Survey of Consumer Payment Choice User's Guide

Contents

1 Introduction

One of the major goals of the Survey of Consumer Payment Choice (SCPC) is to provide a publicly available, consumer-level longitudinal dataset to support research on consumer payments and to provide aggregate data on trends in U.S. consumer payments.

The public datasets for the 2011 and 2012 SCPC are available for download on the Consumer Payments Research Center (CPRC) website at `http://www.bostonfed.org/economic/cprc/scpc/index.htm`. The data are provided in SAS, Stata, and CSV formats. The CPRC assumes that data users are familiar with a statistical analysis software package such as SAS, Stata, or R. The CPRC does not provide any software assistance.

This document is a data user's guide for the SCPC, and anyone interested in conducting research based on SCPC data will find it helpful to become familiar with this document. This document is composed of three sections, which:

- provide an overview of data variables and variable name mnemonics.

- describe how to use the SCPC Variable Database file.

- define the evolution of adoption variable definitions in the SCPC across years.

A broad overview of the $2011 - 2012$ SCPC, including a summary of the survey and tables of survey results, can be found in the The 2011 and 2012 Surveys of Consumer Payment Choice. Details about data collection and data processing are found in The $2011 - 2012$ Survey of Consumer Payment Choice: Technical Appendix.

All questions regarding the use of the data can be directed to:

Kevin Foster
Survey Methodologist
Consumer Payment Research Center
Federal Reserve Bank of Boston
(617) 973-3955
kevin.foster@bos.frb.org

2 SCPC variable overview

There are three broad categories of SCPC variables. Below we provide general information about each.

My Household Questionnaire variables represent a small fraction of variables that come from the RAND American Life Panel (ALP) My Household Questionnaire (MHQ). The MHQ is used to gather demographic data about each respondent. ALP members take the MHQ quarterly, and their most recent responses to the MHQ are included in these SCPC datasets.

Survey variables are the actual results from the SCPC survey questions. Survey variables have variable names such as pa001_a or pu004_b. To see the exact question text, respondent instructions, response option wording, and structure of the questions on the screen, it is recommended to search the survey questionnaires themselves (available on the SCPC website). Two important considerations of the survey variables are:

- *Randomization of question orders:* To avoid potential biases arising from the order of response options presented to respondents, the survey instrument randomizes response options for some questions. The questionnaire clearly indicates if response options were randomized. The unrandomized variables have the same variable names as the original survey variables. The raw data from the unrandomized variables and the SAS macros that unrandomize the responses will be made available upon request.

- *Responses for different time frequencies:* Respondents are given the option of reporting payment use and cash management in terms of a typical week, month, or year. This dataset includes variables where responses have been standardized to a monthly frequency, in addition to the original responses for the weekly, monthly or yearly rates. The frequency converted variables have the same name as the original responses, but without a numeric suffix. For instance, the variable pu006a_a refers to the number of cash payments for retail goods in a typical month, after frequency conversion. The set of three original variables that produce pu006a_a are pu006a_a1 (respondent used the weekly box to report these transactions), pu006a_a2 (monthly) and pu006a_a3 (yearly). The SAS macros for the frequency conversions can be made available upon request.

Created variables are created by the CPRC to populate the SCPC results tables and to aid in data analysis. Most of these variables have descriptive names based on a combination of mnemonics. For example, the variable cc_typ consists of two mnemonics: cc stands for "credit card", and typ stands for "number of transactions in a typical month". More insight into variable name mnemonics is provided in Section 2.2. Data users can search the Variable Information Database to find a description of any variable in the dataset.

2.1 Survey variables

2.1.1 Respondent identifier

prim_key	Unique respondent identifier

The variable prim_key is of the form xyyzzzz:n or xxyyzzzz:n (for 2010 onward), where x or xx is year (9 for 2009, 10 for 2010, e.g.), yy is month (08 for August, e.g.), and zzzz is a household identifier within that year/month. xyyzzzz and xxyyzzzz are the unique household identifier. The number to the right of the colon is the member id (1, 2, ..., n) for a panel member inside a household. It is assigned in the order that the respondent entered the survey; panel members with member id equal to 1 are the panelist that was contacted and recruited to join the ALP. Those with member id numbers of 2 or greater are household members of the original recruits. The prim_key for an ALP member is the same across all RAND ALP surveys. This allows data users to merge other RAND ALP survey datasets onto the SCPC dataset.

2.1.2 Survey weight

r_weight	Individual-level post-stratification weights - from a raking procedure

For information about how the survey weights are calculated, please see the 2011-12 SCPC Technical Appendix.

2.2 Created variables

Most created variable names are a combination of 2 or more mnemonics, combined using underscores. Typically, the first mnemonic refers to payment instrument, type of account, or a method of payment. The second or last mnemonic often indicates the concept being communicated, such as its characteristic, adoption, or typical use. This section describes the most common mnemonics. While this document is useful for learning the meanings of the various mnemonics used by the CPRC when naming created variables, it is recommended that the data user look up variable names directly using the Excel document 2012 SCPC Variable Information Database.xlsx.

2.2.1 Payment instruments

csh	Cash
chk	Check
dc	Debit card
cc	Credit card
svc	Stored-value card/prepaid card
banp	Bank account number payment
obbp	Online banking bill payment
mon	Money order
tc	Travelers check
income	Direct deduction from income (used in automatic bill payments only)

Payment instruments are grouped as follows:

paper	Cash, check, money order, travelers checks
card	Credit cards, debit cards, prepaid cards
elect	Bank account number payments, online banking bill payments
pi	All payment instruments

2.2.2 Transaction types

abp	Automatic bill payment
obp	Online bill payment
ipbp	In-person bill payment (or via mail)
op	Online (non-bill) payments
rp	Retail payments (made in-person)
serv	Services and other payments (in-person)
p2p	Person-to-person payment

Transaction types are grouped as follows:

bp	Bill payment i.e. sum of abp, obp, ipbp
op	Online (non-bill) payments
posp2p	All in-person (non-bill) payments, i.e. sum of rp, serv and p2p

2.2.3 Assessment of payment characteristics

security	Security
setup	Getting and setting up
acceptance	Acceptance for payment
cost	Cost
records	Payment records
convenience	Convenience

2.2.4 Payment adoption

adopt	Respondent is currently an adopter (Y/N)
ever	Respondent was an adopter in the past but does not currently have or own the item in question (Y/N)
discard	Respondent was an adopter, not anymore (Y/N)
num	Number of payment instruments (equals 0 for non-adopters)

2.2.5 Payment use

For each payment instrument and seven transaction types, respondents are asked to report their payment use behavior - how frequently they use a payment instrument for a specific transaction type. Therefore, at the most disaggregated level, a payment use variable name consists of three mnemonic components: the payment instrument (Section 2.2.1), followed by the transaction type (Section 2.2.2), and ending with a suffix that indicates the type of payment use information (incidence of use, frequency of use, and share of all transactions made):

typ	Number of transactions in a typical month
t_m	Respondent makes the corresponding type of payment at least once in a typical month (Y/N)
t_y	Respondent makes the corresponding type of payment at least once in a typical year (Y/N)
sh	Number of transactions in a typical month, as proportion of all payments

It is important to note that not all combinations of payment instruments and transaction types exist. This is because they were assumed not to be possible at the time of the survey. The following table illustrates combinations that do exist in the data and the corresponding combinations of mnemonic prefixes:

	bp			op	posp2p		
	abp	obp	ipbp	op	rp	serv	p2p
csh			csh_ipbp		csh_rp	csh_serv	csh_p2p
chk			chk_ipbp	chk_op	chk_rp	chk_serv	chk_p2p
mon			mon_ipbp	mon_op	mon_rp	mon_serv	mon_p2p
tc	tc_ (not asked by transaction type)						
dc	dc_abp	dc_obp	dc_ipbp	dc_op	dc_rp	dc_serv	dc_p2p
cc	cc_abp	cc_obp	cc_ipbp	cc_op	cc_rp	cc_serv	cc_p2p
svc			svc_ipbp	svc_op	svc_rp	svc_serv	
obbp	obbp_abp	obbp_obp					obbp_p2p
banp	banp_abp	banp_obp		banp_op			banp_p2p
income	income_abp						

The variable tot_pay_typ is defined for each respondent as the sum of all payments made in a typical month. The share variables "_sh" express the original "typ" variable as a proportion of tot_pay_typ for that respondent. The tables in the $2011 - 2012$ SCPC results paper describing payment shares are not computed using these individually defined variables. Instead, each share denotes the total number of transactions falling under that category as a proportion of all reported transactions, aggregated over all respondents. This differs slightly from taking means of the _sh variables defined in this document: it weights respondents who have a large number of transactions more heavily than respondents who have a smaller number of transactions.

