Online Appendix

Older Yet Fairer: How Extended Reproductive Time Horizons Reshaped Marriage Patterns in Israel

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1 Counts of Marriages

In this section, we examine counts of marriages in different age groups over time, to provide suggestive evidence that both young women delaying marriage and older women being more eligible on the marriage market drove the aggregate changes in average age at marriage that we see. It should be noted that looking at counts retrospectively may be more problematic than looking at proportions, since the population is changing over time, and only sampled in a representative way once, in 2008. Thus, we can only glean insight by looking at different series relative to one another, and looking for non-smooth changes around the 1994 policy change. We therefore show as a reference the series of counts for men three years older than the ages for women, as this is the average age gap between spouses pre-change. If there is a common trend towards older marriages, or sampling error that evolves over time, the men's series should be affected as well. Indeed, although these series are somewhat noisy, since variation in cohort size affects the number of marriages each year, the figures show that pre trends were roughly parallel.

We first look at women on the young side of the marriage market, zeroing in on those marrying at or below the 1993 average age of 24. These are women who might have married before completing college, or not attended at all, as women start college relatively late in Israel.[62] Given the average gap in marriage age, comparable men are those who marry at 27 and younger.[63] We see evidence, in Figure A1 panel (a), that the number of marriages in this group decreased relative to the pre-trend, indicating women in this group may have delayed marriage, and thus were removed from the "count." Post 1994, men's marriage numbers in this age group remained relatively stable, while women's precipitously dropped.

If these women forego marriage, their partners might be affected as well, and thus we expect some "missing" men, too. However, we do not expect *all* of them to come from the less than 27 group, and hence the decrease for women should not necessarily be matched by men in this age group. This is even more pronounced because the average age gap for spouses decreases with age,

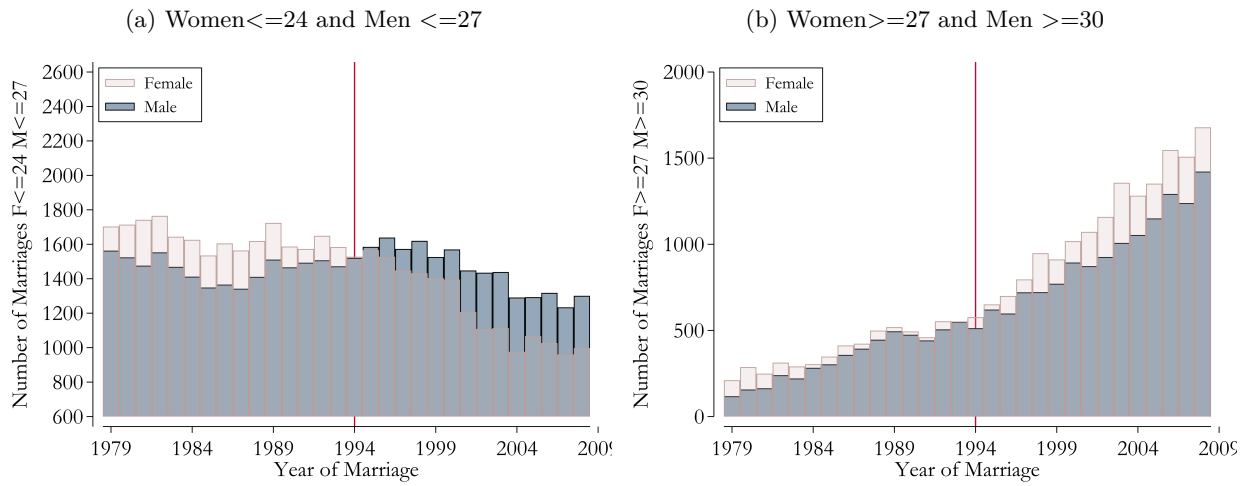
[62] The median age for college entrants at the relevant period was 22.5 for women.

[63] Although 24 is the average age at marriage for women and 27 is the average age at marriage for men, because there is a long tail in men's age at first marriage that is absent for women, there are fewer men marrying below 27 than there are women marrying below 24).

so the actual age gap for women younger than 24 is more than 3 years.[64] This fact could help explain the slight decrease in men's average age at marriage exactly in 1994, shown in Figure 4. If the women who delayed had slightly *older* than average partners, and their partners had to either wait with them or re-match, this would lead to a decrease in men's average age at marriage in the initial year.

