

## About the December Week 1 and Week 3 Omnibus Survey

The PSRAI December 2014 Omnibus Weeks 1 & 3 obtained telephone interviews with a nationally representative sample of 2,002 adults living in the continental United States. Telephone interviews were conducted by landline (1,001) and cell phone (1,001, including 605 without a landline phone). The survey was conducted by Princeton Survey Research Associates International (PSRAI). Interviews were done in English and Spanish by Princeton Data Source from December 4-7, 2014 (1,001) and from December 18-21, 2014 (1,001). Statistical results are weighted to correct known demographic discrepancies. The margin of sampling error for the complete set of weighted data is  $\pm 2.5$  percentage points.

December Omnibus Week 1 and December Omnibus Week 3 were run as separate studies. The sample for each survey was weighted independently, not as a combined sample, although both studies used the same sample design, contact procedures, weighting procedures and weighting parameters. Details on the design, execution and analysis of the surveys are discussed below.

### Sample Design

For each survey, a combination of landline and cellular random digit dial (RDD) samples was used to represent all adults in the continental United States who have access to either a landline or cellular telephone. Both samples were provided by Survey Sampling International, LLC (SSI) according to PSRAI specifications.

Numbers for the landline sample were drawn with equal probabilities from active blocks (area code + exchange + two-digit block number) that contained three or more residential directory listings. The cellular sample was not list-assisted, but was drawn through a systematic sampling from dedicated wireless 100-blocks and shared service 100-blocks with no directory-listed landline numbers.

### Contact Procedures

December Week 1 interviews were conducted December 4 to 7, 2014 and December Week 3 interviews were conducted December 18 to 21, 2014. As many as three attempts were made to contact every sampled telephone number. For each study, sample was released for interviewing in replicates, which are representative subsamples of the larger sample. Using replicates to control the release of sample ensures that complete call procedures are followed for the entire sample. Calls were staggered over times of day and days of the week to maximize the chance of making

contact with potential respondents. Each phone number received at least one daytime call when necessary.

For the landline sample, interviewers asked to speak with the youngest adult male or female currently at home based on a random rotation. If no male/female was available, interviewers asked to speak with the youngest adult of the other gender. This systematic respondent selection technique has been shown to produce samples that closely mirror the population in terms of age and gender when combined with cell interviewing.

For the cellular sample, interviews were conducted with the person who answered the phone. Interviewers verified that the person was an adult and in a safe place before administering the survey.

### **Weighting and Analysis**

Because the studies were run at separate periods, the sample for each wave was weighted separately and not as one combined study. The weighting procedures detailed below were used for both surveys.

Weighting is generally used in survey analysis to compensate for sample designs and patterns of non-response that might bias results. The sample was weighted to match national adult general population parameters. A two-stage weighting procedure was used to weight the dual-frame sample.

The first stage of weighting corrected for different probabilities of selection associated with the number of adults in each household and each respondent's telephone usage patterns. This weighting also adjusts for the overlapping landline and cell sample frames and the relative sizes of each frame and each sample.

The second stage of weighting balanced sample demographics to population parameters. The sample is balanced to match national population parameters for sex, age, education, race, Hispanic origin, region (U.S. Census definitions), population density, and telephone usage. The basic weighting parameters came from the US Census Bureau's 2012 American Community Survey data. The population density parameter was derived from Census 2010 data. The telephone usage parameter came from an analysis of the July-December 2013 National Health Interview Survey.

Weighting was accomplished using the SPSSINC RAKE, an SPSS extension module that simultaneously balances the distributions of all variables using the GENLOG procedure. Weights

were trimmed to prevent individual interviews from having too much influence on the final results. The use of these weights in statistical analysis ensures that the demographic characteristics of the sample closely approximate the demographic characteristics of the national population.

Post-data collection statistical adjustments require analysis procedures that reflect departures from simple random sampling. PSRAI calculates the effects of these design features so that an appropriate adjustment can be incorporated into tests of statistical significance when using these data. The so-called "design effect" or deff represents the loss in statistical efficiency that results from unequal weights. The combined total design effect for both surveys is 1.31.

The margins of error reported and statistical tests of significance are adjusted to account for the survey's design effect, a measure of how much efficiency is lost from the weighting procedures.

