

Islam and fertility at the end of the first demographic transition: the case of North Caucasus

Extensive research on the first demographic transition has revealed that this transition does not have a uniform effect upon marriage and fertility timing. Despite of the natural expectation that decreasing fertility quantum should be associated with an increase of mean age of women at marriage and at the first childbearing, now it is clear that this is not always the case. Thus, the first demographic transition in most Western European countries was not accompanied by an increase of mean age at marriage and at first birth because both were at considerably high levels in those countries already before the first demographic transition started (Hajnal, 1965; 1982). Furthermore, examples have been attested when a considerable decrease of mean age at 1st birth took place exactly in the end of the first demographic transition. See e.g. Zakharov, Ivanov (1996), Zakharov (2008) for Russia, where the first demographic transition was completed in the 1960s, but fertility at younger ages as well as the mean age of the first child bearing increasingly prevailed in the 1960s-1980s. Nevertheless, in most of the developing countries where the first demographic transition has been in progress within the last decades a shift towards later marriage and fertility timing was observed together with it. E.g. Bongaarts (1999, p. 285) gives a sample of 25 developing countries most of which were in the process of the first demographic transition in the 1980s-1990s. In 20 of them the mean age of mother at 1st birth was increasing during that period.

Islamic countries are of a particular interest in this aspect, because on the one hand Islam is often assumed to be a strong determinant of earlier marriage and childbearing (for a critical discussion of this view, see Morgan et al., 2002; Kaufmann, 2008) while on the other hand the champions of the recent country fertility decline mainly come from the Islamic worlds (in Bongaarts' (1999) list, among the 20 countries in which mean age at first birth has increased with fertility reduction, in 15 countries muslims were the majority). Research on a number of Islamic countries which undergo or have recently undergone fertility decrease has shown that this decrease goes together with a shift towards later timing of marriage and/or 1st birth (see e.g. Abbasi-Shavazi et al. 2007 for Iran, Eltigani 2009 for Egypt and Tunisia, Sathar 1997 for Pakistan, Barbieri et al. 1996 for Uzbekistan).

However, it would be an overgeneralization to say that in all areas where the first demographic transition has been in progress in the end of the 20th and the beginning of 21th century mean age at marriage and at the birth of 1st child was uniformly growing. Noteworthy, a decrease of these age parameters is observed in some areas populated predominantly by muslims. A study of such phenomena could answer the question whether Islam can reverse the timing trend currently dominating in societies newly affected by the first demographic transition, or are some other determinants responsible for breaking this trend, and if it can, in what exactly way religion affects timing.

We have come across an appropriate case in our research on current fertility in Russian North Caucasus. In one of the republics of Russian North Caucasus, Daghestan, where TFR is around 2 since late 1990s, mother's mean age at 1st birth was constantly decreasing in recent years. Daghestan gives a special opportunity for studying the impact of Islam on the dynamics of marriage and fertility timing, because it demonstrates a considerable diversity in religious observance as well as in some other cultural and social characteristics between different areas and between different families/individuals. This fact allows us to compare the influence of religion and other possible factors upon timing. The goal of our study, therefore, is to find out if adherence to Islamic norms is the central determinant of early fertility after the first demographic transition in Daghestan.

Daghestan is a republic with ca. 3 million inhabitants (representing more than 30 different ethnic groups) at the eastern part of North Caucasus, between Azerbaijan, Chechnya and the Caspian lake. Percent of rural population in Daghestan is unusually high for Russia (54,2% in 2015), despite of the rather intensive rural-to-urban migration of the last decades. Daghestan underwent fertility decline later than most of other regions of Russia. Figure 1 shows the TFR dynamics of Daghestan and Russia in 1990-2013. While Russia has reached the replacement level of period fertility early before 1990, in Daghestan that level was reached by the end of the 1990s (subsequent slight increase of the TFR both in Russia and Daghestan in the 2000s was presumably due to pronatalist measures of the government). We quote here TFR meanings for rural Russia and rural Daghestan, because our own field study concern rural fertility and also because there are some reasons to treat official statistics on urban areas as much less reliable for Daghestan).

