Fertility preferences in China in the 21st Century

Introduction

The actual level of the fertility rates in China has been the subject of many debates in demographic research in the last two decades. In particular, the large variations in fertility estimates have raised the questions of reliability and credibility of the official estimates. (Chen et al., 2019; Zhai et al., 2015; Cai, 2012; Chen, 2016; Guo, 2011). The large variation has also led to various discussions (Basten, 2015;vJin, 2014; Wu, 2016, 2019; Yang, 2012) including whether China would fall into the "low fertility trap" (Lutz et al., 2006), that is, whether it has already reached such a low level that it would be difficult to increase again.

A key question is therefore how high or low recent fertility preferences in China are. Ideally, the way to answer this question would be to carry out an original analysis of a large number of surveys in order to chart the trend in fertility preferences. However, since most surveys in China are not in the public domain and not accessible, an alternative way is to rely on secondary data. Similar studies have already been done using such an approach in China in different time periods: 1980-1985 (Whyte & Gu, 1987), 1979-1999 (Feng & Zhang, 2002), 2000-2008 (Yao et al., 2010); 1979-2009 (Basten & Gu, 2013); and 1980-2011 (Hou, 2015). Overall, these studies conclude that there has been a decline in fertility preferences from 1979 to 2000, followed by a levelling off from 2000 onwards. However, it is unclear whether this levelling-off trend of low fertility preferences in 2000s has continued in more recent years. This is a particularly relevant question considering the recent relaxation of the family planning policies and the continued rapid cultural and economic changes of the past two decades.

Therefore, in this paper, we will revisit fertility preferences in China and specifically examine the trends in the last two decades by formulating two contrasting hypotheses. The first hypothesis is that fertility preferences in China have remained low since 2000 with no recent increase, or with a continuing decrease. This hypothesis is consistent with the fertility trap mechanism which makes it difficult for fertility to increase again once it has reached a low level, and especially once people have gotten used to such a low level. The contrasting hypothesis is that fertility preferences in China have increased since 2000 and will reach a level of two children. The main assumption in this case is that that preferences have remained at two, but that they were suppressed during the period of policy restrictions.

Data and Methods

In order to capture all Chinese studies that reported on fertility preferences, we used the keywords "survey" and all measurements and concepts of fertility preferences used in Chinese, (e.g., "fertility desire", "fertility decisions", "ideal family size", "planned number of children" etc.) from all publications (up to June 11th, 2018) in the China National Knowledge Infrastructure database (CNKI).

We restricted the search to papers that are included in core journal publication database in CNKI to guarantee the quality of data. This resulted in 261 studies. Full texts of all these papers were screened, and publications that did not meet our three criteria listed

below were excluded from our analysis sample. These criteria were: 1. the paper must involve quantitative research that contains detailed information on the survey(s) used; 2. the sample size of the study is over 500; and 3. The population under study should not be too specific (e.g., only students). This led to a final sample of 152 publications producing 168 estimates for the mean of preferred number of children and 116 estimates of the proportions of preferred family sizes.

Another contribution of this paper is to distinguish concepts of fertility preferences which are measured in many ways in surveys. We compared the different measurements based on the questions asked in the survey and re-group them under three headings: ideal, desired, and planned family size. This made these concepts in Chinese literature compatible with those concepts in English literature.

To test whether the trend in fertility preferences has remained at a low level over time or whether it has increased since 2001, we use a series of polynomial regressions with only time (year) as an explanatory variable. We firstly fitted simple linear regressions then used the weighted meta-regression models to test whether there is an increasing, decreasing or curved trend of fertility preferences while controlling for demographic characteristics, e.g., age and marital status, the geographic regions, and measurements. For studies that did not reported a standard deviation (SD), we use the proportions of different numbers of children preferred reported in these studies to calculate the SDs and imputed the average of all SDs to replace the remaining unknown ones. We used the R package ‘metafor’ (Viechtbauer, 2010) for the meta-analysis. As some estimates are from the same survey (e.g., estimates of different years or measurements of preferences in one survey), we use clustered standard error in the simple linear regression, and we included a model in which “survey” was a higher level in a three-level meta-regression model to control for this nested effect as a robustness check. Estimates on the meta-regression are not presented here, the preliminary results are based on the simple linear regression.

Preliminary Results

There is a decline in preferences from 1986 to 2000 (Figure 1) which is consistent with previous literature (Hou, 2015; Wu, 2008; Feng & Zhang, 2002). Across all studies since 2001, the average ideal number of children was 1.67 (SD=0.29) with substantial variation across this average. This was similar for the desired number of children with 1.68 (SD=0.36). The average for the planned number of children was much lower with 1.42 (SD=0.17), and there was also less variation.

