Introduction

This paper analyses the fertility situation in seven provinces of Afghanistan (Bagdhis, Baghlan, Balkh, Samangan, Nimroz, Herat and Takhar) applying a number of indirect techniques to Socio Demographic and Economic Survey (SDES) provincial data collected over the period 2015-2017, i.e., almost a quinquenium after the first round of fieldwork covering Kabul, Bamiyan, Daykundi, Ghor, Kapisa and Parwan.

The main objective is to estimate the level and age pattern of fertility. Social norms in Afghanistan only accept conception within marriage; hence, marital fertility is an important component in these analyses. In an effort to identify socioeconomic determinants of fertility, the place of residence, education and wealth are considered.

Data and Method

The study conducted here uses William Brass's P/F approach (Brass, 1985); it relies on information about total children ever born (CEB) and live births occurred the 12 months previous to the survey data.

It happens, however, that the series of Pi/Fi, which is particularly robust to reporting errors, is also particularly important for establishing trends in fertility. (Brass, 1985, page 71). The pattern of the ratios with age may reveal data errors or fertility trends (UN, 1983). However, evolution of the series by age also indicates how recent fertility correlates with past fertility, thus it gives valuable insights about fertility behaviour over a recent period.

Results

All the estimates are disaggregated by women's age and due to the potentiality of the information available, a brief mention to the fertility pattern by birth order is presented. Pursuing a better comprehension of the Afghan reproductive process, results are also disaggregated according place of residence, education and wealth.

Figure 1. Provinces included in the first and second SDES round (2011-2014 and (2015-2017) Pi/Fi ratios

1. Provinces from the first round (2011- 2014)

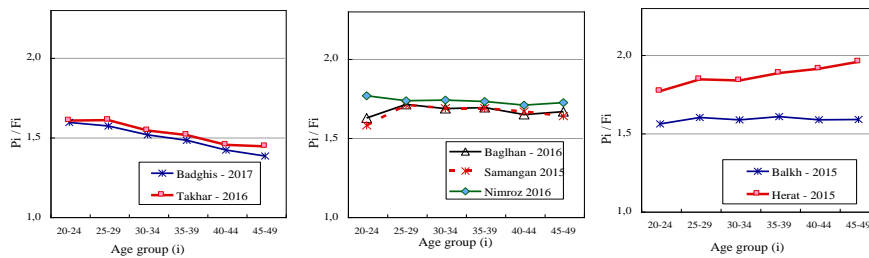1a) Bamiyan, Daykundi and Ghor   1b) Kabul, Kapisa and Parwan
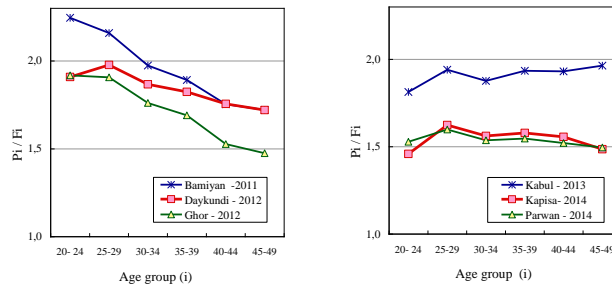
2. Provinces from the second round (2015- 2017)

2a) Badghis and Takhar   2b) Baghlan, Samangan and Nimroz   2c) Balkh and Herat

Source: Provinces from the:

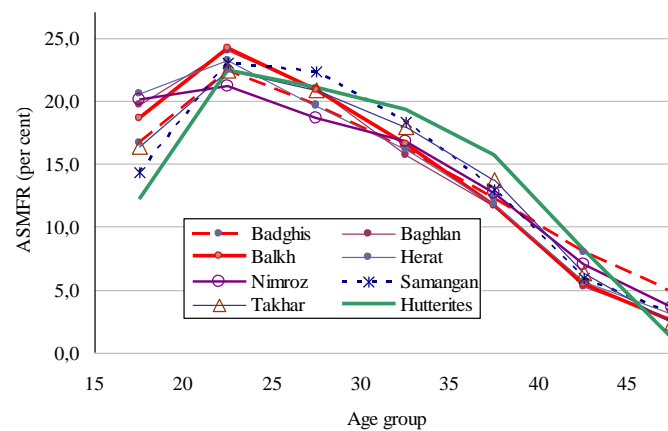First round: SDES 2011-2014, UNFPA-Afghanistan and CSO of Afghanistan (Micro data)
Second round: SDES 2015-2017, UNFPA-Afghanistan and CSO of Afghanistan (Micro data)

Results point towards a moderate falling in the fertility levels, SDES indicate that this phenomenon is present in most of the surveyed provinces. Kabul and adjacent small provinces Kapisa and Parwan probably started the declining process during the first decade of the century. There is no evidence that less developed provinces, being Ghor, an example, were following this trend.