Next, in panel (b) we examine women that are older than the bulk of the marriage market, and have potentially completed college before looking for a partner, those marrying at or above age 27, and men marrying at or above age 30. For this group, the pre-trends track one another extremely closely, and almost the same number of men and women are marrying in these age groups in the ten years preceding the policy change. Post 1994, however, marriage counts appear to go up for women at a much faster rate than they do for men. This shift appears as a gradual trend, rather than an immediate increase, consistent with the idea that these older women must first search for a mate, and then marry, which cannot occur immediately at a large scale.[65]

Figure A1: Number of Marriages in Different Age Groups



Notes: Figure (a) shows the number of women married at or below age 24 and men married at or below age 27, by year of marriage. We exclude the ultra-Orthodox population, most of which marry in this age group, since the large population growth they experience during this period adds irrelevant noise to these counts. Figure (b) shows the number of women married at or above age 27 and men married at or above age 30, by year of marriage. Data from the 2008 Israeli population census, restricted to Israeli-born Jews.

2 Appendix Figures and Tables

[64] From Census data.

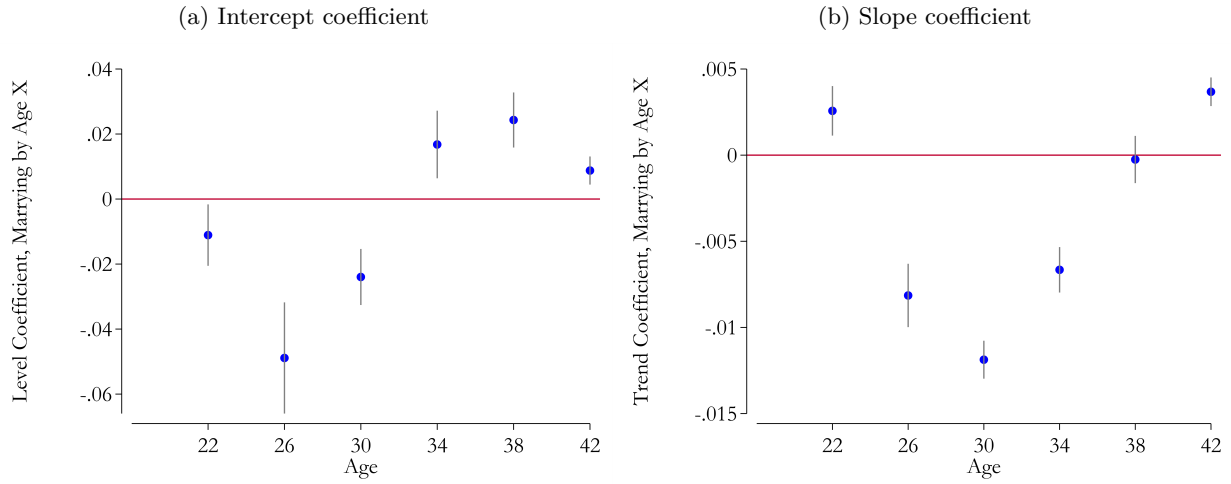
[65] Men's marriages in this group are slightly lower than the overall series (although it could be noise) exactly in 1994, indicating some of these men may have been partners of younger women who chose to delay, as mentioned above.

Table A1: Beliefs of Israeli Students about IVF Success Rates, 2009

Age	Natural fertility success rate %	Success rate with IVF %	Improvement from IVF %
20-35	74.6	90.8	21.7
36-39	58.1	75.9	30.5
40-43	46.9	63.9	36.3
44-47	36.8	52.8	43.2
48-52	28.4	41.5	45.8
53-58	17.6	29.5	67.4