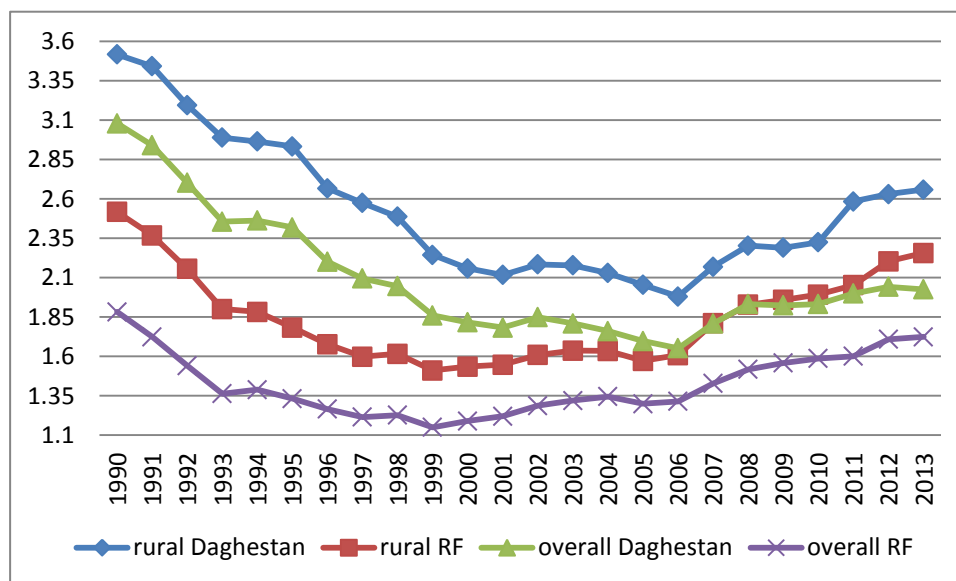


Figure 1. TFR in overall and rural Russia and Daghestan, 1990-2013 (source: Russian statistic agency)

Being close to the current all-Russia level of fertility quantum, Daghestan is very different in fertility timing (dealing at the moment with official statistics, we have to confine ourselves to timing of childbearing because official data on marriage timing is rather misleading in Daghestan, reflecting the age of state registration of marriage but not of actual wedding, which normally takes place considerably earlier than state registration in that region). We concentrate below on differences concerning the 1st parity. Figure 2 shows mother's mean age at birth of the 1st child in Daghestan and in Russia in 1990-2013. The all-Russia mean age was at rather low levels in the beginning of the 1990s, but started constant increasing in after 1994. By contrast, the mean age in Daghestan was considerably higher than in Russia as a whole in the 1990s, but is almost constantly downgrading since 2003:

