Lowest-Low Fertility and the Unfinished Gender Revolution in Postindustrial Societies

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Extremely low fertility rates now characterize a broad swath of postindustrial societies in East Asia and Southern Europe. Lowest-low fertility is historically unprecedented and is leading to a range of social problems such as rapid population aging, pressure on social security and old-age pension systems, lowered economic productivity, and debates over immigration as a solution to shrinking labor force size. In contrast, Sweden, the United States, and a number of other countries have maintained total fertility rates close to 2.0, far above the rates for East Asia and Southern Europe and very close to the level required for natural population replacement. Why has the fertility decline been so steep in some postindustrial countries and only moderate in others? This question holds great theoretical and policy significance for the countries that are experiencing extremely low fertility.

The demographic literature on lowest-low fertility is extensive, but in this paper we argue that insufficient attention has been paid to the "unfinished gender revolution" in postindustrial societies. Consistent with the framework proposed by McDonald (2000), England (2006) and other gender inequality scholars argue that changes in gender roles have been asymmetric across the spheres of household and the labor market, with women increasing their participation in the latter but men only slightly increasing their participation in the former. This has led to a reluctance on the part of many women, particularly in societies dominated by a strong male breadwinner ideology, to attempt the balancing act of motherhood and market.

Our paper extends this logic in three ways: 1) by fully incorporating the normative expectations for *men* as well as women into the theoretical framework used to understand divergent fertility rates across a range of postindustrial societies; 2) by proposing a theoretical framework that articulates how gender-role norms interact with labor market institutions, general

economic conditions, and state policy towards the family to influence fertility; and 3) by bringing a consideration of East Asian cases into the low-fertility literature.

Using latent class analysis (Table 1) we show that OECD countries vary considerably with respect to how individuals are distributed across a) highly conservative gender-role attitudes, b) egalitarian gender-role attitudes, and c) gender-role attitudes that translate into liberal views on gender roles but more conservative views on whether mothers should be employed. (Shaded areas in the table show that a country has a higher concentration of individuals in a given cluster than the mean across countries.) Our regression model (Table 2) uses the total fertility rate across 1990-2008 as the dependent variable, with time-varying independent variables reflecting young males' unemployment, general economic conditions, and female labor force participation; time-invariant variables measure the proportion of a country's population in each gender-role class, the extent of labor-market regulation, and state expenditures on family support. We follow Beck and Katz (1995) and use panel-corrected standard errors corrections for first-order autoregression (AR1) and the imposition of a common rho for all cross-sections. The Prais-Winsten estimations transform the estimations from OLS taking into account auto-correlated errors, and thus produce more rigorous significance tests. Our regression results show that higher-fertility countries have a higher proportion of individuals supporting gender-role norms that are generally liberal but tend towards a negative view of working mothers. Moreover, labor-market regulation (protection of labor market "insiders") depresses fertility, as does young male unemployment; state expenditures on family support boosts fertility. We close with implications of our theoretical framework for the further analysis of individual-level fertility intentions in a comparative context.

Table 1. Latent-Class Analysis of Gender-Role Regimes for OECD Countries

		Class A	Class B	Class C	Total
		Conservative	Egalitarian	Liberal	
	N	7562	5865	2259	15687
	%	48.2	37.4	14.4	100.0
Male	N	4042	2684	1053	7780
	%	52.0	34.5	13.5	100.0
Female	N	3511	3168	1202	7881
	%	44.6	40.2	15.3	100.0
20-29 yrs old	N	2328	2234	800	5361
	%	43.4	41.7	14.9	100.0
30-39 yrs old	N	2597	2054	849	5500
	%	47.2	37.4	15.4	100.0
40-49 yrs old	N	2638	1577	610	4826
	%	54.7	32.7	12.6	100.0
Australia	%	38.9	37.0	24.0	100.0
Austria	%	62.3	32.7	5.1	100.0
Belgium	%	47.2	38.2	14.6	100.0
Canada	%	28.5	40.5	30.9	100.0
Czech Republic	%	77.2	17.2	5.6	100.0
Denmark	%	16.2	65.7	18.1	100.0
Finland	%	26.8	56.4	16.8	100.0
France	%	54.0	39.9	6.1	100.0
Germany	%	49.3	43.4	7.4	100.0
Hungary	%	75.1	21.1	3.8	100.0
Italy	%	58.7	36.7	4.5	100.0
Japan	%	71.0	20.8	8.2	100.0
Korea	%	77.9	10.7	11.5	100.0
Netherlands	%	26.4	33.9	39.6	100.0
New Zealand	%	33.8	39.0	27.2	100.0
Norway	%	30.3	49.1	20.6	100.0
Poland	%	85.7	12.7	1.6	100.0
Portugal	%	48.5	49.0	2.5	100.0
Slovakia	%	75.3	22.4	2.3	100.0
Spain	%	37.7	54.5	7.8	100.0
Sweden	%	43.6	43.2	13.2	100.0
Switzerland	%	45.6	54.4	.0	100.0
UK	%	28.5	49.4	22.1	100.0
USA	%	32.3	40.2	27.5	100.0

Table 2. Determinants of Total Fertility Rates, 1990-2008

Variable	Model 1	Model 2	Model 3	Model 4
Percent conservative gender-role attitudes	-.001	-.002	-.004*	-.003
	(.003)	(.003)	(.002)	(.002)
Percent liberal gender-role attitudes	.014***	.010***	.008***	.010***
	(.002)	(.002)	(.002)	(.002)
Percent egalitarian gender-role attitudes	-----	-----	-----	-----
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Male youth unemployment		-.004†	-.005*	-.005*
		(.002)	(.002)	(.002)
Employment protection: regular workers		-.051**	-.055***	-.057***
		(.018)	(.015)	(.015)
Logged GDP per capita			-7.427***	-6.138***
			(1.569)	(1.530)
Logged GDP per capita^2			.371***	.306***
			(.079)	(.077)
Female labor force participation rate, age 25-44				-.000
				(.002)
State expenditures on family policies (% of GDP)				.064***
				(.014)
Constant	1.560***	1.763***	38.997***	32.433***
	(.126)	(.144)	(7.858)	(7.645)
Rho	.934	.940	.904	.902
R-squared	.832	.827	.866	.874
Number of observations	494	475	475	475
Number of countries	26	25	25	25

† p<.10, * p<.05, ** p<.01, *** p<.001