Timing children at a later age: motivational, behavioural, and socio-structural differentials in the individual decision making process of older mothers
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Citation for published version (APA):

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4 Sampling methods and data collection

4.1 Introduction

This chapter describes the methods used to select and interview women who have had a child when aged thirty years or older. The goal was to create a sample in which a broad variety from this group of women was represented; it was not the goal to create a sample that was representative in one way or another of the Dutch female population. From this point, the sample of this study is referred to as the LM sample, or the Late Motherhood sample.

In order to incorporate as much variety as possible, we used a sampling technique which involves stratification with two variables: age of the mother at birth of her youngest child; birth order of the youngest child. Half the women included in the LM sample were aged 30 to 34 at the birth of their youngest child; the other half were 35 or older at that time. Half the women included in the LM sample have parity one, while the other half have parity two or higher. This double stratification results in four subgroups of women of about the same size;

Group A: parity one; had a child when aged 30-34,
Group B: parity one; had a child when aged 35 or older,
Group C: parity two or higher; had their youngest child when aged 30-34,
Group D: parity two or higher; had their youngest child when aged 35 or older.

In the remainder of this chapter, we describe the sampling technique used and the non response rates that resulted from this technique (in section 4.2). In section 4.3, the fieldwork is described. Preparations and interview procedures are then discussed. We consider the socio structural characteristics of the women included in the LM sample. Finally, the conclusions drawn with respect to the suitability of the LM sample for answering the research questions of interest are presented.

4.2 Creating the LM Sample

Our financial budget allowed us to set a target of 360 interviews. The four groups within the LM sample each consisted of 90 interviewees. This group size is sufficiently high to permit comparisons between subgroups. Creating the LM sample—from choosing the sample frame to completing the desired 360 interviews—involved five steps.

4.2.1 Step1: Choosing the sample frame

We had first to contact the older mothers to invite them personally to participate. We therefore needed their names and addresses. Only the population register of a municipality can combine name and address data with data on our stratification
variables (age of the mother at birth of her youngest child and parity). The municipal population register was chosen as our sample frame.

4.2.2 Step 2. Selecting the municipalities

The municipalities were chosen with the goal of creating a sample with a broad variety of fertility life histories. We sought to achieve this by making use of the detailed regional fertility patterns study of Bosveld, Wijzen and Kuijsten (1991). Urbanized regions tend to show higher mean ages at childbirth than rural regions. We therefore concluded that the mechanisms that influence fertility timing differ in the different regions of the Netherlands. We assumed that each region has its specific socio-cultural milieu which forms the environment in which fertility decision making is performed. It was therefore important to include regions with different fertility patterns in the LM sample. Three regions with different patterns of age specific fertility were selected for inclusion in the sample frame: one region in which the women were relatively young when they had their children (region I); another region in which the women were relatively old (region III); and an intermediate region (region II). It was our intention to administer the same number of interviews in each region.

The municipalities within a region differ with respect to levels of urbanization. Since urban and rural fertility behaviours differ markedly, rural as well as urban municipalities were represented in the sample. The five categories of the Statistics Netherlands scale address density of the surrounding area were used (Den Dulk et al. 1992). Seven municipalities were selected according to region and level of urbanization for inclusion in the LM sample. The municipalities are listed in table 4.1.

1 The first region is in the south-western part of the Netherlands and surrounds the cities of The Hague, Leiden and Delft. This region is characterized by a relatively low age of the mother at childbirth. The second region is situated in the central eastern part of the country. This region includes the rural area of the Veluwe. The ages at childbirth here are intermediate. The third region is the city of Amsterdam. This region is highly urbanized and the age at childbirth is relatively high.

2 The address density of the surrounding area is a measure to enable categorization of municipalities with respect to their degree of urbanization. The variable has 5 levels of address density. Statistics Netherlands uses this indicator, because it represents the concentration of human activities. The measure is readily understood, because it is a one-dimensional variable. The validity of the address density measure appeared to be good (Den Dulk et al. 1992). Correlations with various indicators of urbanization are high; from 0.4 for the proportion of Labour Party voters to 0.9 for the proportion of divorcees.

