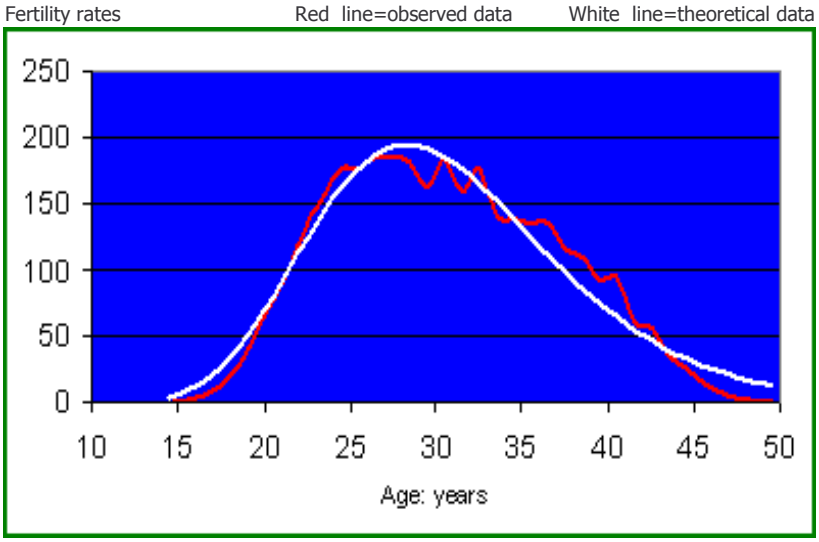
FERTILITY FUNCTIONS

(Source:Petrioli Luciano,"*PRODEMOG 3.0-Demographic software for Windows*", EMMECI-SIENA-ITALY,(2000).

L O G - N O R M A L



Age-specific fertility rates: Italy, year 1931

The density function for Log-normal is:

$$f(x)=\frac{C}{Bx\sqrt{2\pi}}\, e^{-0.5\cdot[(\ln x - A)/b]^2} \qquad [1]$$

The parameters are A, B and C, where C indicates the TFT.
Mean and variance are: respectively:

$$MED= e^{A+0.5B^2} \quad ; \quad DS = e^{2A+B^2}\left(e^{B^2}-1\right)\cdot \qquad [2]$$

hence the values of the parameters are:

$$A=\ln\left[MED^2/\sqrt{MED^2+DS}\right] \quad ; B=\sqrt{ln\left[\left(MED^2+DS\right)/MED^2\right]}\cdot \qquad [3]$$