pairfam
Panel Analysis of Intimate Relationships and Family Dynamics

Adjustment of Variable Frt6

January 2012, revised December 2014

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Pairfam Technical Paper

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Technical Report

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1. Problem

In wave 1, we asked respondents with children in question 129 (variable frt6): "When you think realistically about own children, how many *more* (emphasis PB) children do you think you will have?" The intention was to get the number of *additional c*hildren of respondents with children or who were pregnant. Unfortunately, some respondents obviously missed the word "more" and reported the total number of children, including those already born and conceived. Thus, for those respondents the value of frt6 is too high.

There is one main indicator for the probable overestimation of the values of frt6: In about 600 cases with children, who expect to have another child according to frt6, the sum of actual and expected children is higher than the reported ideal number of children.[1] In the group of respondents with children the mean total number of children expected is 2.5 and thus as high as the ideal number of children (see table 1). This result is unlikely and contrary to the results of other data sets (GGS, PPAS) in which the mean number of expected children is about 2.1.

Table 1: Ideal family size and expected number of children (mean)

	Wave 1		Wave 2	
	Ideal family size	Total number of children expected (nkidsbio+frt6)	Ideal family size	Total number of children expected (nkidsbio+frt6)
Respondents without children	2.08	1.74	2.08	1.72
Respondents with children	2.49	2.53	2.52	2.44

Source: pairfam, wave 1 & 2 (unweighted)

In *wave 2* we changed the wording of the question in order to make clearer that we wanted the respondents to indicate the *additional* number of children:

“When you think realistically about having [Respondents with child(ren) (biological, adopted, step-) or who are pregnant or whose partner is pregnant ((ehc9kx=1,2,3 for at least x=1,...,15) | f1=1): additional] children: how many [Respondents with child(ren) (biological,

[1] That is, we sum the number of children a respondent already has and the number of children the respondent additionally expects. E.g.: If someone already has two children and he or she expects another two the total number of children expected is four.

adopted, step-) or who are pregnant or whose partner is pregnant: more] children do you think you will have? [Respondents with child(ren) (biological, adopted, step-) or who are pregnant or whose partner is pregnant]: Here we mean children in addition to the ones you already have, or if you or your partner is pregnant, in addition to the child you are expecting."

The result, however, was not encouraging. For respondents with children the mean of the total number of children expected remained nearly unchanged (see again table 1).

As the expected number of children is an important concept for fertility analysis we thought of a way to adjust the expected number of children in cases where it is obviously too high. This adjustment is only necessary for waves 1 and 2 and for respondents with children or who were pregnant. Beginning with wave 3, the question was completely reworded for respondents with children.

2. Adjustment of variable frt6 in wave 1 and 2

We have developed a Stata program routine to adjust variable frt6. In the following we describe the different steps and decision rules of this adjustment. For details see the Stata do files in the attachment.

The adjustment is only necessary for respondents with children (including pregnancy) who reported expecting one or more additional children. Respondents without children, respondents who do not expect any more children, who do not know, who gave no answer and who have not yet thought about it, are regarded as being correct.

For the adjustment we use the answer of the respondents with children to the question about the expected age at next birth (variable frt9). This question was only to be answered by persons who expected additional children. Respondents who did not expect (more) children should not answer the question. However, about one third of respondents with children who noted in frt6 that they expected one or more further children did *not* report a valid expected age at next birth. We assume that (many of) these cases did not report an age because they actually do not want any more children and wondered why they should answer frt9. That is, we assume that for this group the correct number of expected children is zero.

In addition to frt9 we also take into account the variable frt7 (intention to have a child in the next two years), information about pregnancy and the difference between the ideal number of children (variable frt5) and the total number of children expected (sum of actual and expected children).

We create four new variables: The dummy variables realexp1 and realexp2 indicate if a respondent expects another child (1) or not (0). The variable rexpno1 and rexpno2 adjust the *number* of additionally expected children. Note that rexpno is much more speculative than realexp.

The two dummy variables differ according to the restrictions we apply in creating the variables:

- *Restrictive method (realexp1):* Realexp1 is set to zero if no valid age is reported in frt9 (including "haven't thought about that yet"), if the respondent or the partner is not pregnant, if the respondent does not intend to have a child in the next two years, if the expected number of children is equal to the actual number *and* if the total number of children expected (sum of actual and expected children) is greater than the ideal number of children.

- *Less restrictive method (realexp2):* Realexp2 is set to zero only if the respondents did not answer frt9 (-3,-4,-2) or said “don't know” (-1), if the respondent or the partner is not pregnant, if the respondent does not intend to have a child in the next two years and if the expected number of children is equal to the actual number *and* if the sum of actual and children is greater than the ideal number of children.

For infertile and pregnant respondents we had to find another solution as they skipped the variables frt7 and frt9.[2]

- Infertile persons are regarded as expecting another child (realexp=1) if they had tried to conceive a child in the last year (frt3).

- Pregnant persons are regarded not to expect another child after the current pregnancy if the expected number of children is equal to the actual number plus 1 and if the sum of actual and expected number of children plus 1 is greater than the ideal number of children.