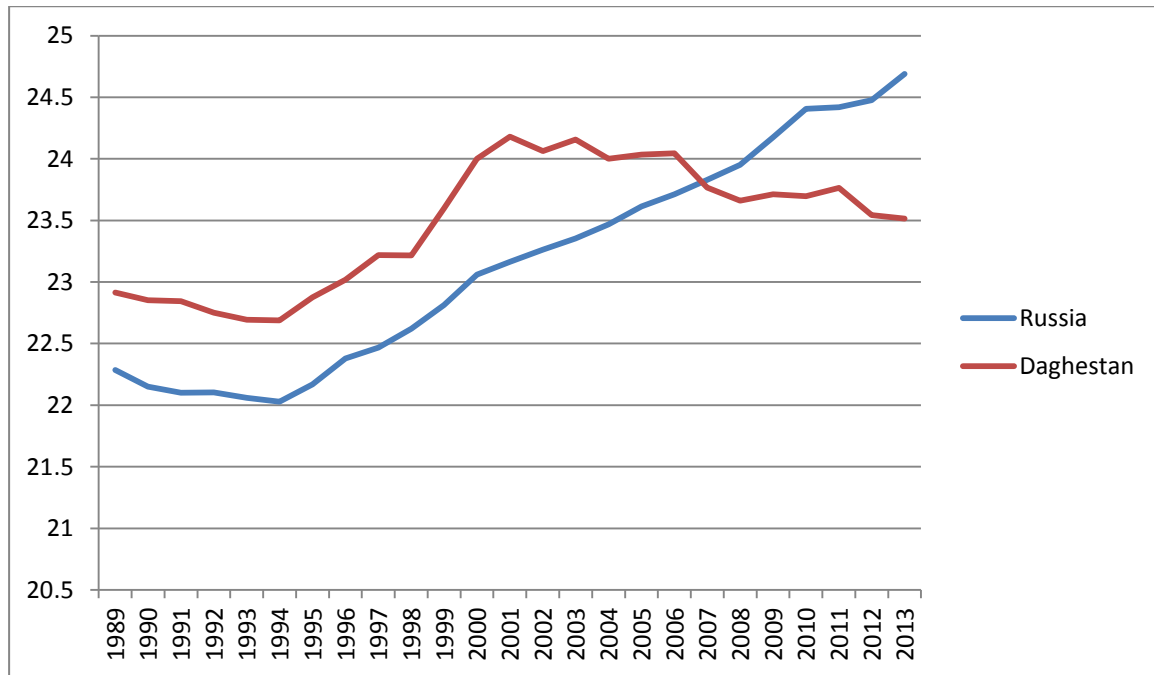


Figure 2. Mean age at birth of the 1st child in Russia and in Daghestan, 1990-2013 (source: Russian statistic agency)

The contrast in timing is also demonstrated by age-specific fertility rates for 1st births. Figure 3 shows all-Russia rates for 1990 and some subsequent years. It can be seen that not just quantum has decreased, but also rates for the elder ages (24 and above) have become considerably higher after 1990 in Russia. In Daghestan, as shown by Figure 4, no increase of birth rates for elder ages has taken place since 1990, whereas the rates for youngest ages (15-17) have become even higher thereafter:

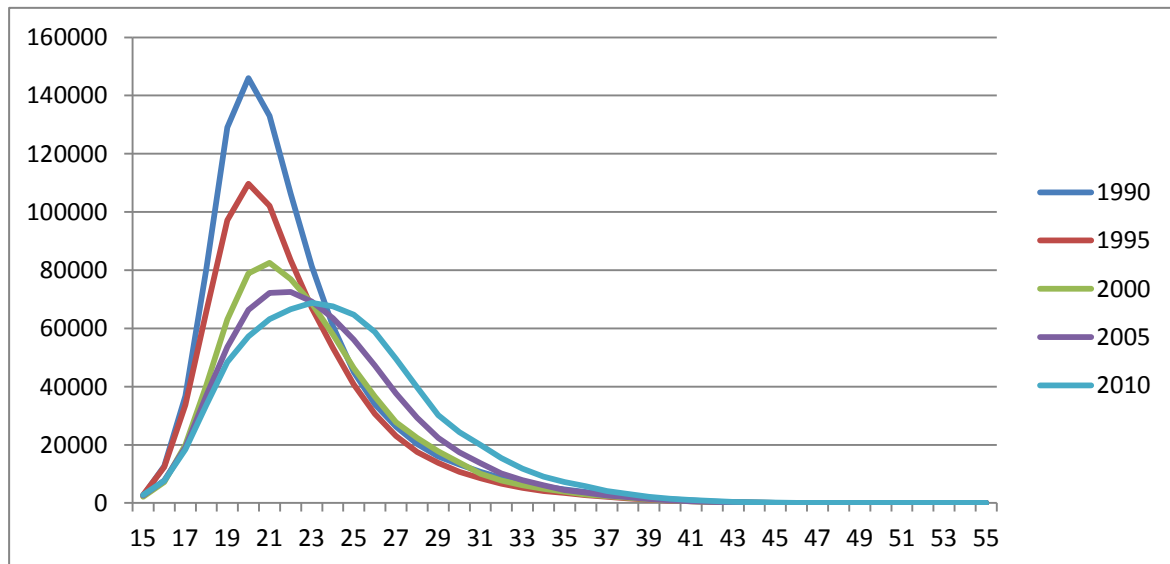


Figure 3. Age specific fertility rates, 1st parity, Russia (proportion of children to 1 million of women; source: Russian statistic agency)

