

Europe and the US: Demographics

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Total Fertility Rate

Average number of children that would be born to a woman over her lifetime if

- (1) she were to experience the exact current age-specific fertility rates through her lifetime
- (2) she were to survive from birth through the end of her reproductive life.

Total Fertility Rate in Europe in 1975 and 2001/02

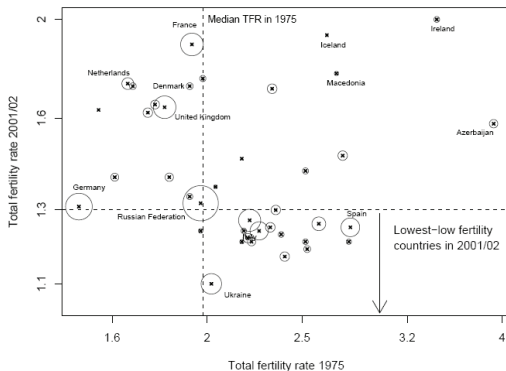
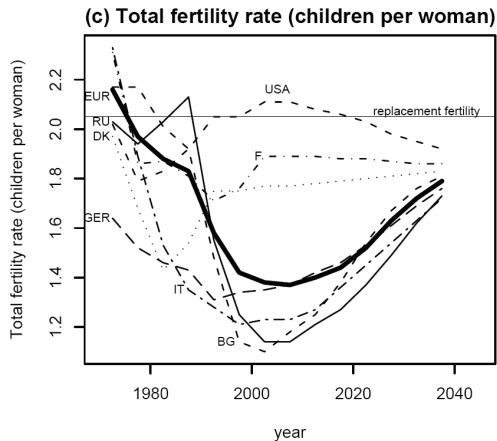


Figure 2: Comparison of the total fertility rate in Europe in 1975 and 2002

The 'x' mark gives the exact position of a country, while the area of circle is proportional to the country's population size in 1990. *Source for data:* Council of Europe (2003); see Table A.1 for list of countries and data.

Source: Kohler, Billari, and Ortega (2006)

Evolution of Fertility Rate over Time



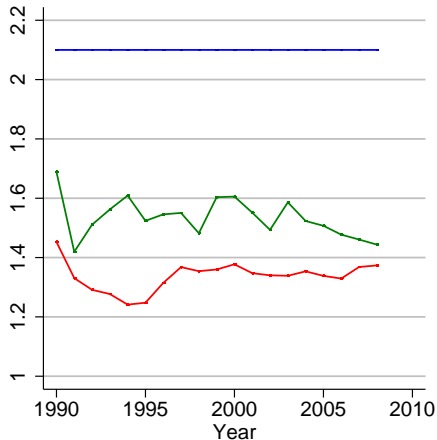
Source: Kohler, Billari, and Ortega (2006)

Average Age at First Birth

	1980	1990	2000
Italy	25	26.9	28.7
France	25	27	27.9
Germany	25	26.6	28.2
UK	n.a.	27.3	29.1
US	22.7	24.2	24.9

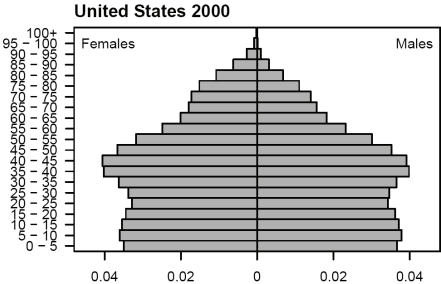
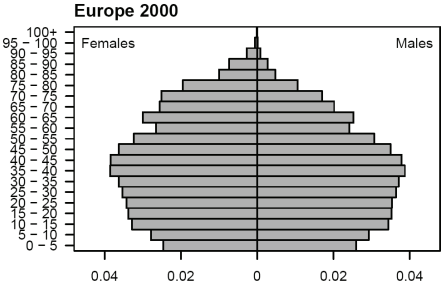
Source: Kohler, Billari, and Ortega (2006)

Fertility Measures in Germany



- Replacement Rate
- Total Fertility Rate (Destatis)
- Completed Cohort Fertility Rate (GSOEP)

Population Age Pyramids in Europe and US



Source: Kohler, Billari, and Ortega (2006)