Examples:

Actual number of children	2
Pregnancy	no
Expected number of additional children	2
Ideal number of children	2
Intention in next two years	No
Expected age at next birth	no answer (-2), don't know (-1), haven't thought about that yet (97)
Result: Realexp1 is set to 0 because we assume that the respondent has reported the actual number of children instead of the number of additional children expected; realexp2 is set to 1	

[2] In wave 2 this is only true for infertile persons. However, it is not clear if pregnant persons did answer frt9 correctly. Thus we decided to apply the same rules for pregnant persons in wave 1 and wave 2.

Actual number of children	1
Pregnancy	yes
Expected number of additional children	2
Ideal number of children	2
Intention in next two years	-
Expected age at next birth	-
Result: Realexp1 and realexp2 are set to 0 because we assume that the respondent has reported the actual number of children including pregnancy instead of the number of additional children expected	

Actual number of children	2
Pregnancy	no
Expected number of additional children	2
Ideal number of children	4
Intention in next two years	no
Expected age at next birth	no answer (-2), don't know (-1), haven't thought about that yet (97)
Result: Realexp1 and realexp2 are *not* set to 0 because the sum of actual and expected children is equal to the ideal number of children	

Actual number of children	2
Pregnancy	no
Expected number of additional children	2
Ideal number of children	2
Intention in next two years	probably yes
Expected age at next birth	35
Result: Realexp1 and realexp2 are *not* set to 0 because the respondent has given a valid age at next birth and does not exclude having a child in the next two years - even if this exceeds the ideal number of children	

For the adjustment of the *number* of additionally expected children we use the following rules:

- If the respondent does not expect another child (realexp1=0; realexp2=0) the number of additional children expected (rexpno1, rexpno2) is set to zero.

- If the respondent expects another child (realexp1=1; realexp2=1) and the sum of actual (including pregnancy) and expected number of children is less or equal to the ideal number of children, the number of expected children is not changed.

- If the respondent expects another child (realexp1=1; realexp2=1) and the sum of actual (including pregnancy) and expected number of children exceeds the ideal number of children and the number of expected children is lower than the number of actual children (including pregnancy), the number of expected

children is not changed because it is unlikely that the respondent has included the number of given children when reporting the number of expected children.

- If the respondent expects another child (realexp1=1; realexp2=1) and the sum of actual (including pregnancy) and expected number of children exceeds the ideal number of children and the number of expected children is larger than the number of actual children (including pregnancy) the new expected number of children is the difference between the expected and the actual number of children.

- If the respondent expects another child (realexp1=1; realexp2=1) and the sum of actual (including pregnancy) and expected number of children exceeds the ideal number of children and the number of expected children is equal to the number of actual children (including pregnancy) the new expected number of children is assumed to be one (conservative assumption).

Examples:

Actual number of children	2
Pregnancy	no
Expected number of additional children	2
Ideal number of children	2
Respondent expects another child (after adjustment)	no (realexp1=0 & realexp2=0)
Result: Rexpno1 and rexpno2 are set to 0.	

Actual number of children	2
Pregnancy	no
Expected number of additional children	3
Ideal number of children	3
Respondent expects another child (after adjustment)	yes (realexp1=1 & realexp2=1)
Result: Rexpno1 and rexpno2 are set to 1 (= difference between expected and actual number of children).	

Actual number of children	1
Pregnancy	yes
Expected number of additional children	2
Ideal number of children	2
Respondent expects another child (after adjustment)	yes (realexp1=1 & realexp2=1)
Result: Rexpno1 and rexpno2 are set to 1 (conservative assumption)	

Actual number of children	1
Pregnancy	yes
Expected number of additional children	2
Ideal number of children	4
Respondent expects another child (after adjustment)	yes (realexp1=1 & realexp2=1)
Result: expected number of children is not changed (i.e. rexpno1 and rexpno2 are equal to frt6) because the ideal number is equal to the sum of actual and expected number of children	

Actual number of children	2
Pregnancy	no
Expected number of additional children	1
Ideal number of children	2
Respondent expects another child (after adjustment)	yes (realexp1=1 & realexp2=1)
Result: expected number of children is not changed (i.e. rexpno1 and rexpno2 are equal to frt6) because the expected number is smaller than the actual number of children	

According to the adjustment of frt6 in wave 1 the number of respondents who do not expect additional children rises from 2,170 to 2,633 (realexp1) or 2,480 (realexp2) respectively.

In the group of respondents with children, the mean of the total number of children expected decreases from 2.53 to 2.2 (wave 1) and from 2.44 to 2.2 (wave 2).

The small decrease in the mean in the group of respondents without children is due to the adjustment in the case of pregnancy.

Table 2: Expected number of children (mean) before and after adjustment of frt6

	Total number of children expected (nkidsbio+frt6)	Total number of children expected (nkidsbio+rexpno1)	Total number of children expected (nkidsbio+rexpno2)
Without children			
Wave 1	1.74	1.72	1.72
Wave 2	1.72	1.71	1.71
With children			
Wave 1	2.53	2.21	2.25
Wave 2	2.43	2.19	2.21

Source: pairfam, wave 1 & 2 (unweighted)