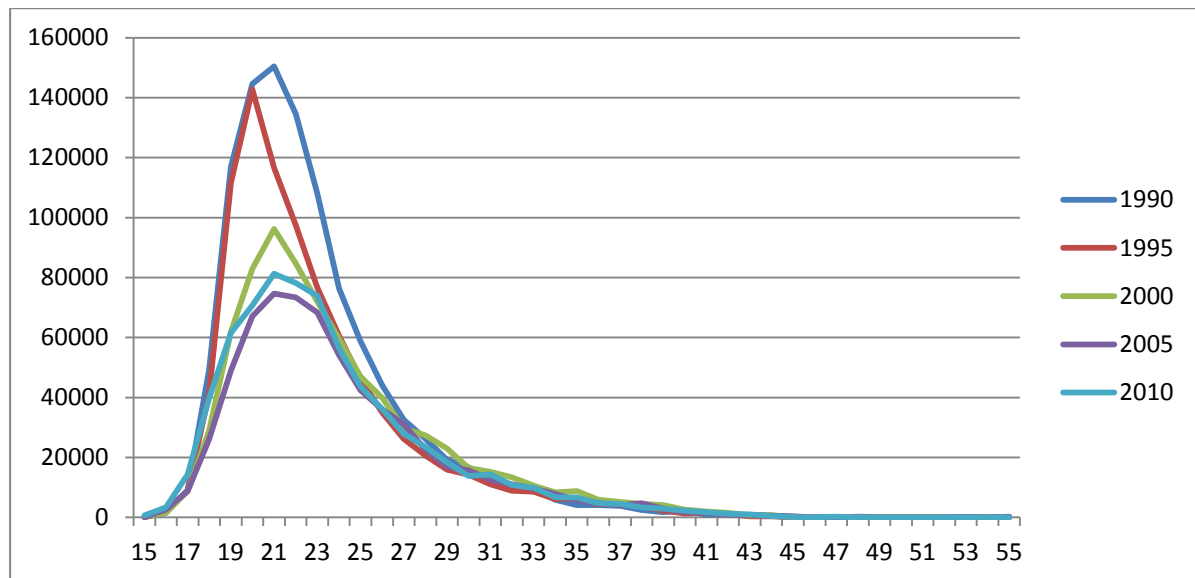


Figure 4. Age specific fertility rates, 1st parity, Daghestan (proportion of children to 1 million of women; source: Russian statistic agency)

Generally speaking, the shift towards younger mean age at 1st parity could be explained by at least two reasons, which in no way exclude each other. One is 'traditionalization' perceived as a partial return of old patriarchal standards of family organization, which are often supposed to include early start of childbearing. The other one is 'islamization', under which early marriage and motherhood are treated as important merits. It is worth to note that both religion and tradition have been considered as influencing fertility in a number of muslim areas of the former Soviet Union (see e.g. Barbieri et al. 1996 for Uzbekistan).