-44-
Table 4.1 Municipalities in LM sample with their address density

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Address Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region I</td>
<td></td>
</tr>
<tr>
<td>Zoetermeer</td>
<td>2</td>
</tr>
<tr>
<td>Noordwijk</td>
<td>3</td>
</tr>
<tr>
<td>Wateringen</td>
<td>3</td>
</tr>
<tr>
<td>Alkemade</td>
<td>5</td>
</tr>
<tr>
<td>Region II</td>
<td></td>
</tr>
<tr>
<td>Tiel</td>
<td>3</td>
</tr>
<tr>
<td>Epe</td>
<td>4</td>
</tr>
<tr>
<td>Region III</td>
<td></td>
</tr>
<tr>
<td>Amsterdam</td>
<td>1</td>
</tr>
</tbody>
</table>

4.2.3 Step 3. Collecting the names and addresses of potential respondents

To attain the goal of 360 interviews, we started by collecting 1000 names and addresses of potential respondents. These were divided over the seven municipalities in proportion to their size. Small municipalities yielded fewer potential respondents than large municipalities.

The seven aforementioned municipalities were each sent a letter with a request to make available the names and addresses of potential respondents who met the following criteria:

- they gave birth to a child when they were thirty years of age or older
- this event must have taken place between January 1991 and July 1992. The interviews were administered in May 1993, so that the youngest child of a respondent would be aged between 11 and 27 months. The sample was designed in this way to minimize the risk of memory distortion as a result of time elapsed between the actual decision making and the interview on the one hand, and to be reasonably sure of interviewing women who had recovered from pregnancy and delivery on the other hand. They are assumed to have been able to get their lives organized again within 8 months (Spanjaard 1992).
- Municipalities were asked to deliver equal numbers of respondents in each LM sub sample, if that was possible. Thus the municipalities were asked to provide information on the birth order of the birth in addition to information regarding the age at birth of the potential respondents.

In response to our request for names and addresses, the seven municipalities followed one of three procedures to deliver names and addresses of potential respondents (see table 4.2):

- In Amsterdam, a letter of invitation was sent to potential respondents, asking them to return an enclosed postal card if they did not wish to be interviewed. From the 336 invitations that were sent, 60 (18%) refusals were returned. The municipality
provided a list of 276 potential respondents, categorized according to age, but not according to parity.

- Epe and Noordwijk have a policy of not giving any addresses to third parties. These municipalities therefore sent the potential respondents a letter of invitation from the researchers (accompanied by a letter of recommendation from the municipality). Respondents willing to participate in the study filled in their name, address and telephone number on the postcard provided, which could then be returned directly to the researcher. A reminder, including a new card, was mailed a week after the first invitation. These two municipalities were also unable to deliver information regarding the parity stratification. Of the 228 invitations sent, 114 (50%) were returned with a positive reaction.

- From the population register departments of Tiel, Zoetermeer, Alkemade and Wateringen a list was received with 517 names and addresses of potential respondents. These lists were already stratified into the appropriate age and parity groups.

At the end of step 3, a total of 907 names and addresses of potential respondents had been gathered.

4.2.4 Step 4. Contacting potential respondents and sources of non response

The goal of step 4 was to call all potential respondents to invite them to participate and check their characteristics regarding the stratification variables. We had to obtain the telephone numbers for as many of the 907 potential respondents as possible. The women from Noordwijk and Epe has already given their telephone numbers on the cards they returned, but for the potential respondents from the other municipalities we were dependent on the public telephone listings published by KPN, the Dutch telephone company. This procedure resulted in the loss of potential respondents without a telephone (n=53) and those with an ex-directory telephone number (n=132). In table 4.2, these two forms of non response are taken together in the fourth row: 41% of potential respondents in Amsterdam and 14% in the four smaller municipalities could not be reached by telephone.