### **Response Rate**

Tables 2 and 3 report the disposition of all sampled telephone numbers ever dialed from the original telephone number samples. The response rate estimates the fraction of all eligible sample that was ultimately interviewed. Response rates are computed according to American Association of Public Opinion Research standards. Thus for December Week 1, the response rate for the landline samples was 5 percent and the response rate for the cellular samples was 4 percent. For December Week 3, the response rate for the landline samples was 6 percent and the response rate for the cellular samples was 8 percent.

Table 2. December Week 1 Sample Disposition

<u>Landline</u>	<u>Cell</u>	
1,138	77	OF = Out of Frame
1,134	77	Non-residential/Business
4	----	Cell in landline frame
20,211	3,078	NWC = Not working/computer
19,248	3,063	Not working
963	15	Computer/fax/modem
4,670	2,828	UHUO <sub>NC</sub> = Non-contact, unknown if household/unknown other
4,555	9,543	UO <sub>NC</sub> = Non-contact, unknown eligibility
4,517	9,496	Voice mail
38	47	Other non-contact
2,802	3,710	UO <sub>R</sub> = Refusal, unknown if eligible
2,378	2,583	Refusals
424	1,127	Callbacks
27	50	O = Other
----	108	SO = Screen out
----	108	Child's cell phone
84	101	R = Refusal, known eligible
501	500	I = Completed interviews
33,988	19,995	T = Total numbers dialed
27.2%	81.6%	$e1 = (I+R+SO+O+UO_R+UO_{NC}) / (I+R+SO+O+UO_R+UO_{NC}+OF+NWC)$ - Est. frame eligibility of non-contacts
100.0%	84.8%	$e2 = (I+R) / (I+R+SO)$ - Est. screening eligibility of unscreened contacts
37.0%	27.4%	$CON = [I + R + (e2*[O + UO_R])] / [I + R + (e2*[O + UO_R + UO_{NC}]) + (e1*e2*UHUO_{NC})]$
14.7%	13.2%	$COOP = I / [I + R + (e2*[O + UO_R])]$
5.4%	3.6%	$AAPOR\ RR3 = I / [I+R+[e2*(UO_R+UO_{NC}+O)]+[e1*e2*UHUO_{NC}]] = CON*COOP$

Table 3. December Week 3 Sample Disposition

<u>Landline</u>	<u>Cell</u>	
1,156	138	OF = Out of Frame
1,146	138	Non-residential/Business
10	----	Cell in landline frame
20,574	5,749	NWC = Not working/computer
19,612	5,716	Not working
962	33	Computer/fax/modem
3,156	672	UHUO <sub>NC</sub> = Non-contact, unknown if household/unknown other
3,974	3,767	UO <sub>NC</sub> = Non-contact, unknown eligibility
3,953	3,758	Voice mail
21	9	Other non-contact
3,479	4,583	UO <sub>R</sub> = Refusal, unknown if eligible
3,265	3,521	Refusals
214	1,062	Callbacks
19	42	O = Other
----	371	SO = Screen out
----	371	Child's cell phone
132	172	R = Refusal, known eligible
500	501	I = Completed interviews
32,990	15,995	T = Total numbers dialed
27.2%	61.6%	$e1 = (I+R+SO+O+UO_R+UO_{NC}) / (I+R+SO+O+UO_R+UO_{NC}+OF+NWC)$ - Est. frame eligibility of non-contacts
100.0%	64.5%	$e2 = (I+R) / (I+R+SO)$ - Est. screening eligibility of unscreened contacts
46.1%	57.6%	$CON = [I + R + (e2*[O + UO_R])] / [I + R + (e2*[O + UO_R + UO_{NC}]) + (e1*e2*UHUO_{NC})]$
12.1%	13.7%	$COOP = I / [I + R + (e2*[O + UO_R])]$
5.6%	7.9%	<b>AAPOR RR3 = <math>I / [I+R+(e2*(UO_R+UO_{NC}+O))] + [e1*e2*UHUO_{NC}] = CON*COOP</math></b>

## Survey Questions

**SMART1** Some cell phones are called 'smartphones' because of certain features they have. Is your cell phone a smartphone or not, or are you not sure?