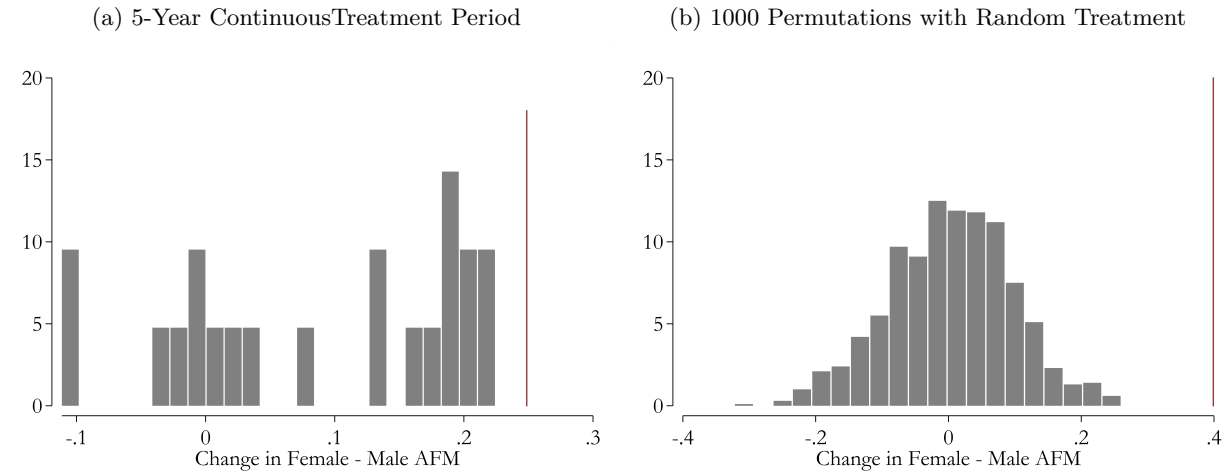
Notes: Imputed estimates from Hashiloni-Dolev, Kaplan and Shkedi-Rafid (2011) survey of Israeli male and female college students. Estimates for natural fertility success rates for given age ranges created by fitting a fifth-order polynomial to survey responses, which were for different age ranges. Total success rates computed by multiplying IVF success rates from the survey by the natural fertility failure rate, then adding to the natural fertility success rate. Percent improvement is the success attributed to IVF divided by baseline success.

Figure A2: Regression Coefficients for Effect of IVF Law on Marrying by a Given Age: Men's Ages Shifted



Notes: The figures present the point estimates and confidence intervals of the coefficients on (a) the interaction term fem×post and (b) the interaction term fem×post×time, for regressions where the outcome is a binary variable indicating whether or not the individual got married at or before a certain age, and the specification is as in column (4) in table 2. In this version of the figure, we compare women's marriage rates by X age to men's marriage rates by X+3, to account for the age gap in average age at marriage between men and women. Data from the 2008 Israeli population census, restricted to Israeli-born Jews.

Figure A3: Permutation Analysis of Average Age at First Marriage Effect Size



Notes: The figure on the left is created by running a similar regression as our column 1 specification, except with a ten year data period, with five years control and five years treatment, sequentially, for every possible ten year period in our data range. The red line represents the effect size of the actual treatment year, with this ten-year data period (the ten-year approach allows us to compare our actual treatment to other break points, with the same number of years before and after). The figure at right uses the same number of "treated" years as in the true model, but randomly draws them from the study period (for an example of this approach, see Agarwal et al. (2014)). We perform 1,000 such random draws.