2.2.6 Variables defined conditional on adoption

Some tables in the $2011 - 2012$ SCPC results paper include statistics that are calculated conditional on the adoption of a bank account, a certain payment instrument, or other payment technology. Separate variables were created to facilitate this calculation for the tables; these variables either end with the suffix "_adoptonly" or contain the term "oadopt", indicating the conditional coding of the underlying variable. Such variables contain missing values (rather than zeros) for non-adopters of the respective account/instrument/technology.

2.2.7 Flags for variables that were cleaned for outliers

The SCPC has many continuous variables. These variables come from survey questions where the respondent is allowed to enter a number into a box. For instance, we ask the respondent to tell us how many credit card payments they make for retail goods in a typical week, month, or year. Continuous variables in the SCPC are cleaned for outliers and edited based on algorithms described in the $2011 - 2012$ SCPC Technical Appendix. To indicate an edited variable, the prefix "f_" is added to the front of a variable name. A flag value of 0 indicates that the particular observation was not edited. A flag value greater than 0 means the observation was edited.

3 SCPC Variable Database.xlsx

3.1 Searching the database

The SCPC Variable Database contains information on 2371 variables released in the SCPC. The document contains the following information about each variable, each of which represents a column in the SCPC Variable Database document:

Variable name
Description
(2009 - 2012) (variable history)
Last change (survey variables only)
Variable type
Filter conditions

To search a specific variable, click the down arrow on the Variable Name category, and enter the variable name in the Search box. The recommended method of searching a specific keyword is to filter the description category, entering the string: $< keyword > + < space >$ $+ < hyphen >$ in the search box. This stops the filter from including unrelated variables with the same string within. For example, filtering by "cc" in the Variable Name category will include any variable with the word "acceptance", which will not happen when filtering by "cc -" in the description category.

3.2 Variable name

The name of each variable as it appears in released datasets. Created variable names are based on the set of keywords described in the Section 2.1

3.3 Description

My Household Questionnaire variables are described by the question text used to prompt the respondent to input a value for the variable. Descriptions written in this way are surrounded by quotation marks.

> Example:
> borninus   'Were you born in the United States?"

Survey variables are described by the question text used to prompt the respondent to input a value for the variable. Descriptions written in this way are surrounded by quotation marks.

  Example:
   as004_a   "How do you rate the security of the following means of making a payment? In person"

Note that the description does not indicate the format of the question. In this example, the respondent was prompted with the question: "How do you rate the security of the following means of making a payment?" A table displayed several means of making a payment, including "In person." The format of the question can be found in The 2012 Survey of Consumer Payment Choices.

Created variables are described by combining the descriptions of the keywords used in the variables name. Descriptions written in this way are indicated by semi-colons following each keyword description.

Example:

mon_ipbp_typ   mon - Money order; ipbp - In-person bill payment (or via mail); typ - Number of transactions in a typical month;

Here, the three separate descriptions indicate that the variable measures the number of bills paid in person or via mail using a money order in a typical month.

3.4 $2009 - 2012$ (variable history)

A value of 1 in a given year indicates that the variable was measured in the SCPC of that year, while a value of 0 indicates that the variable was not measured in that year.

Note that filtering by 1 in one these categories does not return all variables used in that year of the SCPC but rather returns all variables from the 2012 survey that were also used in that years survey. Note also that existence of a variable over multiple years does not necessarily indicate that a variable can be accurately compared over time. Section **??** provides the yearly definitions of some created variables from $2009 - 2012$, indicating changes in the definitions of these variables.

3.5 Last change (survey variables only)

This applies only to survey variables and indicates the most recent year in which the question text or format, including any instructions or examples, was changed in the survey.

3.6 Variable type

"Created" indicates that the variable is dependent on the value of one or more raw variables. Such variables are not reported directly by respondents, but are generated by the CPRC. "Survey Continuous" indicates that the variable holds value directly input by the respondent, and that the input was a value typed in by the respondent. This includes, for example, variables related to frequencies or percentage shares. "Survey Categorical" indicates that

the variable holds value directly input by the survey taker, and that the respondent was presented with a series of options as potential answers.

3.7 Variable filter conditions

The conditions required during the survey for a survey taker to be prompted to input a value for each raw variable. "None" indicates that every survey taker was prompted to input a value for the variable.

> Example:
> pu002_a   1. abp_adopter = 1; 2. dc_adopter = 1;

Here, in order for a survey taker to be prompted to enter a value for pu002_a, their previous responses in the survey must have set the value of abp_adopter to 1 and dc_adopter to 1. Note that filter conditions apply only to filter conditions used during the survey. Created variables are given a value of "N/A".

4   Adoption variable definitions

Adoption is defined differently for different concepts in the SCPC, depending on different combinations of ownership and frequency of use of various payment instruments or appliances. As the SCPC has evolved so have the definitions of adoptions. This section details the exact definitions used for all variables measuring adoption. This list is such that each variable is either defined in terms of other variables in the list or in terms of the original survey variables. All variable names used in these definitions are *italicized in blue text*, and all variable values are written in red text.

It should be noted that for certain variables, the definition with respect to other variables might not change, but the the definition of the underlying variables might change. For example, mb_chkbalance_t_y has the same definition from 2011 - 2013, but it is defined in part by mb_adopt, which changes from 2012 to 2013. In addition, changes to question formats of the survey variables are not considered in the definitions below.

Some variables relating to prepaid card adoption in 2011 depend on the survey question version assigned to each respondent. As such, definitions depend on whether the survey version was the "4-category" version of the "12-category" version (details of each can be

found in the SCPC summary paper or the questionnaires themselves, all available on the SCPC website).

4.1 deposit_acnt_adopt

2011, 2012

if at least one of {*bnk_acnt_adopt, paypal_acnt_adopt, svc_acnt_adopt* } is 1, then *deposit_acnt_adopt* is 1

else if none of {*bnk_acnt_adopt, paypal_acnt_adopt, svc_acnt_adopt* } is 1, and any of them are missing, then *deposit_acnt_adopt* is missing

2010

if at least one of {*bnk_acnt_adopt, mm_acnt_adopt, paypal_acnt_adopt, svc_acnt_adopt* } is 1, then *deposit_acnt_adopt* is 1

else if none of {*bnk_acnt_adopt, mm_acnt_adopt, paypal_acnt_adopt, svc_acnt_adopt* } is 1, and any of them are missing, then *deposit_acnt_adopt* is missing

2009

if at least one of {*bnk_acnt_adopt, mm_acnt_adopt, paypal_acnt_adopt* } is 1, then *deposit_acnt_adopt* is 1

else if none of {*bnk_acnt_adopt, mm_acnt_adopt, paypal_acnt_adopt* } is 1, and any of them are missing, then *deposit_acnt_adopt* is missing

4.2 bnk_acnt_adopt

2011, 2012

if at least one of {*sav_acnt_adopt, chk_acnt_adopt* } is 1, then *bnk_acnt_adopt* is 1

else if none of {*sav_acnt_adopt, chk_acnt_adopt* } is 1, and any of them are missing, then *bnk_acnt_adopt* is missing