The 722 remaining potential respondents were called to ask whether they would be willing to participate (the women from Noordwijk and Epe had already given us their consent, so they were asked to confirm this). In the same telephone conversation, the stratification group of the respondent was verified. The sixth row of table 4.2 shows that we were unable to contact 15.4% (n=111) of the 722 potential respondents for which a telephone number was known, after three attempts at various times of the day, including evenings. Either the telephone call was not answered, or the line was engaged, or the respondent was not known to the person who answered the telephone, or the respondent was no longer living at that location.
A small proportion (0.9%, n=8) of potential respondents were eliminated because of
they did not speak Dutch well enough to participate in the study. As a result, the LM
sample is doubtless strongly biased towards Dutch women. We have no means of
verifying this, because we did not ask respondents about their country of birth.

Two main sources of non response can be distinguished (Louwen 1992). The first
results from the inability of the researchers to contact potential respondents. Of the 907
potential respondents, 304 (37.6%) were eliminated for this reason. This form was
particularly large in Amsterdam. The second source of non response is the unwillingness
of potential respondents to participate. We saw already that the refusal rate in
Amsterdam after the mailed invitation was 18%, while in Epe and Noordwijk it was
50%, because they had to give a positive response by mail. In the four remaining
municipalities the refusal is given in a later stage by telephone. Of the 401 potential
respondents contacted 83 (20.7%) did not want to participate.

We took certain measures to reduce the refusal rate as much as possible (De Leeuw &
Hox 1998). The first was to emphasize the importance of the respondents' opinions as
authorities in family matters, especially in having children, in the letter of invitation as
well as in the first telephone conversation. Second, the University of Amsterdam was
presented as a reliable and established institution. We stressed that any information
given was in capable hands and would be treated with respect, in accordance with the
standard privacy regulations for social science research.

The reason for refusal was not explicitly asked, but when a respondent gave a
spontaneous reason, it was recorded. Most often it was one of the following:
- the respondent did not belong in the research group, because according to her
  own assessment her circumstances were very special, or because our information
  from the population department was not correct.
- the respondent felt that the topic of the interview was not important enough to
  spend time on; having a child when over thirty years of age was not worthy of
  special attention.
- the respondent had trouble with the pregnancy or delivery, or the child had been
  ill, or had died. It would have been very painful for women in these
  circumstances to talk about the subject.
- the respondent was not available for an interview because of work, vacation,
  illness, or a very busy schedule.

The overall response rate was 47% (505 of 1079 potential respondents). This was little
below the average response rate that Kalfs and Kool (1994) found in their study of non
response in studies carried out by Dutch universities and other scientific institutions.
This is, as we saw above, caused by the procedure in Epe and Noordwijk, were woman
had to mail in their address and telephone number. It is remarkable that, in our study,
non response caused by the impossibility of making contact was especially high in
Amsterdam.
Table 4.2 Results of three procedures of selection of respondents

<table>
<thead>
<tr>
<th></th>
<th>Amsterdam</th>
<th>Epe</th>
<th>Noordwijk</th>
<th>Wateringen</th>
<th>Zoetermeer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invitation by mail</td>
<td>336</td>
<td>228</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refusal after mailed invitation</td>
<td>-60</td>
<td>-114</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name + address of potential respondents</td>
<td>276</td>
<td>114</td>
<td>517</td>
<td>907</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No telephone number available</td>
<td>-113</td>
<td>0</td>
<td>-72</td>
<td>-185</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential respondents with telephone</td>
<td>163</td>
<td>114</td>
<td>445</td>
<td>722</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No contact by telephone</td>
<td>-48</td>
<td>-20</td>
<td>-43</td>
<td>-111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language problems</td>
<td>-6</td>
<td>-1</td>
<td>-1</td>
<td>-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential respondents contacted</td>
<td>109</td>
<td>93</td>
<td>401</td>
<td>603</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refusal in telephone conversation</td>
<td>-</td>
<td>-</td>
<td>-83</td>
<td>-83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other form of non response</td>
<td>-</td>
<td>-</td>
<td>-15</td>
<td>-15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Willing to participate</td>
<td>109</td>
<td>93</td>
<td>303</td>
<td>505</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.2.5 Step 5. Filling the sub groups of the research design.