In the case of Daghestan, religion looks as a possible trigger of early fertility because that region has experienced a considerable revival of Islam exactly in the time when fertility timing started decreasing. This revival materialized in a drastic increase of the number of mosques, growth of islamic education, partial informal implementation of some *sharya* norms (see Ware, Kisriev 2010). As far as 'traditionalisation' is concerned, it is a priori not clear whether early motherhood has ever been a characteristic of traditional family organization particularly in Daghestan. The 2010 census data suggests that mean age at 1st birth was higher than its current level (about 23 years) for women born between 1930 and 1970 (see Figure 5). There is no solid evidence for lower mean age in earlier times, so that the 'traditional' status of early motherhood in Daghestan is questionable. However, today's Daghestan, especially its rural part, has preserved a remarkable number of characteristics of family organization which are usually treated as 'traditional' or 'archaic'. These include high frequency of arranged marriages, sharp contrast of gender roles within family, prevailing of extended family over nuclear family, etc. Given that in many studies of different countries these characteristics (or at least some of them) are correlated with early motherhood (see the classical literature devoted to the second demographic transition Van de Kaa, 1987; 2002; Lesthaeghe, 2010), the idea that they could be responsible for the shift towards earlier timing in Daghestan is at least worth looking into.

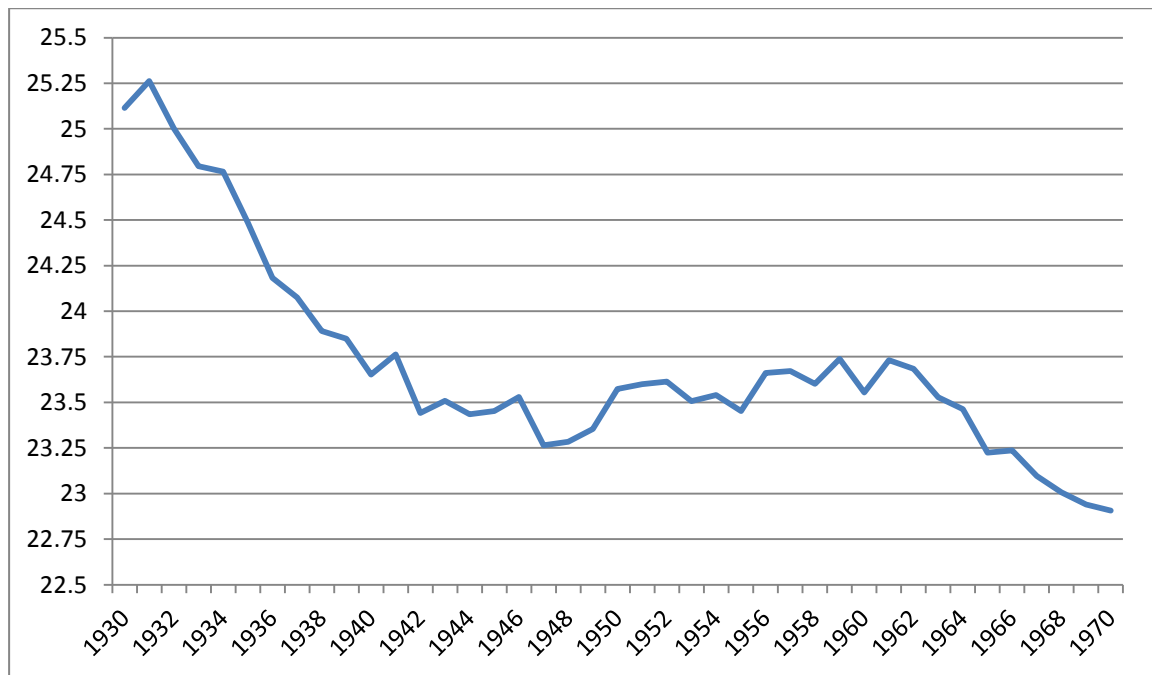


Figure 5. Mean age at birth of the 1st child in Dagestan, women 1930 to 1970 years of birth, according to 2010 census (Source: Russian statistical agency)

The goal of our survey conducted in rural part of Daghestan in 2015 was to estimate the influence of religious observance and traditional family organization on timing of marriage and 1st birth. Our survey was carried out in 5 villages populated by different ethnic groups and covered married women of 16-19, 20-24, 25-29, 30-34 and 35-39 age groups. Apart from questions about age, age at marriage and at births of different parities, respondents were asked a number of questions which concerned their family practices and religious observance. In the analysis of the survey results presented below, 'islamization' is measured by the following parameters: exercising religious fasting (*uraza*), carrying out regular prayer (*namaz*), and attitude towards abortion strictly prohibited for muslims (*abort*). The parameters of traditionality included in the analysis involve participation of parents and other relatives in arranging the marriage, woman's education and employment after marriage and her intention to take a job in the future.