Among cell phone owners [n=1,802]

	CURRENT	
%	Yes, is a smartphone	66
	No, is not a smartphone	27
	Not sure / Don't know	7
	Refused	*

**SMART2** Which of the following best describes the type of cell phone you have? Is it an iPhone, a Blackberry, an Android phone, a Windows phone, or something else?

Among cell phone owners [n=1,802]

	CURRENT	
%	Android	33
	iPhone	30
	Windows	3
	Blackberry	1
	Basic cell phone - unspecified (VOL.)	10
	Flip phone - unspecified (VOL.)	6
	Samsung - unspecified (VOL.)	5
	LG - unspecified (VOL.)	2
	Tracfone (VOL.)	1
	Nokia - unspecified (VOL.)	1
	Motorola - unspecified (VOL.)	*
	Pantech - unspecified (VOL.)	*
	Something else	3
	Don't know	4
	Refused	1

## About the American Trends Panel October Wave

The American Trends Panel (ATP), created by the Pew Research Center, is a nationally representative panel of randomly selected U.S. adults living in households. Respondents who self-identify as internet users (representing 89% of U.S. adults) participate in the panel via monthly self-administered Web surveys, and those who do not use the internet participate via telephone or mail. The panel is being managed by Abt SRBI.

Data in this report are drawn from the October wave of the panel, conducted October 3-27, 2014 among 3,181 respondents (2,875 by Web and 306 by mail). The margin of sampling error for the full sample of 3,181 respondents is plus or minus 2.3 percentage points, and the margin of sampling error for the 2,188 smartphone owners is plus or minus 2.7 percentage points.

All current members of the American Trends Panel were originally recruited from the 2014 Political Polarization and Typology Survey, a large (n=10,013) national landline and cellphone random digit dial (RDD) survey conducted January 23rd to March 16th, 2014, in English and Spanish. At the end of that survey, respondents were invited to join the panel. The invitation was extended to all respondents who use the internet (from any location) and a random subsample of respondents who do not use the internet.

Of the 10,013 adults interviewed, 9,809 were invited to take part in the panel. A total of 5,338 agreed to participate and provided either a mailing address or an email address to which a welcome packet, a monetary incentive and future survey invitations could be sent. Panelists also receive a small monetary incentive after participating in each wave of the survey.

The ATP data were weighted in a multi-step process that begins with a base weight incorporating the respondents' original survey selection probability and the fact that some panelists were subsampled for invitation to the panel. Next, an adjustment was made for the fact that the propensity to join the panel and remain an active panelist varied across different groups in the sample. The final step in the weighting uses an iterative technique that matches gender, age, education, race, Hispanic origin, telephone service, population density and region to parameters from the U.S. Census Bureau's 2012 American Community Survey. It also adjusts for party affiliation using an average of the three most recent Pew Research Center general public telephone surveys, and for internet use using as a parameter a measure from the 2014 Survey of Political Polarization. Sampling errors and statistical tests of significance take into account the effect of weighting. The Hispanic sample in the American Trends Panel is predominantly native born and English speaking.

The following table shows the unweighted sample sizes and the error attributable to sampling that would be expected at the 95% level of confidence for different groups of smartphone owners in the survey:

<b>Group</b>	<b>Unweighted sample size</b>	<b>Plus or minus ...</b>
Smartphone owners	2,188	2.7 percentage points
18-29	402	6.4 percentage points
30-49	763	4.7 percentage points
50-64	673	5.0 percentage points
65+	343	6.9 percentage points
White, non-Hispanic	1,668	3.1 percentage points
Black, non-Hispanic	170	9.9 percentage points
Hispanic	199	9.1 percentage points
HS grad or less	316	7.2 percentage points
Some college	601	5.2 percentage points
College+	1,269	3.6 percentage points
Less than \$30,000/yr	401	6.4 percentage points
\$30,000-\$74,999	725	4.8 percentage points
\$75,000 or more	961	4.1 percentage points
Smartphone-dependent	110	12.3 percentage points
Non-dependent	2,078	2.8 percentage points

Sample sizes and sampling errors for other subgroups are available upon request.

In addition to sampling error, one should bear in mind that question wording and practical difficulties in conducting surveys can introduce error or bias into the findings of opinion polls.