2009, 2010

if at least one of {*sav_acnt_adopt, chk_acnt_adopt, mm_acnt_adopt* } is 1, then *bnk_acnt_adopt* is 1

else if none of {*sav_acnt_adopt, chk_acnt_adopt, mm_acnt_adopt* } is 1, and any of them are missing, then *bnk_acnt_adopt* is missing

4.3   chk_acnt_adopt

2011, 2012

if *pa001_a* is greater than 0, then *chk_acnt_adopt* is 1

else if *pa001_a* is 0, then *chk_acnt_adopt* is 0

else if *pa001_a* is missing and *pa001_b* is greater than or equal to 0, then *chk_acnt_adopt* is 0

else if *pa001_a* is missing and *pa003* is 2, then *chk_acnt_adopt* is 0

2009, 2010

if *pa001_a* is greater than 0, then *chk_acnt_adopt* is 1

else if *pa001_a* is 0, then *chk_acnt_adopt* is 0

else if *pa001_a* is missing and at least one of {*pa001_b, pa001_c, pa001_d* } is greater than or equal to 0, then *chk_acnt_adopt* is 0

else if *pa001_a* is missing and *pa003* is 2, then *chk_acnt_adopt* is 0

if at least one of {*sav_acnt_adopt, mm_acnt_adopt, paypal_acnt_adopt*} is greater than or equal to 0 and *chk_acnt_adopt* is missing, then *chk_acnt_adopt* is 0

4.4   chk_acnt_interest_adopt

2011, 2012

if *pa004* is in the range [2, 14], then *chk_acnt_interest_adopt* is 1

else if *pa004* is 1, then *chk_acnt_interest_adopt* is 0

else if *pa004* is 15, then *chk_acnt_interest_adopt* is missing

2009, 2010

if *pa004* is in the range [2, 10], then*chk_acnt_interest_adopt* is 1

else if *pa004* is 1, then *chk_acnt_interest_adopt* is 0

else if *pa004* is 15, then *chk_acnt_interest_adopt* is missing

4.5   chk_overdraft_adopt

2011, 2012

if *chk_acnt_adopt* is 0, then *chk_overdraft_adopt* is 0

else if *pa005* is 1, then *chk_overdraft_adopt* is 1

else if *pa005* is 2, then *chk_overdraft_adopt* is 0

else if *pa005* is 3, then *chk_overdraft_adopt* is missing

else *chk_overdraft_adopt* is missing

2009, 2010

if *pa005* is 1, then *chk_overdraft_adopt* is 1

else if *pa005* is 2, then *chk_overdraft_adopt* is 0

else if *pa005* is 3, then *chk_overdraft_adopt* is missing

else *chk_overdraft_adopt* is missing

4.6   sav_or_mm_acnt_adopt

2009, 2010

if at least one of {*sav_acnt_adopt, mm_acnt_adopt* } is 1, then *sav_or_mm_acnt_adopt* is 1

else *sav_or_mm_acnt_adopt* is 0

4.7   sav_acnt_adopt

2011, 2012

if *pa001_b* is greater than 0, then *sav_acnt_adopt* is 1

else if *pa001_b* is 0, then *sav_acnt_adopt* is 0

else if *pa001_b* is missing and *pa001_a* is greater than or equal to 0, then *sav_acnt_adopt* is 0

else if *pa001_b* is missing and *newsav* is 2, then *sav_acnt_adopt* is 0

2009, 2010

if *pa001_b* is greater than 0, then *sav_acnt_adopt* is 1

else if *pa001_b* is 0, then *sav_acnt_adopt* is 0

else if *pa001_b* is missing and at least one of {*pa001_a, pa001_c, pa001_d*} is greater than or
    equal to 0, then *sav_acnt_adopt* is 0

else if *pa001_b* is missing and *newsav* is 2, then *sav_acnt_adopt* is 0

if at least one of {*chk_acnt_adopt, mm_acnt_adopt, paypal_acnt_adopt*} is greater than or
    equal to 0 and *sav_acnt_adopt* is missing, then *sav_acnt_adopt* is 0

4.8   mm_acnt_adopt

2009, 2010

if *pa001_c* is greater than 0, then *mm_acnt_adopt* is 1

else if *pa001_c* is 0, then *mm_acnt_adopt* is 0

else if *pa001_c* is missing and at least one of {*pa001_a, pa001_b, pa001_d*} is greater than or
    equal to 0, then *mm_acnt_adopt* is 0

else if *pa001_c* is missing and *pa030* is 2, then *mm_acnt_adopt* is 0

if at least one of {*chk_acnt_adopt, sav_acnt_adopt, paypal_acnt_adopt*} is greater than or equal
    to 0 and *mm_acnt_adopt* is missing, then *mm_acnt_adopt* is 0

4.9   mm_acnt_chk_adopt

2009, 2010

if *pa047* is 1, then *mm_acnt_chk_adopt* is 1

else if *pa047* is 2, then *mm_acnt_chk_adopt* is 0

else if *mm_acnt_adopt* is 0, then *mm_acnt_chk_adopt* is 0

else then *mm_acnt_chk_adopt* is missing

4.10   paypal_acnt_adopt

2012

if all of {*paypal_adopt, googlewallet_adopt, amazonpayment_adopt, otheronlineacnt_adopt*}
    are missing, then *paypal_acnt_adopt* is missing

else if at least one of {*paypal_adopt, googlewallet_adopt, amazonpayment_adopt, otheronlin-
    eacnt_adopt*} is 1, then *paypal_acnt_adopt* is 1

else if at least one of {*paypal_adopt, googlewallet_adopt, amazonpayment_adopt, otheronlin-
    eacnt_adopt*} is 0, then *paypal_acnt_adopt* is 0

2011

if all of {*paypal_adopt, googlecheckout_adopt, amazonpayment_adopt, otheronlineacnt_adopt*}
    are missing, then *paypal_acnt_adopt* is missing

else if at least one of {*paypal_adopt, googlecheckout_adopt, amazonpayment_adopt, otheron-
    lineacnt_adopt*} is 1, then *paypal_acnt_adopt* is 1

else if at least one of {*paypal_adopt, googlecheckout_adopt, amazonpayment_adopt, otheronlineacnt_adopt*} is 0, then *paypal_acnt_adopt* is 0

2009, 2010

if *pa001_d* is greater than 0, then *paypal_acnt_adopt* is 1

else if *pa001_d* is 0, then *paypal_acnt_adopt* is 0

else if *pa001_d* is missing and at least one of {*pa001_a, pa001_b, pa001_c*} is greater than or equal to 0, then *paypal_acnt_adopt* is 0

if at least one of {*chk_acnt_adopt, mm_acnt_adopt, sav_acnt_adopt*} is greater than or equal to 0 and *paypal_acnt_adopt* is missing, then *paypal_acnt_adopt* is 0

4.11   amazonpayment_adopt

2011, 2012

if *pa001_d3* is 1, then *amazonpayment_adopt* is 1

else if *pa001_d3* is 2, then *amazonpayment_adopt* is 0

else *amazonpayment_adopt* is missing

4.12   googlecheckout_adopt

2011

if *pa001_d2* is 1, then *googlecheckout_adopt* is 1

else if *pa001_d2* is 2, then *googlecheckout_adopt* is 0

else *googlecheckout_adopt* is missing

4.13   googlewallet_adopt

2012

if *pa001_d2* is 1, then *googlewallet_adopt* is 1

else if *pa001_d2* is 2, then *googlewallet_adopt* is 0

else *googlewallet_adopt* is missing

4.14   paypal_adopt

2011, 2012

if *pa001_d1* is 1, then *paypal_adopt* is 1

else if *pa001_d1* is 2, then *paypal _adopt* is 0

else *paypal _adopt* is missing

4.15   otheronlineacnt_adopt

2011, 2012

if *pa001_d4* is 1, then *paypal_adopt* is 1

else if *pa001_d4* is 2, then *paypal _adopt* is 0

else *paypal _adopt* is missing

4.16   svc_12cat_acnt_adopt

2011

if *survey version* is 12-category

> if all of {*pa197a, pa197b, pa197c, pa197d, pa197e, pa197f, pa197g, pa197h, pa197i, pa197j, pa197k, pa19l* } are missing, then *svc_12cat_acnt_adopt* is missing