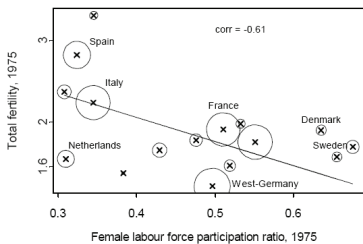
Immigration

Germany: Over the period 2000 to 2050 on average per year

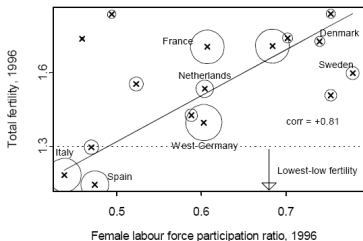
- ▶ Expected: 204,000
- ▶ Required for
 - Constant population size: 344,000
 - Constant age group 15-64: 487,000
 - Constant ratio of 15-64 to 65-older: 3,630,000

Fertility and Female Labor Force Participation, 1975 and 1996

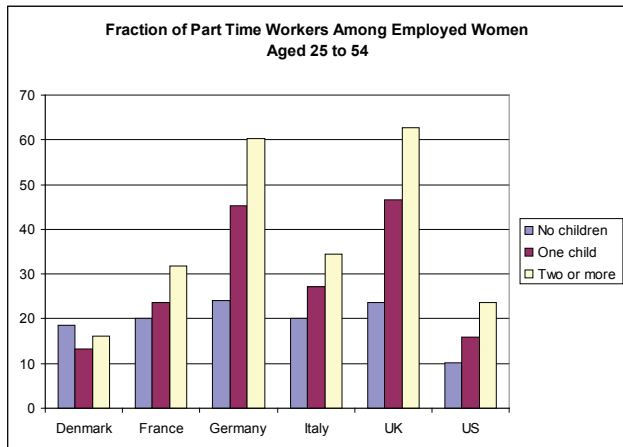
(a) Total fertility and labour force participation: 1975



(b) Total fertility and labour force participation: 1996

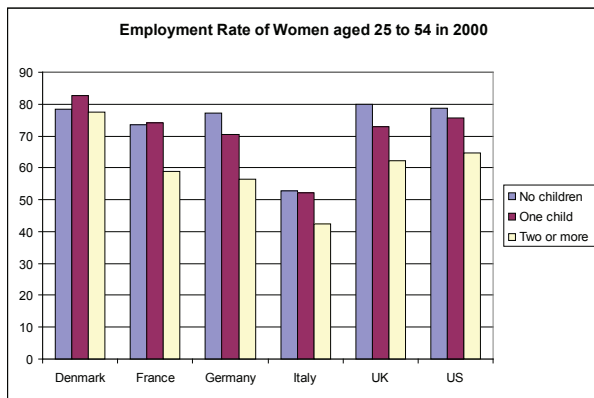


Part-Time Work Among Employed Women in 2000



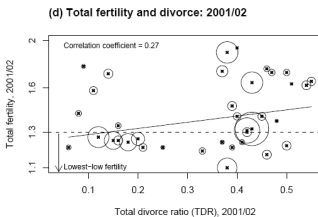
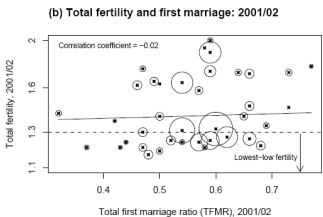
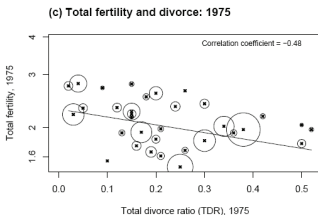
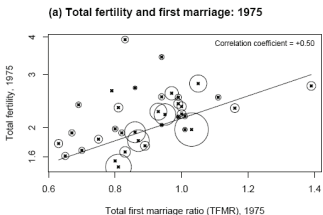
Source: Pissarides et al. (2005), OECD