The Web component of the October wave had a response rate of 78% (2,875 responses among 3,673<sup>1</sup> Web-based individuals enrolled in the panel); the mail component had a response rate of 55% (306 responses among 555 non-Web individuals enrolled in the panel). Taking account of the

<sup>1</sup> Prior to this wave, 962 web panelists who had never responded were removed from the panel. The response rate including these panelists would have been 62%. Mail panelists who never responded were not yet removed.



response rate for the 2014 Survey of Political Polarization (10.6%), the cumulative response rate for the October ATP wave is 3.4%.

## Survey questions

### ASK ALL

SMARTPHONE. Which type of cell phone do you have? [*If you have multiple cell phones, select the one you use most often*]

Oct 3-27

2014

68	<b>NET</b> Smartphone
28	iPhone
33	Android
1	Blackberry
2	Windows
0	Symbian
4	Some other type of smartphone
24	I have a cell phone, but it's not a smartphone
6	I do not have a cell phone <b>[EXCLUSIVE PUNCH]</b>
1	No answer

### ASK CELL PHONE OWNERS (SMARTPHONE=1-7) [N=3,019]:

COST1. Do you have an individual cell phone plan, or are you part of a group or family plan?

Oct 3-27

2014

35	Individual plan, including prepaid
61	<b>NET</b> Group or family plan
34	Group or family plan, and I pay for the entire bill
14	Group or family plan, and I pay for a portion of the bill
13	Group or family plan, and I don't pay for any of the bill
4	Not sure
1	No answer

### ASK IF KNOW TYPE OF PLAN AND PAY SOME PORTION OF BILL (COST1=1-3) [N=2,568]:

COST2. How much do you PERSONALLY pay or contribute each month for your cell phone service (including your voice, texting, and/or data plan)? **[IF COST1=3, Group or family plan, and I pay for a portion of the bill: "If you only pay for a portion of a group or family plan, please indicate that amount."]**

Oct 3-27

2014

27	Less than \$50
28	\$50 to less than \$100
18	\$100 to less than \$150
11	\$150 to less than \$200
8	\$200 or more
3	I pay nothing because someone else pays my bill
1	Not sure
4	Prefer not to say
*	No answer

**ASK CELL PHONE OWNERS (SMARTPHONE=1-7) [N=3,019]:**

COST3. Have you ever had to cancel or shut off your cell phone service for a period of time because the cost of maintaining the service was too expensive?

Oct 3-27

2014

21	Yes, have done this
78	No, have not had to do this
*	No answer

**ASK ALL:**

COMP. Do you own a desktop or laptop computer?

Oct 3-27

2014

80	Yes
19	No
1	No answer

**ASK ALL:**

TAB. Do own a tablet computer?

Oct 3-27

2014

43	Yes
56	No
1	No answer

**ASK SMARTPHONE OWNERS (SMARTPHONE=1-6) [N=2,188]:**

SM1. Other than the data plan on your cell phone, do you have high-speed internet service at home (such as cable internet, DSL, FIOS, or satellite internet service)?

Oct 3-27

2014

85	Yes, have high speed internet service at home
15	No, do not have high speed internet service at home
*	No answer

**ASK SMARTPHONE OWNERS (SMARTPHONE=1-6) [N=2,188]:**

SM2. Which of the following statements comes closest to describing how you use your cell phone to access online services and information, even if neither is exactly right?

Oct 3-27

2014

22	Other than my cell phone, I have a limited number of ways to get online
78	I have a number of other options for getting online in addition to my cell phone
1	No answer

**ASK SMARTPHONE OWNERS (SMARTPHONE=1-6) [N=2,188]:**

SM3. How often... [RANDOMIZE ITEMS SM3a-SM3f]?

	<u>Frequently</u>	<u>Occasionally</u>	<u>Rarely</u>	<u>Never</u>	<u>No answer</u>
a. Does content that you are trying to access on your cell phone not display properly Oct 3-27, 2014	10	39	40	11	*
b. Do apps that you've downloaded on your cell phone not work correctly Oct 3-27, 2014	9	37	41	12	*
c. Is your monthly cell phone bill substantially higher than you expected it to be Oct 3-27, 2014	7	20	35	38	*
d. Do you experience unexpected cell phone charges from in-app purchases Oct 3-27, 2014	2	7	30	60	1
e. Do you reach the maximum amount of data you are allowed to use as part of your cell phone plan Oct 3-27, 2014	15	21	25	38	1
f. Do poor or dropped signals prevent you from using your cell phone Oct 3-27, 2014	11	36	43	10	*