> else if at least one of {*pa197a, pa197b, pa197c, pa197d, pa197e, pa197f, pa197g, pa197h, pa197i, pa197j, pa197k, pa19l* } is 1, then *svc_12cat_acnt_adopt* is 1

> else *svc_12cat_acnt_adopt* is 0

> if *svc_12cat_acnt_adopt* is 0 or missing and *pa027_c* is 1, then *svc_12cat_acnt_adopt* is 1

4.17   svc_acnt_adopt

2012

if all of {*pa197a, pa197b, pa197c, pa197d, pa197e, pa197f, pa197g, pa197h, pa197i, pa197j, pa197k, pa197l, pa197m* } are missing, then *svc_acnt_adopt* is missing

else if at least one of {*pa197a, pa197b, pa197c, pa197d, pa197e, pa197f, pa197g, pa197h, pa197i, pa197j, pa197k, pa197l, pa197m* } is equal to 1, then *svc_acnt_adopt* is 1

else *svc_acnt_adopt* is 0

if *svc_acnt_adopt* is missing or 0 and *pa027_c* is 1, then *svc_acnt_adopt* is 1

2011

if *survey version* is 4-category

if all of {*pa099a, pa099b, pa099c, pa099d* } are missing, then *svc_acnt_adopt* are missing

else if at least one of {*pa099a, pa099b, pa099c, pa099d* } is 1, then *svc_acnt_adopt* is 1

else *svc_acnt_adopt* is 0

if *svc_acnt_adopt* is 0 or missing and *pa027_c* is 1, then *svc_acnt_adopt* is 1

if *survey version* is 12-category

if all of {*pa197a, pa197b, pa197c, pa197d, pa197e, pa197f, pa197g, pa197h, pa197i, pa197j, pa197k, pa19l* } are missing, then *svc_acnt_adopt* is missing

else if at least one of {*pa197a, pa197b, pa197c, pa197d, pa197e, pa197f, pa197g, pa197h, pa197i, pa197j, pa197k, pa19l* } is 1, then *svc_acnt_adopt* is 1

else *svc_acnt_adopt* is 0

if *svc_acnt_adopt* is 0 or missing and *pa027_c* is 1, then *svc_acnt_adopt* is 1

2010

if all of {*pa099a, pa099b, pa099c, pa099d* } is missing, then *svc_acnt_adopt* are missing

else if at least one of {*pa099a, pa099b, pa099c, pa099d* } is 1, then *svc_acnt_adopt* is 1

else *svc_acnt_adopt* is 0

if *svc_acnt_adopt* is 0 or missing and *pa027_c* is 1, then *svc_acnt_adopt* is 1

4.18   svc_4cat_acnt_adopt

2011

if *survey version* is 4-category

if all of {*pa099a, pa099b, pa099c, pa099d* } is missing, then *svc_4cat_acnt_adopt* are missing

else if at least one of {*pa099a, pa099b, pa099c, pa099d* } is 1, then *svc_4cat_acnt_adopt* is 1

else *svc_4cat_acnt_adopt* is 0

if *svc_acnt_adopt* is 0 or missing and *pa027_c* is 1, then *svc_4cat_acnt_adopt* is 1

4.19 atmordc_adopt

2009-2012

if at least one of {*atm_adopt, dc_adopt*} is 1, then *atmordc_adopt* is 1

else if all of {*atm_adopt, dc_adopt*} are 0, then *atmordc_adopt* is 0

else if at least one of {*atm_adopt, dc_adopt*} is missing, then *atmordc_adopt* is missing

4.20 atm_adopt

2009-2012

if *pa008_b* is 0, then *atm_adopt* is 0

else if *pa008_b* is greater than 0, then *atm_adopt* is 1

else if *pa008_b* is less then 0 and *bnk_acnt_adopt* is 0, then *atm_adopt* is 0

else if *pa008_b* is less then 0 and *pa008_a* is greater than or equal to 0, then *atm_adopt* is 0

else if *pa008_b* is less then 0 and *pa009* is 2, then *atm_adopt* is 0

4.21 dc_adopt

2009-2012

if *pa008_a* is greater than 0, then *dc_adopt* is 1

else if *pa008_a* is missing and *pa027_b* is 1, then *dc_adopt* is 1

else if *pa008_a* is 0, then *dc_adopt* is 0

else if *pa008_a* is missing and *bnk_acnt_adopt* is 0, then *dc_adopt* is 0

else if *pa008_a* is missing and *pa008_b* is greater than or equal to 0, then *dc_adopt* is 0

else if *pa008_a* is missing and *pa010* is 2, then *dc_adopt* is 0

4.22 tb_adopt

2009-2012

if *bnk_acnt_adopt* is 1, then *tb_adopt* is 1

else if *pa012* is 1 then *tb_adopt* is 1

else if *pa012* is 2, then *tb_adopt* is 0

else *tb_adopt* is missing

if *newtb* is 2 and *pa012* is missing, then *tb_adopt* is 0

4.23   ob_adopt

2009-2012

if *bnk_acnt_adopt* is 1, then *ob_adopt* is 1

else if *pa013* is 1 then *ob_adopt* is 1

else if *pa013* is 2, then *ob_adopt* is 0

else *ob_adopt* is missing

4.24   mb_adopt

2011, 2012

if all of { *mb_chkbalance_t_y, mb_billpay_t_y, mb_text_t_y, mb_p2p_t_y, mb_app_adopt* } are
missing, then *mb_adopt* is missing

else if at least one { *mb_chkbalance_t_y, mb_billpay_t_y, mb_text_t_y, mb_p2p_t_y, mb_app_adopt* } is 1, then *mb_adopt* is 1

else if at least one { *mb_chkbalance_t_y, mb_billpay_t_y, mb_text_t_y, mb_p2p_t_y, mb_app_adopt* } is 0, then *mb_adopt* is 0

if at least one of { *cell_adopt, bnk_acnt_adopt* } is 0, then *mb_adopt* is 0

2009, 2010

if *pa026* is 1, then *mb_adopt* is 1

else if *pa026* is 2, then *mb_adopt* is 0

else if at least one of { *cell_adopt, bnk_acnt_adopt* } is 0, then *mb_adopt* is 0

else *mb_adopt* is missing

4.25   mb_app_adopt

2011, 2012

if *pa026_a* is 1, then *mb_app_adopt* is 1

else if *pa026_a* is 2, then *mb_app_adopt* is 0

else if at least one of {*cell_adopt, bnk_acnt_adopt*} is 0, then *mb_app_adopt* is 0

else *mb_app_adopt* is missing

if *pa028* is 2, then *mb_app_adopt* is 0

4.26 mb_usedmb_t_y

2011, 2012

if at least one of {*mb_chkbalance_t_y, mb_billpay_t_y, mb_text_t_y, mb_p2p_t_y* } is 1, then
mb_usedmb_t_y is 1

else if all of {*mb_chkbalance_t_y, mb_billpay_t_y, mb_text_t_y, mb_p2p_t_y* } are 0, then *mb_usedmb_t_y*
is 0

else *mb_usedmb_t_y* is missing

4.27 mb_chkbalance_t_y

2011, 2012

if *pa026_b* is 1, then *mb_chkbalance_t_y* is 1

else if *pa026_b* is 2, then *mb_chkbalance_t_y* is 0

else if at least one of {*deposit_acnt_adopt, cell_adopt*} is 0, then *mb_chkbalance_t_y* is 0

else *mb_chkbalance_t_y* is missing

if *mb_adopt* is 0 and *mb_chkbalance_t_y* is missing, then *mb_chkbalance_t_y* is 0