Fertility and Female Labor Force Participation within Countries in 2000



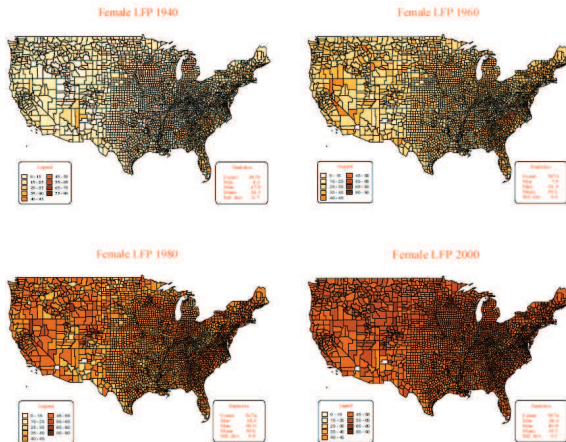
Source: Pissarides et al. (2005), OECD

Changing Culture?: Fertility and Marriage/Divorce, 1975 and 2000



Source: Kohler, Billari, and Ortega (2006)

The Spread of Female Labor Force Participation in the US, 1940 to 2000



Source: Fogli and Veldkamp (2007)

Evidence for Role of Culture from Epidemiological Approach

TABLE 2. Country statistics.

Country	No. of observations	Children	Siblings	TFR 1950
Canada	40	2.55	3.67	3.73
Denmark	14	2.86	3.86	2.54
U.K.	265	2.20	2.92	2.18
Finland	13	2.77	3.46	2.97
France	34	2.15	3.47	2.73
Germany	305	2.38	3.57	2.16
Ireland	224	2.38	3.99	3.38
Italy	91	2.15	2.81	2.32
Mexico	38	2.95	7.26	6.87
Netherlands	28	2.75	4.89	3.06
Norway	32	2.22	2.81	2.60
Russia	19	2.42	3.37	2.85
Spain	11	2.45	5.09	2.57
Sweden	31	2.19	2.48	2.21
Average	81.79	2.46	3.83	3.01
Std. Dev.	102.24	0.28	1.23	1.20

Source: Fernandez and Fogli (2006)

Evidence for Role of Culture from Epidemiological Approach

TABLE 3a. Fertility, culture, and siblings.

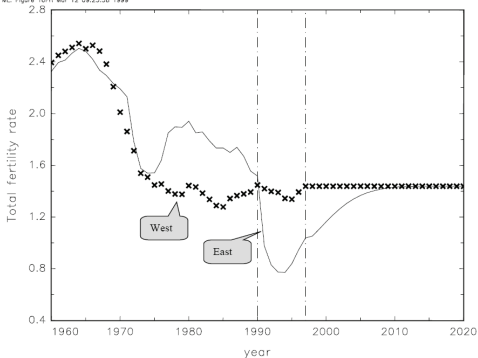
Dependent variable is Children									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
TFR 1950	0.166*** (0.025)		0.101*** (0.026)	0.117*** (0.016)		0.097*** (0.020)	0.135*** (0.036)		0.118** (0.042)
SIBS		0.093*** (0.012)	0.086*** (0.014)		0.044*** (0.012)	0.039** (0.014)		0.045** (0.017)	0.039* (0.019)
Age				0.281** (0.098)	0.304*** (0.095)	0.299*** (0.095)	0.345*** (0.079)	0.364*** (0.083)	0.359*** (0.083)
Age sq				-0.003* (0.001)	-0.003** (0.001)	-0.003** (0.001)	-0.003*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)
High School				-0.814*** (0.128)	-0.764*** (0.122)	-0.738*** (0.124)	-0.629*** (0.152)	-0.574*** (0.170)	-0.564*** (0.162)
Some College				-0.921*** (0.063)	-0.865*** (0.072)	-0.822*** (0.055)	-0.619*** (0.181)	-0.553** (0.194)	-0.532** (0.178)
College*				-1.362*** (0.100)	-1.292*** (0.106)	-1.250*** (0.108)	-1.143*** (0.128)	-1.071*** (0.147)	-1.057*** (0.134)
Mother's education							-0.060** (0.024)	-0.063*** (0.019)	-0.056** (0.021)
Father's education							0.027** (0.010)	0.027** (0.010)	0.028** (0.010)
Obs.	1145	1144	1144	1144	1143	1143	922	921	921
Adj. R ²	0.037	0.060	0.062	0.203	0.206	0.208	0.223	0.225	0.229

Note: *significant at 10%; **significant at 5%; ***significant at 1%. Robust standard errors in parentheses account for clustering at country level. Region and year of survey fixed effects in all specifications.