The preliminary results for 5 villages and 438 observations showed us the same trends for marriage and 1st birth timing as the official statistics did (see Figures 6 and 7). According to these results, the mean age at marriage and at 1st birth are currently decreasing, moving downward from elder to younger age generations.

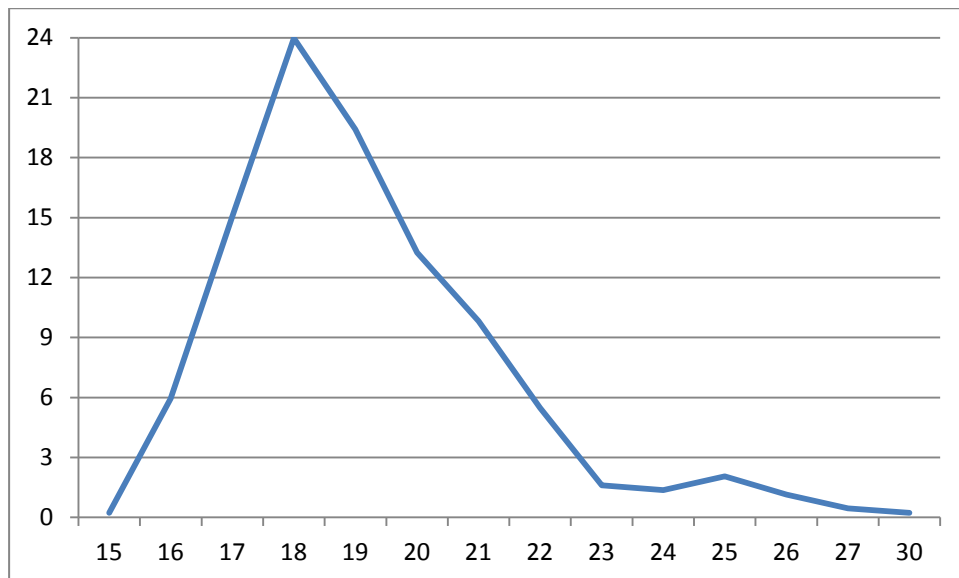


Figure 6. The proportion of women first married at the particular age in the villages of the sample, %

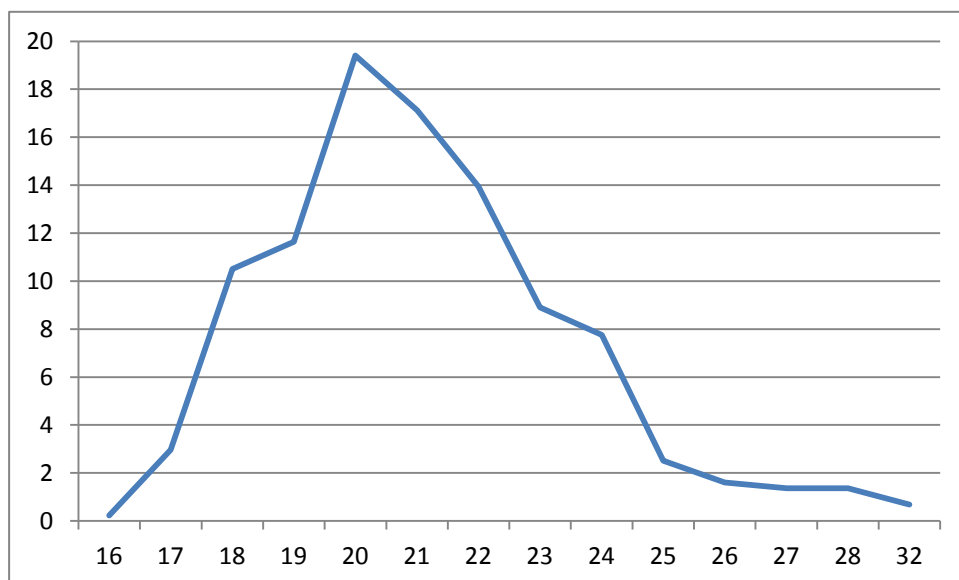


Figure 7. The proportion of women having the 1st child-bearing at the particular age in the villages of the sample, %