4.28 mb_billpay_t_y

2011, 2012

if *pa026_c* is 1, then *mb_billpay_t_y* is 1

else if *pa026_c* is 2, then *mb_billpay_t_y* is 0

else if at least one of {*deposit_acnt_adopt, cell_adopt*} is 0, then *mb_billpay_t_y* is 0

else *mb_billpay_t_y* is missing

if *mb_adopt* is 0 and *mb_billpay_t_y* is missing, then *mb_billpay_t_y* is 0

4.29   mb_text_t_y

2011, 2012

if *pa026_d* is 1, then *mb_text_t_y* is 1

else if *pa026_d* is 2, then *mb_text_t_y* is 0

else if at least one of {*deposit_acnt_adopt, cell_adopt*} is 0, then *mb_text_t_y* is 0

else *mb_text_t_y* is missing

if *mb_adopt* is 0 and *mb_text_t_y* is missing, then *mb_text_t_y* is 0

4.30   mb_p2p_t_y

2011, 2012

if *pa026_e* is 1, then *mb_p2p_t_y* is 1

else if *pa026_e* is 2, then *mb_p2p_t_y* is 0

else if at least one of {*deposit_acnt_adopt, cell_adopt*} is 0, then *mb_p2p_t_y* is 0

else *mb_p2p_t_y* is missing

if *mb_adopt* is 0 and *mb_p2p_t_y* is missing, then *mb_p2p_t_y* is 0

4.31   tablet_adopt

2012

if *tablet* is 1, then *tablet_adopt* is 1

else if *tablet* is 2, then *tablet_adopt* is 0

else *tablet_adopt* is missing

4.32   cell_adopt

2009-2012

if *cellphone* is 1, then *cell_adopt* is 1

else if *cellphone* is 2, then *cell_adopt* is 0

else *cell_adopt* is missing

4.33   smartphone_adopt

2011, 2012

if *smartphone* is 1, then *smartphone_adopt* is 1

else if *smartphone* is 2, then *smartphone_adopt* is 0

else if *cell_adopt* is 0, then *smartphone_adopt* is 0

else *smartphone_adopt* is missing

2010

if *smartphone_d* is 1, then *smartphone_adopt* is 1

else if *smartphone_d* is 2, then *smartphone_adopt* is 0

else if *cell_adopt* is 0, then *smartphone_adopt* is 0

else *smartphone_adopt* is missing

4.34   paper_adopt

2010, 2011

if all of {*csh_adopt, chk_adopt, mon_adopt, tc_adopt*} are missing, then *paper_adopt* is missing

else if at least one of {*csh_adopt, chk_adopt, mon_adopt, tc_adopt*} is 1, then *paper_adopt* is 1

else if at least one of {*csh_adopt, chk_adopt, mon_adopt, tc_adopt*} is 0, then *paper_adopt* is 0

if *paper_adopt* is 0 and at least one of {*csh_adopt, chk_adopt, mon_adopt, tc_adopt*} is missing, then *paper_adopt* is missing

2012

if all of {*csh_adopt, chk_adopt, mon_adopt, tc_adopt*} are missing, then *paper_adopt* is missing

else if at least one of {*csh_adopt, chk_adopt, mon_adopt, tc_adopt*} is 1, then *paper_adopt* is 1

else if at least one of {*csh_adopt, chk_adopt, mon_adopt, tc_adopt*} is 0, then *paper_adopt* is 0

if *paper_adopt* is 0 and at least one of {*csh_adopt, chk_adopt, mon_adopt, tc_adopt, cashier-schk_adopt, certifiedchk_adopt*} is missing, then *paper_adopt* is missing

2009

if at least one of {*csh_adopt, chk_adopt, mon_adopt, tc_adopt*} is 1, then *paper_adopt* is 1

else if all of {*csh_adopt, chk_adopt, mon_adopt, tc_adopt*} are missing, then *paper_adopt* is missing

else *paper_adopt* is 0

4.35 csh_adopt

2009-2012

if *pa050* is 1 or *pa015_a* is greater than 0 or *pa015_b* is greater than 0 or (*pa017_a* is greater than 0 and *pa018_1* is greater than 0) or (*pa017_b* is greater than 0 and *pa018_2* is greater than 0) or *csh_typ* is greater than 0, then *csh_adopt* is 1

else if all of {*pa015_a, pa015_b, pa017_a, pa018_1, pa017_b, pa018_2, csh_typ*} are 0 and *pa050* is 2, then *csh_adopt* is 0

4.36 chk_adopt

2010-2012

let *dummychk_typ* = the sum of {*pu004_b, pu005_a, pu006a_b, pu006c_b, pu021_b*}

if all of {*dummychk_typ, chk_blnk_adopt, pa035*} are missing, then *chk_adopt* is missing

else if *dummychk_typ* is greater than 0 or *chk_blnk_adopt* is 1 or *pa035* is 1, then *chk_adopt* is 1

else if *dummychk_typ* is less than or equal to 0 and *chk_blnk_adopt* is not equal to 1 and *pa035* is not equal to 1, then *chk_adopt* is 0

2009

let *dummychk_typ* = the sum of {*pu004_b, pu005_a, pu006a_b, pu006c_b, pu021_b*}

if *dummychk_typ* is greater than 0 or *chk_blnk_adopt* is 1, then *chk_adopt* is 1

else if *dummychk_typ* is 0 or missing and *chk_blnk_adopt* is not equal to 1, then *chk_adopt* is 0

else *chk_adopt* is missing

if all of {*csh_adopt, mon_adopt, tc_adopt* } are missing and *chk_adopt* is not equal to 1, then *chk_adopt* is missing

4.37 chk_alt_adopt

2012

if at least one of {*mon_adopt, tc_adopt, cashierschk_adopt, certifiedchk_adopt*} is 1, then
chk_alt_adopt is 1

else if all of {*mon_adopt, tc_adopt, cashierschk_adopt, certifiedchk_adopt*} are 0, then *chk_alt_adopt*
is 0

else *chk_alt_adopt* is missing

2010, 2011

if at least one of {*mon_adopt, tc_adopt*} is 1, then *chk_alt_adopt* is 1

else if all of {*mon_adopt, tc_adopt*} are 0, then *chk_alt_adopt* is 0

else *chk_alt_adopt* is missing

4.38 mon_adopt

2009-2012

if *pa040* is 1 or *mon_t_y* is greater than 0, then *mon_adopt* is 1

else if *pa040* is 2 and *mon_t_y* is 0, then *mon_adopt* is 0

else if *pa040* is missing and *mon_t_y* is missing, then *mon_adopt* is missing

else if *pa040* is missing and *mon_t_y* is 0, then *mon_adopt* is missing

else if *pa040* is 2 and *mon_t_y* is missing, then *mon_adopt* is missing

4.39 tc_adopt

2012

if *pa040_b* is 1, then *tc_adopt* is 1

else if *pa040_b* is 2, then *tc_adopt* is 0

else *tc_adopt* is missing

2011

if *pa042* is 1, then *tc_adopt* is 1

else if *pa042* is 2, then *tc_adopt* is 0

else *tc_adopt* is missing

2009, 2010

if *pa042* is 1 or *tc_t_y* is greater than 0, then *tc_adopt* is 1

else if *p042* is 2 and *tc_t_y* is not equal to 1, then *tc_adopt* is 0

else *tc_adopt* is missing

4.40 cashierschk_adopt

2012

if *pa040_c* is 1, then *cashierschk_adopt* is 1

else if *pa040_c* is 2, then *cashierschk _adopt* is 0

else *cashierschk _adopt* is missing

4.41 certifiedchk_adopt

2012

if *pa040_d* is 1, then *certifiedchk_adopt* is 1

else if *pa040_d* is 2, then *certifiedchk _adopt* is 0

else *certifiedchk _adopt* is missing

4.42 card_12cat_adopt

2011

if *randompa* is 2

    if all of {*dc_adopt, cc_adopt, svc_adopt*} are missing, then *card_12cat_adopt* is missing

    else if at least one of {*dc_adopt, cc_adopt, svc_adopt*} is 1, then *card_12cat_adopt* is 1

    else if at least one of {*dc_adopt, cc_adopt, svc_adopt*} is 0, then *card_12cat_adopt* is 0