The 505 respondents who agreed to participate could not all be interviewed, because of financial and time constraints; 352 of them were actually interviewed (see table 4.3). The target was to select a sample of 360 respondents, evenly distributed over the four sub groups of 90 respondents. In groups A and B all the women who had given their consent were interviewed, but there were not enough to reach the target of 90. This shortfall in the total sample was compensated for by respondents from research groups C and D. In these two groups, not all the women who consented were interviewed, but they were randomly drawn within each municipality. Overall, we had 8 interviews less than we initially intended. The mismatch is caused by the fact that the groups C and D were already very large, and making them any larger would serve no purpose.
Table 4.3 Number of interviews, within the four LM sub samples

<table>
<thead>
<tr>
<th></th>
<th>30-34</th>
<th>35+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 child</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(group A)</td>
<td>85</td>
<td>40</td>
<td>125</td>
</tr>
<tr>
<td>2 or more children</td>
<td>113</td>
<td>114</td>
<td>227</td>
</tr>
<tr>
<td>(group C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(group D)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>198</td>
<td>154</td>
<td>352</td>
</tr>
</tbody>
</table>

All 7 municipalities are represented in each research group. There is no significant relationship between municipality and sub sample ($\chi^2=27.867$, df=18, p=0.06). The sample seems to satisfy the need to distribute respondents of the four LM sub samples over municipalities.

4.3 Interview Administration

4.3.1 The interviewers

The questionnaire was administered in the form of a face-to-face interview. The interviews were carried out by fourteen professional female interviewers. They were all employed and trained by a social science research institute (Research voor Beleid, Leiden). Besides their general interview training there was an additional training session in which the interviewers were informed about the specific details of the LM study (Weinberg 1983). There were two important topics in this training: how to deal with the retrospective perspective of the study; how to use the life history calendar (which is described below). Using such a calendar is not yet common practice and the interviewers had had no experience with this method. All the interviewers were female and were at least 25 years of age. These interviewer characteristics were chosen to make talking about pregnancy, contraception and related topics a little easier for the respondents (Bradburn 1983; Smit et al. 1994).

4.3.2 The questionnaire

The choice of a face-to-face interview is evident (Sheatsly 1983; De Leeuw 1992; De Leeuw & Hox 1998). The retrospective life history nature of some parts of the questionnaire calls for a trained interviewer who has no difficulties with complex questions. It would have been extremely difficult for participants to respond with pencil and paper. The instructions would have been so complicated, completing the questionnaire would not have felt rewarding. The complexity and length of the questionnaire also excluded interviewing by telephone as an alternative. Interviews were planned to take at least one hour. The face-to-face interview was changed into a pencil
and paper administration in the case of items of a private or personal character and when long lists of items with the same format were presented. In this manner, evasive answers for the more personal items were avoided and the attention of the respondent was held where there were long lists of items with the same format.

The questionnaire used consisted of three main parts. The first was a life history calendar (Freedman et al. 1988). The calendar method was chosen so as to make it possible to lead the respondent into her past with the help of the visual aid of the calendar in front of her. This method reduces the risk of mistakes and memory distortions. With the aid of the calendar, we obtained information on the spells of the fertility and contraception career, the partner career, and the school/work career. The second part of the questionnaire deals with the decision making on the timing of the respondent’s child(ren), in particular for her youngest child. The first part is completely retrospective. To reduce the risk of memory distortions or confusion, that are often associated with retrospective questions (De Jong Gierveld 1995; Sudmon & Bradburn 1982), considerable emphasis is put on the retrospective nature of the questions. Respondents were repeatedly told that the questions dealt with the decision making stage (before their child was born) or the evaluation stage (after the child was born). The questionnaire ends with a set of structural and demographic variables, such as religion and income.