According to the simple linear regression models, the trend of these three measures seems to be a slight increase since 2001 but there was not much statistical confidence to support the rising trend for the desired number of children and planned number of children, as confidence intervals were wide particularly. Results for the positive trend in the ideal number of children were most convincing, but there is still substantial variation and time explains only 15.9% of the variation in outcomes. Robustness checks based only on national surveys indicate that the data are consistent with no trend at all.

Further insight is gained by investigating specific preferences for having no children, only one child, two children, or more than two children. Few people preferred to have no child or to have more than three children in all three measurements, so our analyses focused exclusively on the preference for one child and two children. The majority of people

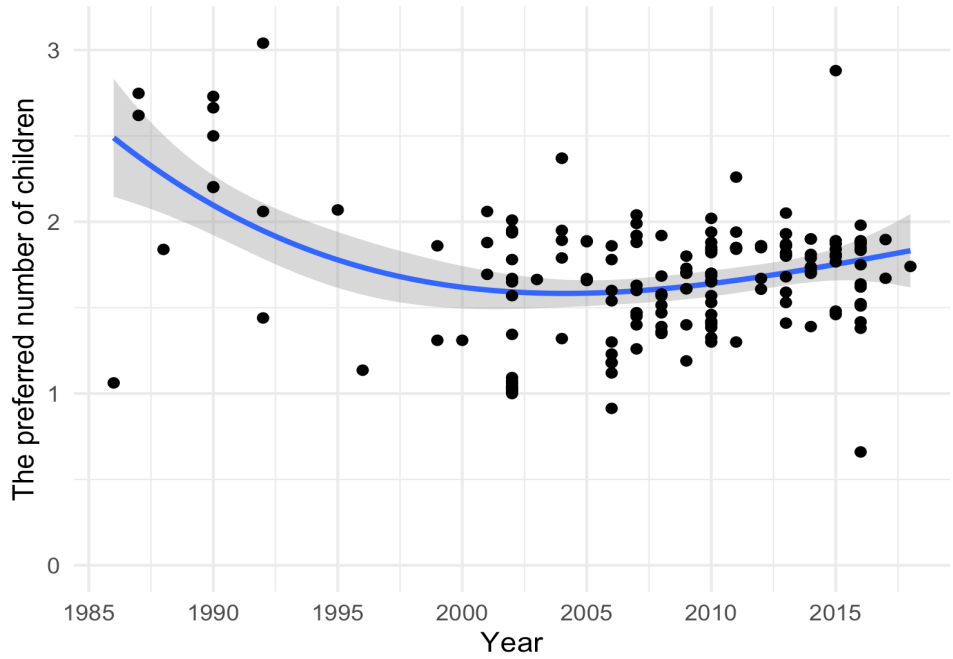
prefer to have two children: on average across the estimates of all studies, 55% people desired to have two children, while around 39% people planned to have two children, and 65% regarded two children as the ideal family size. Having only one child is less preferred than having two children, on average, approximately 37% people desired to have one child, while 55% planned to have one child, 27% people think one-child family is ideal in the last two decades.

The trend of percentage of people preferring two children shows the majority of Chinese people continue to prefer to have two children, and after a decrease in this preference from the 1980s onwards, this preference has been stable since 2000s. When examining the proportion of people who thought that two children was the ideal family size, we found an increase from 2007 onwards.

Discussion and conclusion

Based on the results of simple linear regressions, we found there has been a strong decrease in fertility preferences since the 1980s, but this decline has not continued in the 2000s. When examining three different measures of fertility preferences—ideal, desired, and planned family size—we observed a minor, but positive trend in each of these measures from 2000 onwards. Current analyses showed no robust evidence for these trends, and data were also consistent with a stable level of preferences since (around 1.66 for ideal, similar to desired family size which is 1.68, and 1.51 for planned number of children). Thus, these results are most consistent with the hypothesis that fertility preferences have remained stable in the last two decades, while it is also clear that preferences have not further declined. This stable low-level of fertility preferences indicate that it is certainly possible that China can fall into the "low fertility trap", as the desired family size has stayed at a low level of 1.6-1.7 on average. Fertility rates will probably not increase rapidly when the government relaxes family planning policies even if there is a strong two-child norm in China.

Figure 1: Average number of children preferred 1986-2018. The blue line is based on the cubic polynomial regression; the grey band reflects a 95% confidence interval.



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