4.43 card_4cat_adopt

2011

if *survey version* is 4-category

    if all of {*dc_adopt, cc_adopt, svc_adopt*} are missing, then *card_4cat_adopt* is missing

else if at least one of {*dc_adopt, cc_adopt, svc_adopt*} is 1, then *card_4cat_adopt* is 1

else if at least one of {*dc_adopt, cc_adopt, svc_adopt*} is 0, then *card_4cat_adopt* is 0

4.44 card_adopt

2009-2012

if all of {*dc_adopt, cc_adopt, svc_adopt*} are missing, then *card_adopt* is missing

else if at least one of {*dc_adopt, cc_adopt, svc_adopt*} is 1, then *card_adopt* is 1

else if at least one of {*dc_adopt, cc_adopt, svc_adopt*} is 0, then *card_adopt* is 0

4.45 dc_adopt

2009-2012

if *pa008_a* is greater than 0, then *dc_adopt* is 1

else if *pa008_a* is missing *and pa027_b* is 1, then *dc_adopt* is 1

else if *pa008_a* is 0 then *dc_adopt* is 0

else if *pa008_a* is missing and *bnk_acnt_adopt* is 0, then *dc_adopt* is 0

else if *pa008_a* is missing and *pa008_b* is greater than or equal to 0, then *dc_adopt* is 0

else if *pa008_a* is missing and *pa010* is 2, then *dc_adopt* is 0

4.46 cc_adopt

2009-2012

if *pa053* is 1, then *cc_adopt* is 1

else if *pa053* is 2, then *cc_adopt* is 0

else *cc_adopt* is missing

if *cc_adopt* is missing and *pa027_a* is 1, then *cc_adopt* is 1

4.47 cc_only_adopt

2011, 2012

if all of {*cc_vmd_adopt, cc_branded_adopt, cc_ae_adopt* } are missing, then *cc_only_adopt* is missing

else if at least one {*cc_vmd_adopt, cc_branded_adopt, cc_ae_adopt* } is 1, then *cc_only_adopt* is 1

else if at least one of {*cc_vmd_adopt, cc_branded_adopt, cc_ae_adopt* } is 0, then *cc_only_adopt* is 0

else if *cc_adopt* is 0, then *cc_only_adopt* is 0

2010

if all of {*cc_gp_adopt, cc_branded_adopt*} are missing, then *cc_only_adopt* is missing

else if at least one {*cc_gp_adopt, cc_branded_adopt*} is 1, then *cc_only_adopt* is 1

else if at least one of {*cc_gp_adopt, cc_branded_adopt*} is 0, then *cc_only_adopt* is 0

else if *cc_adopt* is 0, then *cc_only_adopt* is 0

4.48   cc_charge_adopt

2011, 2012

if all of {*cc_aecharge_adopt, cc_club_adopt*} are missing, then *cc_charge_adopt* is missing

else if at least one {*cc_aecharge_adopt, cc_club_adopt*} is 1, then *cc_charge_adopt* is 1

else if at least one of {*cc_aecharge_adopt, cc_club_adopt*} is 0, then *cc_charge_adopt* is 0

2009, 2010

if *pa019_b* is 1, then *cc_charge_adopt* is 1

else if *pa019_b* is 2, then *cc_charge_adopt* 0

else if *cc_adopt* is 0, then *cc_charge_adopt* is 0

else *cc_charge_adopt* is missing

4.49   svc_12cat_adopt

2011

if *survey version* is 12-category, *svc_12cat_adopt = svc_adopt* (see *svc_adopt*)

4.50 svc_4cat_adopt

2011

if *survey version* is 4-category, then *svc_4cat_adopt = svc_adopt* (see *svc_adopt*)

4.51 svc_adopt

2011, 2012

if all of {*svc_gov_adopt, svc_emp_adopt, svc_gp_adopt, svc_sp_adopt*} are missing, then *svc_adopt* is missing

else if at least one of {*svc_gov_adopt, svc_emp_adopt, svc_gp_adopt, svc_sp_adopt*} is 1, then *svc_adopt* is 1

else if at least one of {*svc_gov_adopt, svc_emp_adopt, svc_gp_adopt, svc_sp_adopt*} is 0, then *svc_adopt* is 0

if *svc_adopt* is 0 or missing and *pa027_c* is 1, then *svc_adopt* is 1

2010

if all of {*svc_gp_adopt, svc_specific_adopt, svc_payroll_adopt, svc_govt_adopt*} are missing, then *svc_adopt* is missing

else if at least one of {*svc_gp_adopt, svc_specific_adopt, svc_payroll_adopt, svc_govt_adopt*} is 1, then *svc_adopt* is 1

else if at least one of {*svc_gp_adopt, svc_specific_adopt, svc_payroll_adopt, svc_govt_adopt*} is 0, then *svc_adopt* is 0

if *svc_adopt* is 0 or missing and *pa027_c* is 1, then *svc_adopt* is 1

2009

if all of {*svc_gp_adopt, svc_specific_adopt, svc_payroll_adopt, svc_ebt_adopt*} are missing, then *svc_adopt* is missing

else if at least one of {*svc_gp_adopt, svc_specific_adopt, svc_payroll_adopt, svc_ebt_adopt*} is 1, then *svc_adopt* is 1

else if at least one of {*svc_gp_adopt, svc_specific_adopt, svc_payroll_adopt, svc_ebt_adopt*} is 0, then *svc_adopt* is 0

if *svc_adopt* is 0 or missing and *pa027_c* is 1, then *svc_adopt* is 1

4.52   elect_adopt

2011, 2012

if at least one of {*obbp_adopt, banp_t_y*} is 1, then *elect_adopt* is 1

else if all of {*obbp_adopt, banp_t_y*} are 0, then *elect_adopt* is 0

if *elect_adopt* is 0 and at least one of {*obbp_adopt, banp_adopt*} is missing, then *elect_adopt*
    is missing

2009, 2010

if at least one of {*obbp_adopt, banp_t_y*} is 1, then *elect_adopt* is 1

else if all of {*obbp_adopt, banp_t_y*} are 0, then *elect_adopt* is 0

4.53   obbp_adopt

2009-2012

if *bank_acnt_adopt* is 1

    {

if *pa013* is 1 and *pa014* is 1, then *obbp_adopt* is 1

else if *pa013* is 1 and *pa014* is 2, then *obbp_adopt* is 0

else if *pa013* is 1 and *pa014* is missing, then *obbp_adopt* is missing

if *obbp_adopt* is missing and *newobbp* is 2, then *obbp_adopt* is 0

    }

else if *bnk_acnt_adopt* is 0, then *obbp_adopt* is 0

else if *bnk_acnt_adopt* is missing, then *obbp_adopt* is missing

4.54   banp_adopt

2009-2012

if *banp_typ* is greater than 0, then *banp_adopt* is 1

else if *banp_typ* is 0, then *banp_adopt* is 0

else *banp_adopt* is missing

4.55   income_adopt

2009-2012

let *income_typ* = *pu002_d*

if *pu002_d* is missing and *abp_adopt* is 0, then *income_typ* is 0

else if *pu002_d* is missing then *income_typ* is missing

if *income_typ* is greater than 0, then *income_adopt* is 1

else if *income_typ* is 0, then *income_adopt* is 0

else *income_adopt* is missing

4.56   csh_typ

2009-2012

let *csh_typ* = the sum of {*pu004_a, pu006a_a, pu006c_a, pu021_a*}

if all of {*pu004_a, pu006a_a, pu006c_a, pu021_a*} are missing, then *csh_typ* is missing