When the interview was finished, the interviewer had the opportunity to write down any comments or remarks regarding the interview. The remarks the interviewers made suggested that all conversations proceeded congenially. In general, the respondents liked their interviews and the interviewers encountered few difficulties in completing them. In a few cases there were some disturbances because of children present at the time of the interview. It was requested that respondents should be alone with the interviewer during the interview, but that was not always possible. Only one interview had to be terminated before the questionnaire had been completed.

4.4 LM sample characteristics

In this section, a preliminary description of the LM sample characteristics is given. The focus is first on the characteristics used to stratify the sample (age of the mother at birth of youngest child and parity). We then consider some characteristics that are known from demographic research to affect fertility behaviour. Although the LM sample was not designed to be representative of the Dutch female population, it must nevertheless be capable of comparison with results from other data sources.

Age
The mean age at the time of the interview calculated for all respondents was 35.6 years, with a standard deviation of 3.1 years. At the time of interviewing, the minimum age was 30 years and the maximum age was 49. Thus the respondents belong to the birth cohorts 1944 to 1962; however, 85% of them were born in the period 1954 - 1961.
The mean age at which respondents gave birth to the youngest child was calculated for each LM sub sample. For research groups A and B, this was their first child; for groups C and D, the child was of a higher birth order. The results are given in table 4.4. The stratification into two age groups had the intended effect of spreading the age at which the respondents gave birth to their youngest child.

Table 4.4 Mean age at birth of youngest child

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>sd</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A (30-34,1)</td>
<td>32.1</td>
<td>1.4</td>
<td>30.0 - 34.9</td>
</tr>
<tr>
<td>Group B (35+,1)</td>
<td>37.3</td>
<td>2.3</td>
<td>35.0 - 43.4</td>
</tr>
<tr>
<td>Group C (30-34,2+)</td>
<td>32.6</td>
<td>1.2</td>
<td>30.0 - 34.9</td>
</tr>
<tr>
<td>Group D (35+,2+)</td>
<td>37.5</td>
<td>2.2</td>
<td>35.0 - 46.9</td>
</tr>
</tbody>
</table>

The distribution of the age at first birth in the LM sample is given in figure 4.1 by the proportion of women with at least one child at specific ages. The comparable distribution is given for two Dutch birth cohorts (1955 and 1960). The figure shows two typical characteristics of the LM sample, both caused by the sampling method. The first difference is that the women in the LM sample had their first child later than their counterparts in the Dutch cohorts. The second feature is that the curve runs up to 100% for the LM sample, because everybody in the sample has had at least one child. No childless women were included in the LM study.

For the LM sample, the age of first childbirth is artificially high, because the sampling methods involved stratification on the age of the mother at the birth of her youngest child. The mean age at first childbirth for all LM respondents was 31.1 (SD=4.4). The age range is enormous, from a minimum of 18.3 to a maximum of 43.4 years. Thus, although older mothers are deliberately over represented in the LM sample, this sampling method did not result in the exclusion of respondents who had their first child at a younger age.
Figure 4.1 Proportion with at least one child at different ages for Dutch birthcohorts 1955 and 1960, and the LM sample

Parity
The LM sample stratification into parity groups resulted in a parity distribution as given in figure 4.2. The attempt to represent all parities in the LM sample appears to have been successful. In the columns of the figure we have given the numbers of respondents belonging to each LM sub sample (groups A,B,C, and D). Groups A and B have by definition only one child; they constitute column 1. For group C as well as group D we see an even distribution over parities.