Marital fertility, as that already estimated for the provinces in the first survey round is very high; level in this second round, however, is slightly lower as the general fertility was. CMW in five provinces have between 8-9 children per woman. The exceptions are Nimroz and Takhar where TMFR is above 10. Adolescent marital fertility ($ASMFR_{15-19}$) presents, also significant values ranking from 237 to more than 400 children per 1000 women.

The age pattern, defined by the Age Specific Marital Fertility Rates (ASMFRs) is consistent with the high levels detected compared with the Age Specific Fertility Rates (ASFR) the contribution of every age group to fertility. Only one important difference in the adolescent fertility is observe, the $ASMFR_{15-19}$ contribution is greater than in the case of the ASFR.

Figure 2. Bagdish, Baghlan, Balkh, Herat, Nimroz, Samangan, Takhar (2015-2017), and Hutterites (1921-30) - Relative Distribution of the Age Specific Marital Fertility Rates – ASMFR (percent)

Source: SDES- 2015-2017, UNFPA-Afghanistan and CSO of Afghanistan (Micro data) and Coale & Trussell (1978).

The similarity with the Hutterites' pattern indicates the absence of fertility control among currently married women (CMW), which is indirectly measured comparing ASMFRs at central ages of the reproductive period (primarily, ages 20 to 29). In a different way, older women's lower contribution suggests the incipient presence of fertility control, which is behaviour not detected in the first round survey.

As marital fertility has still extremely high levels, this translates into high fertility in the total population fertility, as long as marriage is universal and happens at young ages.

Educational levels, known as a powerful predictor of reproductive behaviour changes indicate different degrees of association depending on the educational criteria adopted.

Women's education seems to influence the TFR; notwithstanding, it is necessary to bear in mind that differences in the TFR are shy between no schooling and basic education; they are noticeable only when women comparing basic and secondary education. This call attention to the quality of the education offered to women, wondering if –in a context where gender relations are unbalanced– girls do not get the adequate education everybody deserves. Also, most women at reproductive ages, have currently extremely low educational levels thus small proportions for those with seven year or more may be no representative of the reality. Validation of the values obtained for the TFR for women with highest educational level, though, is given by the systematic differentials obtained in the seven provinces. Whether changes are on the way due to changes in

education, they will operate via the youngest woman whose entrance at school seems massive now.

Household educational levels suggest different sort of relationship with female fertility. Let aside the provinces with constant TFR across education of the household head, the overview of differentials in the TFR according education suggests that when the no-schooling is surpassed, fertility tends to increase, being this relationship clearer when the highest educational level in the household is considered. Findings are similar for some provinces analysed in the first SDES round. Namely Ghor is one of them. Again, the coincidental pattern in the seven provinces validates the results.

Household wealth presents fertility differential patterns similar to those found according to educational levels. In a general way, woman's number of children may, remain the same or increase, be she inside a household of any richness level. Or, may it decrease, only after the poorest conditions are surpassed.

The positive or negative relationship between fertility and determinants like education and wealth has been registered using evidence related to the demographictransition, and particularly to fertility transition. Positive relationship is more often associated to pre-transitional stages, where better development conditions stimulates higher number of children regardless of any educational level. In rural Afghanistan, slight improvements in material conditions benefiting the whole family would translate into higher fecundity and so fertility. It will only after reaching much better living conditions that family size and composition is balanced against other costs and opportunities and the onset of fertility decline would start.

Conclusion

1. **Conclusion**

Analyses developed in this this paper depart from the premise that fertility transition has started in Afghanistan since several years now. Evidence presented by 2010 and 2015 demographic and health surveys suggests that there is a national process of fertility change, although some regions may remain yet outside. Main results are discussed next.

• An additional evidence that fertility is declining in Afghanistan comes through the overview of the fertility mean age. SDES results show that, on average, the mean age of the fertility pattern has decreased between the two rounds. If each SDES round tells, in general terms, what is happening with the fertility behaviour in the country, results show that fertility is actually declining.

•   Whether the decline trend is a result of recent successful strategies, aiming to improve reproductive health, it should be kept in mind that fertility is still very high. Current ASFR at the foremost ages of the reproductive behaviour are well above by world standards. A 25 or 30 year-old woman has, on average, a baby every two or three years in most of the thirteen provinces

•   Marital fertility suggests a regime near to natural fertility, where fertility control depending on the number of children the women have is inexistent.

•   Social determinants, apart from the urban/rural condition, suggest an ambiguous relationship with the fertility behaviour. Firstly, education does not present, in general terms, significant influence when women have no education or have entered basic education. It is only among most educated women (7 or more years of schooling) that results show TFR below 5,0. Secondly, classification of fertility levels according to either household head's education or the highest educational level attained in the household suggests that an initial improve in education is associated with no change or even increase in the TFR. It is only when the highest educational level is reached that TFR goes down. Thirdly, family wealth suggests similar association: initial improvements in material welfare associate to either no changes or a slight increase in the TFR.

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