4.57   mon_t_y

2009-2012 For use in definition of *mon_adopt*:

if *mon_typ* is greater than 0, then *mon_t_y* is 1

else if *mon_typ* is 0, then *mon_t_y* is 0

else *mon_t_y* is missing

For use outside of definition of *mon_adopt*:

if *pa040_a* is 1, then *mon_t_y* is 1

else if *pa040_a* is 2, then *mon_t_y* is 0

else *mon_t_y* is missing

4.58   tc_t_y

2012

if *pa040_b* is 1, then *tc_t_y* is 1

else if *pa040_b* is 2, then *tc_t_y* is 0

else *tc_t_y* is missing

2011

if *pa042* is 1, then *tc_t_y* is 1

else if *pa042* is 2, then *tc_t_y* is 0

else *tc_t_y* is missing

2009, 2010

if *tc_typ* is greater than 0, then *tc_t_y* is 1

else if *tc_typ* is 0, then *tc_t_y* is 0

else *tc_t_y* is missing

4.59   svc_ebt_adopt

2012

if *pa197f* is 1, then *svc_ebt_adopt* is 1

else if *pa197f* is 2, then *svc_ebt_adopt* is 0

else *svc_ebt_adopt* is missing

2011

if *survey version* is 12-category

    if *pa197f* is 1, then *svc_ebt_adopt* is 1

    else if *pa197f* is 2, then *svc_ebt_adopt* is 0

    else *svc_ebt_adopt* is missing

2009

if *pa099d* is 1, then *svc_ebt_adopt* is 1

else if *pa099d* is 2, then *svc_ebt_adopt* is 0

else *svc_ebt_adopt* is missing

4.60   svc_direxp_adopt

2012

if *pa197e* is 1, then *svc_direxp_adopt* is 1

else if *pa197e* is 2, then *svc_direxp_adopt* is 0

else *svc_direxp_adopt* is missing

2011

if *survey version* is 12-category

    if *pa197e* is 1, then *svc_direxp_adopt* is 1

    else if *pa197e* is 2, then *svc_direxp_adopt* is 0

    else *svc_direxp_adopt* is missing

4.61   svc_other_gov_adopt

2012

if *pa197m* is 1, then *svc_other_gov_adopt* is 1

else if *pa197m* is 2, then *svc_other_gov_adopt* is 0

else *svc_other_gov_adopt* is missing

4.62   svc_payroll_adopt

2012

if *pa197g* is 1, then *svc_payroll_adopt* is 1

else if *pa197g* is 2, then *svc_payroll_adopt* is 0

else *svc_payroll_adopt* is missing

2011

if *survey version* is 12-category

    if *pa197g* is 1, then *svc_payroll_adopt* is 1

    else if *pa197g* is 2, then *svc_payroll_adopt* is 0

    else *svc_payroll_adopt* is missing

2009, 2010

if *pa099c* is 1, then *svc_payroll_adopt* is 1

else if *pa099c* is 2, then *svc_payroll_adopt* is 0

else *svc_payroll_adopt* is missing

4.63   svc_incentive_adopt

2012

if *pa197h* is 1, then *svc_incentive_adopt* is 1

else if *pa197h* is 2, then *svc_incentive_adopt* is 0

else *svc_incentive_adopt* is missing

2011

if *survey version* is 12-category

> if *pa197h* is 1, then *svc_incentive_adopt* is 1
>
> else if *pa197h* is 2, then *svc_incentive_adopt* is 0
>
> else *svc_incentive_adopt* is missing

4.64   svc_benefit_adopt

2012

if *pa197i* is 1, then *svc_benefit_adopt* is 1

else if *pa197i* is 2, then *svc_benefit_adopt* is 0

else *svc_benefit_adopt* is missing

2011

if *survey version* is 12-category

> if *pa197i* is 1, then *svc_benefit_adopt* is 1
>
> else if *pa197i* is 2, then *svc_benefit_adopt* is 0
>
> else *svc_benefit_adopt* is missing

4.65   svc_gpp_adopt

2012

if *pa197b* is 1, then *svc_gpp_adopt* is 1

else if *pa197b* is 2, then *svc_gpp_adopt* is 0

else *svc_gpp_adopt* is missing

2011

if *survey version* is 12-category

    if *pa197b* is 1, then *svc_gpp_adopt* is 1

    else if *pa197b* is 2, then *svc_gpp_adopt* is 0

    else *svc_gpp_adopt* is missing

4.66   svc_remittance_adopt

2012

if *pa197j* is 1, then *svc_remittance_adopt* is 1

else if *pa197j* is 2, then *svc_remittance_adopt* is 0

else *svc_remittance_adopt* is missing

2011

if *survey version* is 12-category

    if *pa197j* is 1, then *svc_remittance_adopt* is 1

    else if *pa197j* is 2, then *svc_remittance_adopt* is 0

    else *svc_remittance_adopt* is missing

4.67   svc_rebate_adopt

2012

if *pa197k* is 1, then *svc_rebate_adopt* is 1

else if *pa197k* is 2, then *svc_rebate_adopt* is 0

else *svc_rebate_adopt* is missing

2011

if *survey version* is 12-category

    if *pa197k* is 1, then *svc_rebate_adopt* is 1

    else if *pa197k* is 2, then *svc_rebate_adopt* is 0

    else *svc_rebate_adopt* is missing

4.68 svc_gift_adopt

2012

if *pa197a* is 1, then *svc_gift_adopt* is 1

else if *pa197a* is 2, then *svc_gift_adopt* is 0

else *svc_gift_adopt* is missing

2011

if *survey version* is 12-category

> if *pa197a* is 1, then *svc_gift_adopt* is 1
>
> else if *pa197a* is 2, then *svc_gift_adopt* is 0
>
> else *svc_gift_adopt* is missing

4.69 svc_transit_adopt

2012

if *pa197c* is 1, then *svc_transit_adopt* is 1

else if *pa197c* is 2, then *svc_transit_adopt* is 0

else *svc_transit_adopt* is missing

2011

if *survey version* is 12-category

> if *pa197c* is 1, then *svc_transit_adopt* is 1
>
> else if *pa197c* is 2, then *svc_transit_adopt* is 0
>
> else *svc_transit_adopt* is missing

4.70 svc_phonecard_adopt

2012

if *pa197d* is 1, then *svc_phonecard_adopt* is 1

else if *pa197d* is 2, then *svc_phonecard_adopt* is 0

else *svc_phonecard_adopt* is missing

2011

if *survey version* is 12-category

    if *pa197d* is 1, then *svc_phonecard_adopt* is 1

    else if *pa197d* is 2, then *svc_phonecard_adopt* is 0

    else *svc_phonecard_adopt* is missing

4.71   svc_location_adopt

2012

if *pa197l* is 1, then *svc_location_adopt* is 1

else if *pa197l* is 2, then *svc_location_adopt* is 0

else *svc_location_adopt* is missing

2011

if *survey version* is 12-category

    if *pa197l* is 1, then *svc_location_adopt* is 1

    else if *pa197l* is 2, then *svc_location_adopt* is 0

    else *svc_location_adopt* is missing

4.72   svc_gov_adopt

2012

if all of {*svc_ebt_adopt, svc_direxp_adopt, svc_other_gov_adopt*} is missing, then *svc_gov_adopt*
    are missing

else if at least one of {*svc_ebt_adopt, svc_direxp_adopt, svc_other_gov_adopt*} is 1, then *svc_gov_adopt*
    is 1

else if at least one of {*svc_ebt_adopt, svc_direxp_adopt, svc_other_gov_adopt*} is 0, then *svc_gov_adopt*
    is 0

2011

if *survey version* is 4-category

    if *pa099a* is 1, then *svc_gov_adopt* is 1

    else if *pa099a* is 2, then *svc_gov_adopt* is 0

    else *svc_gov_adopt* is missing

if *survey version* is 12-category

    if all of {*svc_ebt_adopt, svc_direxp_adopt*} are missing, then *svc_gov_adopt* is missing

    else if at least one of {*svc_ebt_adopt, svc_direxp_adopt*} is 1, then *svc_gov_adopt* is 1

    else if at least one of {*svc_ebt_adopt, svc_direxp_adopt*} is 0, then *svc_gov_adopt* is 0