Figure 4.2 Parity distribution of LM sample
Education

In table 4.5 the level of education is given for the LM sample as a whole and for the four sub samples. Of the LM sample, 14.8% attended a primary school or non selective lower secondary school ('lagere school' or 'lager beroeps onderwijs'). Most respondents (43.5%) had attended some form of secondary school, thus a middle level education ('middelbaar algemeen of beroeps onderwijs' or 'voortgezet algemeen onderwijs'), and 41.5% had attended some form of higher education (university or higher vocational education).

The distributions over levels of education within each LM sub sample show that groups B and D (the oldest mothers in the LM sample) had a higher mean level of education than group A, and that group C had the lowest mean level of education. Correlation between age of the mother at childbirth and level of education is a strong relationship found in most fertility studies (Statistics Netherlands 1990, De Graaf & Sprangers 1999; Corijn et al. 1994). The relationship is generally explained by the fact that women with a higher level of education are older when they leave school, which decreases the possibility of them having a child at a young age. This explanation seems not entirely valid when applied to the group who first had a child when 30 years of age or older, because they had left school some years previously and had had plenty of time to have a child since then. When the relationship between group membership and level of education is tested with a chi square test, there appears to be no statistically significant relationship ($\chi^2=10.132$, df=6, p.12).

Table 4.5 Level of education

<table>
<thead>
<tr>
<th></th>
<th>Lower level</th>
<th>Middle level</th>
<th>Higher level</th>
<th>Mean level of education</th>
<th>sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM sample</td>
<td>14.8%</td>
<td>43.6%</td>
<td>41.5%</td>
<td>2.27</td>
<td>0.70</td>
</tr>
<tr>
<td>'Late mothers' of NFFS</td>
<td>34.6%</td>
<td>41.0%</td>
<td>24.1%</td>
<td>1.92</td>
<td>0.87</td>
</tr>
<tr>
<td>Group A LM sample</td>
<td>14.1%</td>
<td>42.4%</td>
<td>43.5%</td>
<td>2.29</td>
<td>0.70</td>
</tr>
<tr>
<td>NFFS</td>
<td>25.3%</td>
<td>40.3%</td>
<td>33.9%</td>
<td>2.12</td>
<td>0.92</td>
</tr>
<tr>
<td>Group B LM sample</td>
<td>7.5%</td>
<td>47.5%</td>
<td>45.0%</td>
<td>2.38</td>
<td>0.63</td>
</tr>
<tr>
<td>NFFS</td>
<td>[50.0%]</td>
<td>[10.0%]</td>
<td>[40.0%]</td>
<td>[1.90]</td>
<td>[0.99]</td>
</tr>
<tr>
<td>Group C LM sample</td>
<td>21.2%</td>
<td>46.0%</td>
<td>31.9%</td>
<td>2.11</td>
<td>0.73</td>
</tr>
<tr>
<td>NFFS</td>
<td>36.9%</td>
<td>41.7%</td>
<td>20.1%</td>
<td>1.85</td>
<td>0.85</td>
</tr>
<tr>
<td>Group D LM sample</td>
<td>11.4%</td>
<td>40.4%</td>
<td>48.2%</td>
<td>2.37</td>
<td>0.68</td>
</tr>
<tr>
<td>NFFS</td>
<td>26.9%</td>
<td>40.4%</td>
<td>32.7%</td>
<td>2.06</td>
<td>0.78</td>
</tr>
</tbody>
</table>
In table 4.5, the levels of education of the counterparts\(^3\) of the women in the LM sample in the 1988 Netherlands Family and Fertility Survey (NFFS) sample are given (in the rows just below the data of the LM sample). If these findings are compared with the LM sample, we see that the levels of education in the NFFS sample are somewhat lower than those in the LM sample. There seems to be a bias in the LM sample towards the more highly educated. This bias is a well known sampling effect (Hox & De Leeuw 1998). A higher level of education often leads to higher participation rates. On the other hand, it is also the case that the highly educated are difficult to contact (they are less often at home). This problem did not occur in the selection of the LM sample.