**ASK ALL:**

EXPS. Which of the following have you done in the last year? [RANDOMIZE A-F] [Check all that apply]

	<u>Yes</u>	<u>Not selected/ No answer</u>
a. Look for information about a job Oct 3-27, 2014	43	57
b. Submit a job application Oct 3-27, 2014	31	69
c. Access government services or information Oct 3-27, 2014	41	59
d. Take a class or watch educational content Oct 3-27, 2014	40	60
e. Look up information about a health		

condition		
Oct 3-27, 2014	63	37
	<u>Yes</u>	<u>Not selected/ No answer</u>
f. Look up real estate listings or information about a place to live		
Oct 3-27, 2014	43	57
g. I have not done any of these		
<b>[EXCLUSIVE PUNCH]</b>		
Oct 3-27, 2014	16	84

**ASK ALL:**

BANK. Do you have an account with a bank?

Oct 3-27		
<u>2014</u>		
86	Yes	
12	No	
2	No answer	

**ASK SMARTPHONE OWNERS (SMARTPHONE=1-6) [N=2,188]:**SM4. In the last year, have you used your cell phone to... **[RANDOMIZE SM4A-SM4G, MATCH SAME ORDER OF RANDOMIZATION OF A-F FROM EXPS WITH G ALWAYS LAST]**

	<u>Yes, have done using cell phone</u>	<u>No, have not done using cell phone</u>	<u>No answer</u>
a. Look for information about a job			
Oct 3-27, 2014	43	57	*
b. Submit a job application			
Oct 3-27, 2014	18	82	*
c. Look up government services or information			
Oct 3-27, 2014	40	60	*
d. Take a class or watch educational content			
Oct 3-27, 2014	30	69	*
e. Look up information about a health condition			
Oct 3-27, 2014	62	38	*
f. Look up real estate listings or information about a place to live			
Oct 3-27, 2014	44	56	*
g. Do online banking (for example, pay a bill or transfer money)			
Oct 3-27, 2014	57	42	*

**ASK SMARTPHONE OWNERS (SMARTPHONE=1-6) [RANDOMIZE SM5A-SM5C] [N=2,188]:**

SM5. How often, if ever, do you use your cell phone to...

	<u>Frequently</u>	<u>Occasionally</u>	<u>Rarely</u>	<u>Never</u>	<u>No answer</u>
a. Get public transit information Oct 3-27, 2014	10	15	21	54	*
b. Reserve a taxi or car service Oct 3-27, 2014	4	7	17	72	*
c. Get turn-by-turn navigation while you are driving Oct 3-27, 2014	31	36	17	16	*

**RANDOMIZE ITEMS****ASK SMARTPHONE OWNERS (SMARTPHONE=1-6) [RANDOMIZE SM6A-SM6D] [N=2,188]:**

SM6. How often, if ever, do you use your cell phone to...

	<u>Frequently</u>	<u>Occasionally</u>	<u>Rarely</u>	<u>Never</u>	<u>No answer</u>
a. Follow along with breaking news events Oct 3-27, 2014	33	35	16	16	*
b. Share pictures, videos, or commentary with others about events happening in your community Oct 3-27, 2014	35	32	18	14	*
c. Make a monetary donation to a political or charitable cause Oct 3-27, 2014	2	6	15	77	*
d. Learn about events or activities in your community Oct 3-27, 2014	18	38	23	21	*

**ASK SMARTPHONE OWNERS (SMARTPHONE=1-6) [N=2,188]:**

SM7. Have you ever used your cell phone to report a problem in your neighborhood (like a pothole or a missing street sign) to the local authorities?

Oct 3-27  
2014

17	Yes, have done this with my cell phone
9	Have done this, but not with my cell phone
74	No, have not done this
*	No answer

**ASK CELL PHONE OWNERS (SMARTPHONE=1-7) [N=3,019]:**

EMER1. Have you ever been in an emergency situation where having your cell phone helped resolve the issue?

Oct 3-27  
2014

52	Yes
48	No
1	No answer

**ASK CELL PHONE OWNERS (SMARTPHONE=1-7) [N=3,019]:**

PROB1. Have you ever been in a situation where you had trouble doing something because you didn't have your cell phone with you?