Source: Fernandez and Fogli (2006)

Fertility in East and West Germany Before and After Reunification

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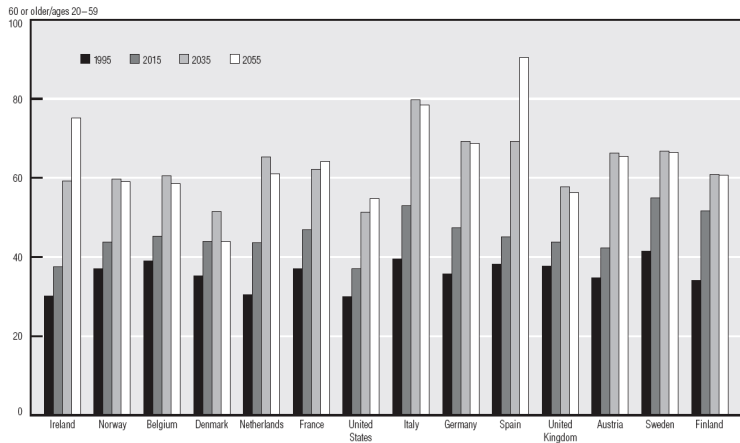
Note: West: Area of former Federal Republic of Germany, including West Berlin. East: Area of former German Democratic Republic (including East Berlin).

Sources: Until 1996: Various issues of East and West German Statistical Yearbooks. 1997: Communication by the German Federal Statistical Office.

After 1997: Estimated values according to scenario 3 given in Conrad et al. (1996). Because the data is updated the results differ to some extent from the results given there as well as from the newer results in Lechner (1998).

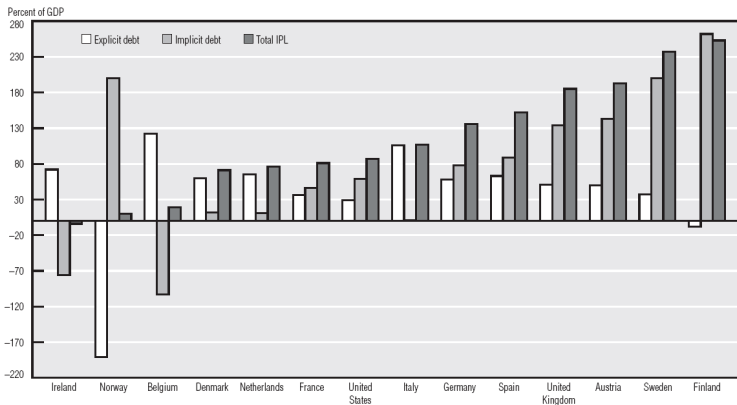
Source: Lechner (1999)

Old-Age Dependency Ratio



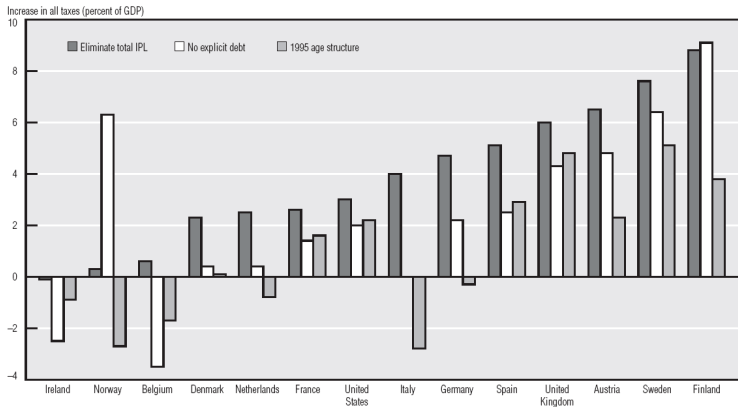
SOURCES: Country studies in European Commission (1999); U.S. data are based on Gokhale et al. (1999).

Implicit and Explicit Debt in Generational Accounting



SOURCES: Country studies in European Commission (1999); U.S. data are based on Gokhale et al. (1999).

Implied Necessary Tax Increases



SOURCES: Country studies in European Commission (1999); U.S. data are based on Gokhale et al. (1999).