**Labour Market Participation**

We now turn to the labour force participation rates in the LM sample. Overall, the rate of labour market participation at the time of the interviews was 56.8\% (see figure 4.3). This participation rate is a little higher than the overall female labour market participation rate at that time given by Statistics Netherlands (2000c). They report a female participation rate of 47\% in 1993. When the labour market participation is calculated for each LM subsample, the results are as follows: group A (30-34, parity 1) had a rate of 77.8\%; group B (35+, parity 1) 55.0\%; group C (30-34, parity 2+) 44.2\%; and group D (35+, parity 2+) had a participation rate of 54.4\%.

![Figure 4.3 Labour force participation rates for the LM sample and the national data](image)

The dataset of the NFFS-1988 show that the rate of labour market participation of Dutch women with children is much lower than that of women without children. If we restrict

\(^3\)The counterparts of the women in the four LM sub samples were those women in the 1988 NFFS sample who had a child when they were older than thirty years of age. The numbers within each group are as follows: group A, n=186; group B, n=10; group C, n=611; group D, n=52. The number of cases in group B was very small. Consequently, the figures in table 4.5 for this group are not reliable; they are included in the table for completeness.
ourselves to the women with children, the labour force participation rate rises from 10% for mothers aged 20 to about 35% for mothers aged 33-37. If the participation rates before and after the first birth are considered, we see that women aged 30-34 at first childbirth returned to the labour market in 44% of the cases; women aged 25-29 at first childbirth returned in 30% of the cases; and women younger than 24 at first childbirth only returned in 16% of the cases. Women who have their first child later in life have a higher probability of returning to work.

We see that the positive correlation of age at childbirth on returning to work after having a child is only found in the LM sample in the case of higher birth orders; group D has a higher rate than group C. For parity 1 mothers, we even see a reversed relationship. Women aged 30-34 (group A) when having their first child have a higher labour force participation rate than women aged 35 or older (group B).

We also see that, in the age group 30-34, women with two or more children tend to work less then women with only one child. Group C (30-34, parity2+) has a higher participation rate than group A (30-34, parity1). But this correlation is not present in the age category 35+ (D and B). These groups have about the same labour force participation rate.

The findings above suggest that the drawback of creating a bias in the LM sample in favour of women not working outside the home did not have any effect (see also section 4.1). The labour force participation in the LM sample is a little higher than that found in the NFFS.

4.5 Evaluation

It was not our intention to select a sample that was representative in some way of the Dutch population; nevertheless, we have compared them with some national survey data on education and female labour force participation rates. This comparison was undertaken in order to obtain a better insight into the characteristics of the LM sample. In this closing section we comment on our findings.

The net response rate was 47%. In the light of the generally declining response rates in western countries, this can be considered an average result (Hox & De Leeuw 1998). Evaluating the selection bias caused by non response is an inherently difficult task. By definition, little is known about people who refuse to be interviewed. It is usually found that survey samples run the risk of over representing housewives and households with more persons, as a result of the greater chances of making contact with them. When the labour force participation rates were compared with those of the Dutch population and of the NFFS sample, it became clear that there had been no selection bias in the LM sample in favour of women who did not take part in the labour force.

The level of education in the LM sample, as well as the level of labour force
participation were somewhat higher than in the NFFS. The level of education was higher within each of the four sub samples than in the NFFS sub samples. This difference may be attributable to the phenomenon that the more highly educated are more willing to take part in a survey study than the less well educated (De Leeuw & Hox 1998).

We conclude this chapter with a note on the goals the sample was set to serve. The sample was designed to facilitate the study of as wide a range as possible of fertility careers of older mothers. It has been shown that the stratification with respect to age and parity had the intended effect and we can therefore assume that a sufficiently wide range of fertility careers was present in the sample. No deviations from the NFFS or other national data in labour force participation and level of education found in the LM sample were of essential importance for the results we present in the remainder of this book. The deviations have been described in this chapter so that there is an awareness of them and they are taken into account when generalizations are being made.