Oct 3-27	
<u>2014</u>	
41	Yes
59	No
1	No answer

**RANDOMIZE ITEMS SM8a-SM8e****ASK CELL PHONE OWNERS (SMARTPHONE=1-7) [N=3,019]:**

SM8a. Which of the following statements most closely matches how you feel about your cell phone, even if neither one is exactly right? **[RANDOMIZE ORDER OF RESPONSE OPTIONS]**

Oct 3-27	
<u>2014</u>	
59	Not always needed
40	Couldn't live without
1	No answer

**RANDOMIZE ITEMS SM8a-SM8e****ASK CELL PHONE OWNERS (SMARTPHONE=1-7) [N=3,019]:**

SM8b. Which of the following statements most closely matches how you feel about your cell phone, even if neither one is exactly right? **[RANDOMIZE ORDER OF RESPONSE OPTIONS]**

Oct 3-27	
<u>2014</u>	
72	Freedom
27	Leash
1	No answer

**RANDOMIZE ITEMS SM8a-SM8e****ASK CELL PHONE OWNERS (SMARTPHONE=1-7) [N=3,019]:**

SM8c. Which of the following statements most closely matches how you feel about your cell phone, even if neither one is exactly right? **[RANDOMIZE ORDER OF RESPONSE OPTIONS]**

Oct 3-27	
<u>2014</u>	
73	Connecting
27	Distracting
1	No answer

**RANDOMIZE ITEMS SM8a-SM8e****ASK CELL PHONE OWNERS (SMARTPHONE=1-7) [N=3,019]:**

SM8d. Which of the following statements most closely matches how you feel about your cell phone, even if neither one is exactly right? **[RANDOMIZE ORDER OF RESPONSE OPTIONS]**

Oct 3-27	
<u>2014</u>	
91	Helpful
8	Annoying
*	No answer

## About American Trends Panel Experience Sampling Study

The American Trends Panel (ATP) is a national, probability-based panel of US adults fielded for the Pew Research Center by Abt SRBI. A special Diary Study was fielded November 10 through 16, 2014, with smartphone users identified in the panel. This study consisted of 14 short surveys administered twice a day for seven consecutive days. The study was conducted using two different self-administered approaches or “treatments.” One treatment required the panelist to download a special app to their phone, and then they used that app to complete the surveys. The other treatment was a normal Web survey, which could be completed on a mobile device, tablet, laptop or desktop computer. The app is only compatible with certain smartphones. Eligible panelists with a compatible phone were randomly assigned to participate in the app treatment (60%) or the normal Web survey treatment (40%). Eligible panelists with a non-compatible phone were assigned to the normal Web survey treatment. In total, 1,635 ATP members completed at least one of the 14 surveys, with 938 participating by Web and 697 participating with the app. The survey was administered in English and Spanish. Survey weights are provided to account for differential probabilities of selection into the panel, attrition, and differential nonresponse to the Diary Study.

Data in this report are drawn from the 1,035 respondents who completed at least ten of the 14 surveys over the course of the study period. The margin of sampling error for these 1,035 smartphone owners is plus or minus 4.0 percentage points.

### Sample Design

The target population for the Diary Study was non-institutionalized smartphone owners age 18 and over, living in the US, including Alaska and Hawaii. The sample consisted of smartphone users identified and recruited in Wave 8 of the ATP, which was administered using the routine panel protocol. The ATP is a probability-based panel of adults in the United States. Currently all ATP panelists have been recruited from a large (n=10,013) national overlapping dual frame landline and cell phone random digit dial (RDD) survey conducted for the Pew Research Center. At the end of that RDD survey, respondents were invited to join the panel. The invitation was extended to all respondents who use the internet (from any location) and a random subsample of respondents who do not use the internet. The RDD survey was conducted from January 23rd to March 16th, 2014, in English and Spanish. Sample for the RDD survey was obtained from SSI. Please refer to the [Pew Research Center Political Typology/Polarization Survey Methodology Report](#) for additional information on the sample design for the RDD survey.

