable of, but we still can't let our guard down. Decisions on whether to exclude smartphones (and the population segments who rely heavily on them) should be made on a thoughtful, case-by-case basis. And decisions on how to optimize for mobile should be mindful of emerging best practices that take account of User Interface constraints and survey heuristics. We'll continue to put smartphones to the test and publish results of our analytic due diligence. By following best practices, we'll all ensure that smartphone survey responses are nearly as smart as the devices that capture them.



As Vice President of our Methods & Analytics function, Elaine Zanutto leads a talented department of statistical programmers and statisticians who advise project teams throughout the Analytics group. NAXION has a well-deserved reputation as one of the most inventive and experienced teams of methodologists in the industry, noted for their authoritative understanding of theory and their skilled, pragmatic application.

Elaine has published many articles in peer-reviewed academic journals in the fields of market research methods, statistics, and survey research methods. She is also an Associate Editor for the Journal of Official Statistics, Chair 2017 of the American Statistical Association Survey Research Methods Section, and a member of the Statistics Canada Advisory Committee on Survey Research Methods. Elaine received a Ph.D. in Statistics from Harvard University, and a M.Sc. in Statistics and a B.A. in Mathematics and Statistics from Carleton University (Ottawa, Ontario, Canada).

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