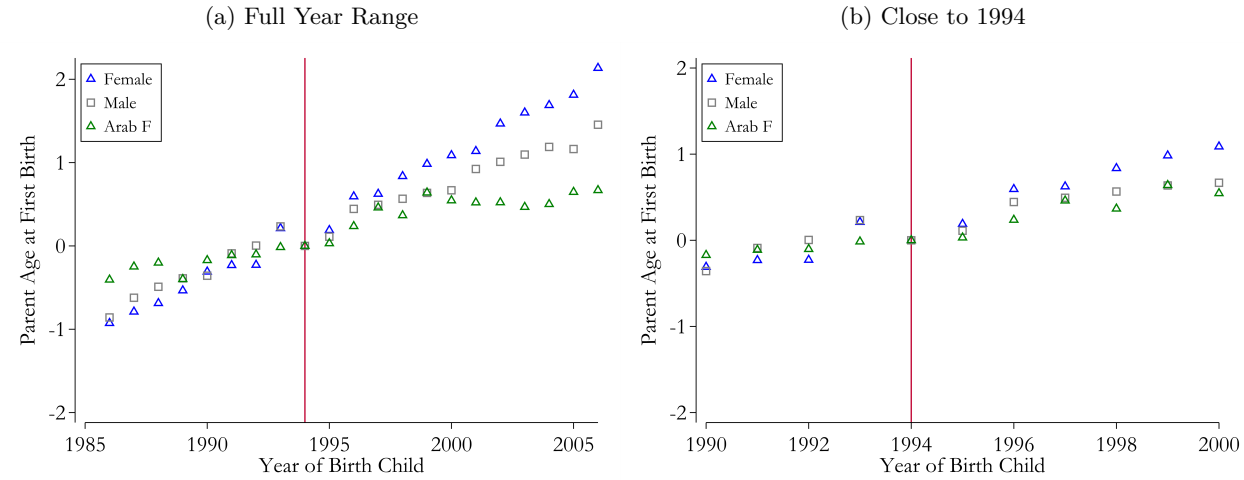
Table A2: Age at First Marriage (Triple Differences)

	Dependent variable: Age First Marriage			
	DiD		Slope-Change DiD	
	(1)	(2)	(3)	(4)
jewish × fem × post	0.719	0.720	0.003	0.004
	(0.131)***	(0.105)***	(0.202)	(0.153)
	[0.315]**	[0.315]**	[0.239]	[0.239]
jewish × fem × post × time			0.097	0.097
			(0.022)***	(0.019)***
			[0.044]***	[0.044]**
YOM FEs		YES		YES
Observation	242381	242381	242381	242381
R-Squared	0.1808	0.1809	0.1811	0.1813

Notes: Ordinary least-squares triple-differences regression using micro data (no controls included since religiosity and parents' origin controls used only apply to Jewish population). Robust standard errors clustered at the group × year level in parentheses; robust standard errors clustered at the group × geography level in square brackets. Data from the 2008 Israeli population census, restricted to Israeli-born.

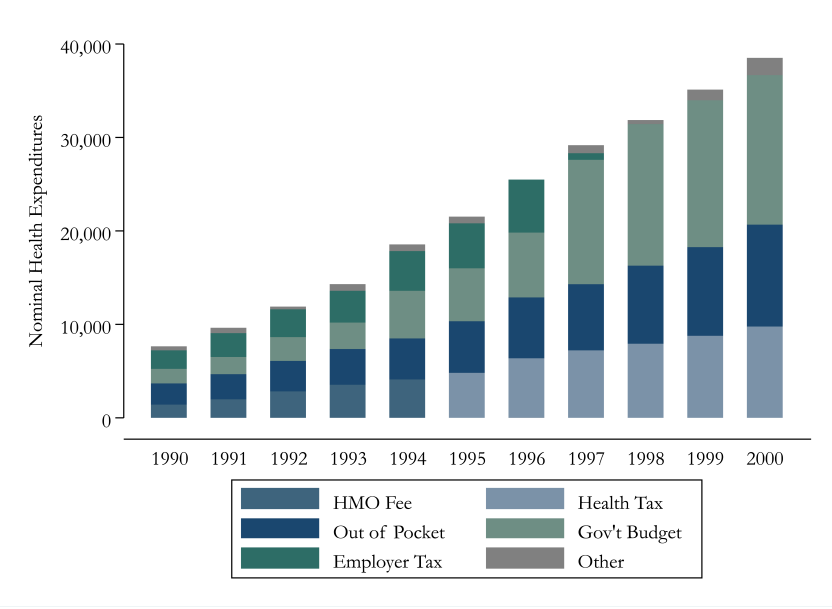
*** p<0.01, ** p<0.05, * p<0.1

Figure A4: Average Age at First Birth, by Child's Year of Birth, with Arab Comparison



Notes: ADD NOTES The figure presents the average age at first birth by the child's year of birth, for the years 1986-2006.

Figure A5: National Health Expenditures, by Funding Source, 1990-2000



Notes: The figure presents the nominal national expenditure on health divided by the source for the funding in the years around the 1994 NHI law, 1990-2000. Data from Israeli Central Bureau of Statistics, publication number 1316, 2008.