In this way, we get firmer evidence that Daghestan gives an example of a region where a shift towards younger age at marriage and at start of childbearing takes place at the completion of the first demographic transition. As this shift is rarely attested in such conditions, it is worth an in-depth study.

Our data also show that islamic observance, or at least one of its key attributes (daily prayer performed by woman), strongly correlates with early timing, whereas adherence to traditional family practices does not have a detectable impact on time of marriage and first birth. The t-tests show us the significant differences between the religious and non-religious respondents, but not between respondents. However, if we include these results into the model we see that the effect becomes non-significant (see Annex 1). What is even more interesting is that the marriage outside native village demonstrates a robust positive effect on the mean age of 1st child bearing and marriage. That is, for women who married a man outside their village, the timing was regularly later than for those who married a man from their own village. The positive effect of marriage outside the native village presumably has nothing to do with

religion, but suggests that community has certain on fertility timing. Since families in Daghestan are strictly patrilocal, marriage outside one's native village almost always means migration from that village. As a possible explanation goes, occurring outside her native village, a woman becomes less dependent upon the opinion of her native community as thus more free in the choice of timing (the role of woman in that choice is considerable because contraception is very widely used in Daghestan).

Our study is currently in progress and is due to cover at least 10 villages (more than 1000 respondents) of different areas of Daghestan by September. It will also cover more parameters as possible determinants of timing. Our preliminary results show that it is possible to untangle the influence of traditional family organization and religion. This is of some value because often religion and traditional family system are considered as determinants so closely connected with each other that their impact on demographic processes can only be treated as joint. In Daghestan, the distinct role of these determinants may be due to historical reasons, because they had very different fortunes there in the Soviet epoch: while family traditions, including those considered in our study, were mainly preserved at that time, Islamic practices were for most part strictly prohibited starting as early as in the 1930s, to the effect that today's enhancing of the role of Islam looks more as innovation than as a return to some traditional social settings.

For further study of possible distinctiveness of the effect of these determinants on timing of marriage and childbearing it could be of interest to turn to other post-Soviet areas where traditional family organization has been largely preserved and (re-)islamization is in progress in the recent decades. Our preliminary observations suggest that such areas can be found in different parts of North Caucasus and of Central Asia.

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Annex 1.

VARIABLES	(1) marriage_ag e	(2) marriage_ag e	(3) marriage_ag e	(4) marriage_ag e	(5) marriage_ag e	(6) marriage_ag e	(7) marriage_ag e	(8) marriage_ag e
year	-0.0951*** (0.0118)	-0.0922*** (0.0133)	-0.0923*** (0.0146)	-0.0926*** (0.0151)	-0.0972*** (0.0117)	-0.0941*** (0.0121)	-0.0873*** (0.0148)	-0.0929*** (0.0125)
abort		0.655 (0.644)						
uraza			-0.756 (0.492)					
namaz				-0.477 (0.494)				
self_aq					0.306 (0.340)			
mar_des						0.104 (0.180)		
local (was born at the place of residence)							-1.105** (0.387)	
local1 (was born in Daghestan)								-0.899* (0.397)
Constant	208.1*** (23.41)	202.3*** (26.52)	203.0*** (28.86)	203.4*** (30.01)	212.2*** (23.26)	206.1*** (23.99)	193.5*** (29.55)	204.5*** (24.91)