4.73 svc_emp_adopt

2012

if all of {*svc_payroll_adopt, svc_incentive_adopt, svc_benefit_adopt*} are missing, then *svc_emp_adopt* is missing

else if at least one of {*svc_payroll_adopt, svc_incentive_adopt, svc_benefit_adopt*} is 1, then *svc_emp_adopt* is 1

else if at least one of {*svc_payroll_adopt, svc_incentive_adopt, svc_benefit_adopt*} is 0, then *svc_emp_adopt* is 0

2011

if *survey version* is 4-category

    if *pa099b* is 1, then *svc_emp_adopt* is 1

    else if *pa099b* is 2, then *svc_emp_adopt* is 0

    else *svc_emp_adopt* is missing

if *survey version* is 12-category

    if all of {*svc_payroll_adopt, svc_incentive_adopt, svc_benefit_adopt*} are missing, then *svc_emp_adopt* is missing

    else if at least one of {*svc_payroll_adopt, svc_incentive_adopt, svc_benefit_adopt*} is 1, then *svc_emp_adopt* is 1

    else if at least one of {*svc_payroll_adopt, svc_incentive_adopt, svc_benefit_adopt*} is 0, then *svc_emp_adopt* is 0

4.74 svc_gp_adopt

2012

if all of {*svc_gpp_adopt, svc_remittance_adopt, svc_rebate_adopt*} are missing, then *svc_gp_adopt* is missing

else if at least one of {*svc_gpp_adopt, svc_remittance_adopt, svc_rebate_adopt*} is 1, then *svc_gp_adopt* is 1

else if at least one of {*svc_gpp_adopt, svc_remittance_adopt, svc_rebate_adopt*} is 0, then *svc_gp_adopt* is 0

2011

if *survey version* is 4-category

if *pa099c* is 1, then *svc_gp_adopt* is 1

else if *pa099c* is 2, then *svc_gp_adopt* is 0

else *svc_gp_adopt* is missing

if *survey version* is 12-category

if all of {*svc_gpp_adopt, svc_remittance_adopt, svc_rebate_adopt*} are missing, then *svc_gp_adopt* is missing

else if at least one of {*svc_gpp_adopt, svc_remittance_adopt, svc_rebate_adopt*} is 1, then *svc_gp_adopt* is 1

else if at least one of {*svc_gpp_adopt, svc_remittance_adopt, svc_rebate_adopt*} is 0, then *svc_gp_adopt* is 0

2009, 2010

if *pa099a* is 1, then *svc_gp_adopt* is 1

else if *pa099a* is 2, then *svc_gp_adopt* is 0

else *svc_gp_adopt* is missing

4.75   svc_sp_adopt

2012

if all of {*svc_gift_adopt, svc_transit_adopt, svc_phonecard_adopt, svc_location_adopt*} are missing, then *svc_sp_adopt* is missing

else if at least one of {*svc_gift_adopt, svc_transit_adopt, svc_phonecard_adopt, svc_location_adopt*} is 1, then *svc_sp_adopt* is 1

else if at least one of {*svc_gift_adopt, svc_transit_adopt, svc_phonecard_adopt, svc_location_adopt*} is 0, then *svc_sp_adopt* is 0

2011

if *survey version* is 4-category

    if *pa099d* is 1, then *svc_sp_adopt* is 1

    else if *pa099d* is 2, then *svc_sp_adopt* is 0

    else *svc_sp_adopt* is missing

if *survey version* is 12-category

    if all of {*svc_gift_adopt, svc_transit_adopt, svc_phonecard_adopt, svc_location_adopt*} are missing, then *svc_sp_adopt* is missing

    else if at least one of {*svc_gift_adopt, svc_transit_adopt, svc_phonecard_adopt, svc_location_adopt*} is 1, then *svc_sp_adopt* is 1

    else if at least one of {*svc_gift_adopt, svc_transit_adopt, svc_phonecard_adopt, svc_location_adopt*} is 0, then *svc_sp_adopt* is 0

4.76 svc_specific_adopt

2009, 2010

if *pa099b* is 1, then *svc_specific_adopt* is 1

else if *pa099b* is 2, then *svc_specific_adopt* is 0

else *svc_specific_adopt* is missing

4.77 svc_govt_adopt

2010

if *pa099d* is 1, then *svc_govt_adopt* is 1

else if *pa099d* is 2, then *svc_govt_adopt* is 0

else *svc_govt_adopt* is missing

4.78 banp_t_y

2009-2012

if *banp_typ* is greater than 0, then *banp_t_y* is 1

else if *banp_typ* is 0, then *banp_t_y* is 0

else *banp_t_y* is missing

4.79　abp_adopt

2009-2012

if *pa024* is 1, then *abp_adopt* is 1

else if *pa024* is 2, then *abp_adopt* is 0

else *abp_adopt* is missing

4.80　cc_gp_adopt

2011, 2012

if all of {*cc_vmd_adopt, cc_ae_adopt*} are missing, then *cc_gp_adopt* is missing

else if at least one of {*cc_vmd_adopt, cc_ae_adopt*} is 1, then *cc_gp_adopt* is 1

else if at least one of {*cc_vmd_adopt, cc_ae_adopt*} is 0, then *cc_gp_adopt* is 0

2009, 2010

if *pa019_a* is 1, then *cc_gp_adopt* is 1

else if *pa019_a* is 2, then *cc_gp_adopt* 0

else if *cc_adopt* is 0, then *cc_gp_adopt* is 0

else *cc_gp_adopt* is missing

4.81　cc_aecharge_adopt

2011, 2013

if *pa019_c* is 1, then *cc_aecharge_adopt* is 1

else if *pa019_c* is 2, then *cc_aecharge_adopt* is 0

else if *cc_adopt* is 0, then *cc_aecharge_adopt* is 0

else *cc_aecharge_adopt* is missing

4.82　cc_club_adopt

2011, 2012

if *pa019_e* is 1, then *cc_club_adopt* is 1

else if *pa019_e* is 2, then *cc_club_adopt* is 0

else if *cc_adopt* is 0, then *cc_club_adopt* is 0

else *cc_club_adopt* is missing

4.83   mon_typ

2009-2012

let *mon_typ* = the sum of {*pu004_bmo, pu005_amo, pu006a_bmo, pu006c_bmo, pu021_bmo*}

if all of {*pu004_bmo, pu005_amo, pu006a_bmo, pu006c_bmo, pu021_bmo*} are missing and *moadopter* is 0, then *mon_typ* is 0

else if all of {*pu004_bmo, pu005_amo, pu006a_bmo, pu006c_bmo, pu021_bmo*} are missing and *moadopter* is not equal to 0, then *mon_typ* is missing

4.84   tc_typ

2009-2012

let *tc_typ* = *pu008_c*

if *pu008_c* is missing and at least one of {*tcadopter, tcever*} is 0, then *tc_typ* is 0

else if *pu008_c* is missing and none of {*tcadopter, tcever*} is 0, then *tc_typ* is missing

4.85   chk_blnk_adopt

2009-2012

if *pa031* is 1, then *chk_blnk_adopt* is 1

else if *pa031* is 2, then *chk_blnk_adopt* is 0

else if *chk_acnt_adopt* is 0, then *chk_blnk_adopt* is 0

else *chk_blnk_adopt* is missing

4.86   banp_typ

2009-2012

let *banp_typ* = the sum of {*pu002_c, pu003_c, pu005_c, pu021_e*}

if all of {*pu002_c, pu003_c, pu005_c, pu021_e* } are missing and *bnk_acnt_adopt* is 0, then *banp_typ* is 0

else if all of {*pu002_c, pu003_c, pu005_c, pu021_e*} are missing and *bnk_acnt_adopt* is not equal to 0, then *banp_typ* is missing