At the start of Wave 8, the ATP featured 4,228 active panel members, and 3,181 of them completed Wave 8. The Diary Study sample consisted of ATP panelists who had internet access, reported

having a smartphone in Wave 8, and consented to participate in the smartphone follow-up (Diary) study. In total 2,188 Wave 8 panelists reported having a smartphone. Of those, 42 belonged to the non-internet arm of the panel and were ineligible for the Diary Study. Of the remaining 2,146 smartphone panelists, 1,945 consented to participate in the Diary Study. Among those consenting, 1,635 completed at least one of the 14 Diary Study surveys.

The Diary Study was conducted using two different self-administered approaches or “treatments.” One treatment required the panelist to download a special app (SODA®) to their phone, and then they used that app to complete the surveys. The other treatment was a normal Web survey, which could be completed on a mobile device, tablet, laptop or desktop computer. SODA® is only compatible with iPhones, Androids and Blackberry phones. Eligible panelists with one of these three phone types were randomly assigned to participate in the app treatment (60%) or the normal Web survey treatment (40%). All of the eligible panelists with a different type of smartphone (e.g., Windows) were assigned to the normal Web survey treatment. Among the 1,211 panelists assigned to the app treatment, 292 declined the follow up survey invitation and were then asked if they would complete the Diary Study via normal Web surveys. Some 195 agreed to that offer.

### **Data Collection Protocol**

ATP panelists who agreed to participate in the special week of surveys (Diary Study) were sent an email notifying them of the upcoming week of surveys on November 7, 2014. Respondents for whom we also had a residential address received a matching letter in the mail with \$5 cash enclosed, while respondents without an address were emailed a \$5 Amazon gift code as a pre-incentive. The data collection for the surveys was conducted from November 10-16, 2014.

An identical survey measuring smartphone usage was dispatched to each respondent twice daily for seven days, for a total of 14 surveys. All respondents were sent an email invitation. Those who agreed to receive text message reminders were sent those, and the SODA® app had an alarm feature that notified SODA respondents of the current survey’s availability. Each survey was available for two hours, and the survey invitations were dispatched at the times specified in the table below based on the respondents’ reported local time zone.

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### **Survey Administration Contacts**



Date	First Survey	Second Survey
Monday, November 10	8am	3pm
Tuesday, November 11	9am	4pm
Wednesday, November 12	10am	5pm
Thursday, November 13	11am	6pm
Friday, November 14	12pm	7pm
Saturday, November 15	1pm	8pm
Sunday, November 16	2pm	9pm

Pew Research Center American Trends Panel experience sampling survey, November 10-16 2014.

PEW RESEARCH CENTER

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Panelists received \$1 for each survey they completed during the week and an additional \$5 bonus for completing 10 or more of the surveys during the week. Panelists who had previously selected a method of payment received their incentive based on their check or electronic Amazon gift code preference.

## Weighting

The ATP data were weighted in a multi-step process that begins with a base weight incorporating the respondents' original survey selection probability and the fact that some panelists were subsampled for invitation to the panel. Next, an adjustment was made for the fact that the propensity to join the panel and remain an active panelist varied across different groups in the sample. The next step was a weighting cell adjustment for non-response to the experience sampling study since the response rate differed somewhat across the treatment groups. The final step in the weighting uses an iterative technique that matches gender, age, education, race, Hispanic origin, region and smartphone type to parameters for US adults who have a smartphone from the October 2014 wave of the ATP. Normally ATP samples are calibrated to benchmarks for the US adult population. For this study, however, the target population was US adults who have a smartphone. There are no official government statistics on the demographics of this population. The best available data were from the October 2014 wave of the American Trends Panel, which featured a national probability-based sample of 2,188 adult smartphone users.

The margins of error reported and statistical tests of significance are adjusted to account for the survey's design effect, a measure of how much efficiency is lost from the weighting procedures. The Hispanic sample in the American Trends Panel is predominantly native born and English speaking. In addition to sampling error, one should bear in mind that question wording and

practical difficulties in conducting surveys can introduce error or bias into the findings of opinion polls.

The following table shows the unweighted sample sizes and the error attributable to sampling that would be expected at the 95% level of confidence for different groups in the survey:

<b>Group</b>	<b>Unweighted sample size</b>	<b>Plus or minus ...</b>
Smartphone owners, 10+ surveys completed	1,035	4.0 percentage points
18-29	202	9.1 percentage points
30-49	403	6.4 percentage points
50+	426	6.2 percentage points

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