Observations	438	420	434	436	383	422	438	438
R-squared	0.072	0.082	0.092	0.082	0.074	0.071	0.119	0.086
st. errors	clustered	clustered	clustered	clustered	clustered	clustered	clustered	clustered
Robust standard errors in parentheses								
*** p<0.01, ** p<0.05, * p<0.1								
VARIABLES	(9) marriage_age	(10) marriage_age	(11) marriage_age	(12) marriage_age	(13) marriage_age	(14) marriage_age	(15) marriage_age	(16) marriage_age
year	-0.0834*** (0.0156)	-0.0816*** (0.0163)	-0.0820*** (0.0156)	-0.0837*** (0.0157)	-0.0809*** (0.0166)	-0.0814*** (0.0158)	-0.0804*** (0.0154)	-0.0828*** (0.0155)
abort		0.161 (0.302)						
uraza			-0.442 (0.328)					
namaz				0.158 (0.355)				
self_aq					-0.244 (0.247)			
mar_des						-0.0704 (0.229)		
local (was born at the place of residence)							-0.835*** (0.289)	

local1								-0.607
(was born in Daghestan)								(0.451)
Constant	183.5*** (30.94)	179.9*** (32.49)	181.2*** (31.09)	184.0*** (31.19)	178.6*** (33.09)	179.5*** (31.35)	178.5*** (30.66)	183.0*** (30.92)
Observations	438	420	434	436	383	422	438	438
R-squared	0.174	0.179	0.177	0.176	0.199	0.178	0.195	0.180
st. Errors (villages as dummies)	robust	robust	robust	robust	robust	robust	robust	robust

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	1_child_age	1_child_age	1_child_age	1_child_age	1_child_age	1_child_age	1_child_age	1_child_age
year	-0.148*** (0.0236)	-0.151*** (0.0240)	-0.147*** (0.0242)	-0.146*** (0.0247)	-0.149*** (0.0246)	-0.142*** (0.0223)	-0.143*** (0.0229)	-0.147*** (0.0232)
abort		0.206 (0.456)						
uraza			-0.466 (0.251)					
namaz				-0.328 (0.252)				
self_aq					-0.0119 (0.250)			

mar_des						0.128 (0.196)		
local (was born at the place of residence)							-0.851* (0.356)	
local1 (was born in Daghestan)								-0.535 (0.331)
Constant	316.1*** (46.91)	322.0*** (47.72)	314.0*** (48.11)	312.0*** (49.06)	317.0*** (48.86)	302.6*** (44.16)	304.8*** (45.67)	314.0*** (46.38)
Observations	438	420	434	436	383	422	438	438
R-squared	0.140	0.145	0.145	0.143	0.139	0.134	0.163	0.144
st. errors	clustered	clustered	clustered	clustered	clustered	clustered	clustered	clustered

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(9) 1_child_age	(10) 1_child_age	(11) 1_child_age	(12) 1_child_age	(13) 1_child_age	(14) 1_child_age	(15) 1_child_age	(16) 1_child_age
year	-0.148*** (0.0192)	-0.151*** (0.0202)	-0.147*** (0.0194)	-0.147*** (0.0192)	-0.147*** (0.0212)	-0.140*** (0.0187)	-0.145*** (0.0194)	-0.148*** (0.0193)
abort		-0.0182 (0.319)						
uraza			-0.454					

			(0.350)					
namaz				-0.210				
				(0.426)				
self_aq					-0.307			
					(0.280)			
mar_des						-0.0465		
						(0.244)		
local							-0.800**	
(was born at the place of residence)							(0.335)	
local1								-0.392
(was born in Daghestan)								(0.456)
Constant	314.7***	320.6***	314.1***	313.6***	312.8***	299.5***	310.0***	314.5***
	(38.25)	(40.27)	(38.67)	(38.22)	(42.09)	(37.17)	(38.48)	(38.33)
Observations	438	420	434	436	383	422	438	438
R-squared	0.157	0.161	0.159	0.158	0.164	0.152	0.172	0.159
st. Errors (villages as dummies)	robust	robust	robust	robust	robust	robust	robust	robust