Cote d'Ivoire

```
## [1] "Census Females"
```

```
## # A tibble: 87 x 3
##      age  `1988`  `2014`
##    <dbl>   <dbl>   <dbl>
##  1     0 203715. 386588.
##  2     1 216006. 356228.
##  3     2 211959. 354545.
##  4     3 203480. 348633.
##  5     4 195529. 339395.
##  6     5 185336. 326126.
##  7     6 176132. 316320.
##  8     7 166192. 305782.
##  9     8 157365. 293768.
## 10     9 147985. 282366.
## # ... with 77 more rows
```

```
## [1] "Census Males"
```

```
## # A tibble: 87 x 3
##      age  `1988`  `2014`
##    <dbl>   <dbl>   <dbl>
##  1     0 208188. 405054.
##  2     1 223072. 381633.
##  3     2 218092. 378865.
##  4     3 209725. 372798.
##  5     4 202228. 362544.
##  6     5 191795. 348987.
##  7     6 182735. 339867.
##  8     7 173216. 329715.
##  9     8 165005. 318376.
## 10     9 155815. 307829.
## # ... with 77 more rows
```

Thiele log-Normal Hump Spline

```
## [1] "relative convergence (4)"
```

```
##           log_tau2_logpop_f          log_tau2_logpop_f           log_tau2_logpop_m           log_tau2_
##                   6.0464258                  4.9900419                   6.0588716                   4
##               log_tau2_gx_m        log_lambda_gx_age_f         log_lambda_gx_age_m        log_lambda_g
##                   3.5259395                  7.9932450                   7.9202232                   7
##     log_lambda_gx_agetime_m              log_lambda_tp log_lambda_tp_0_inflated_sd           log_dispe
##                   6.9077421                  1.8987540                  -1.8477735                   0
##     log_marginal_prec_psi_f       log_marginal_prec_A_f       log_marginal_prec_B_f     log_marginal_pre
##                   4.3036721                  6.7981346                   6.7267481                   4
##       log_marginal_prec_B_m           log_lambda_phi_f            log_lambda_psi_f         log_lambda_
##                   3.1945321                  4.3661236                   4.3311974                   1
##              log_lambda_A_f             log_lambda_B_f           log_lambda_phi_m           log_lambd
##                   4.3065398                  4.3022129                   4.3882172                   4
##        log_lambda_epsilon_m             log_lambda_A_m             log_lambda_B_m
##                   4.4898091                  4.3077277                   4.3717073
```

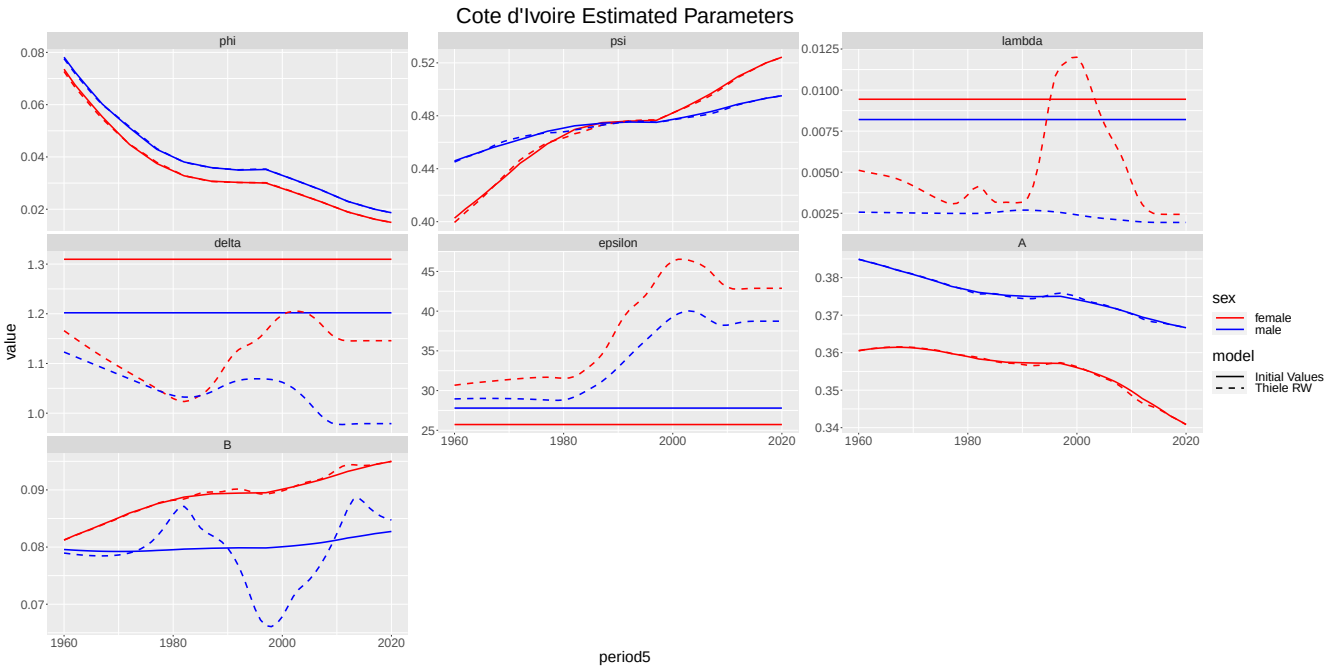

Figure 1: Estimated parameters

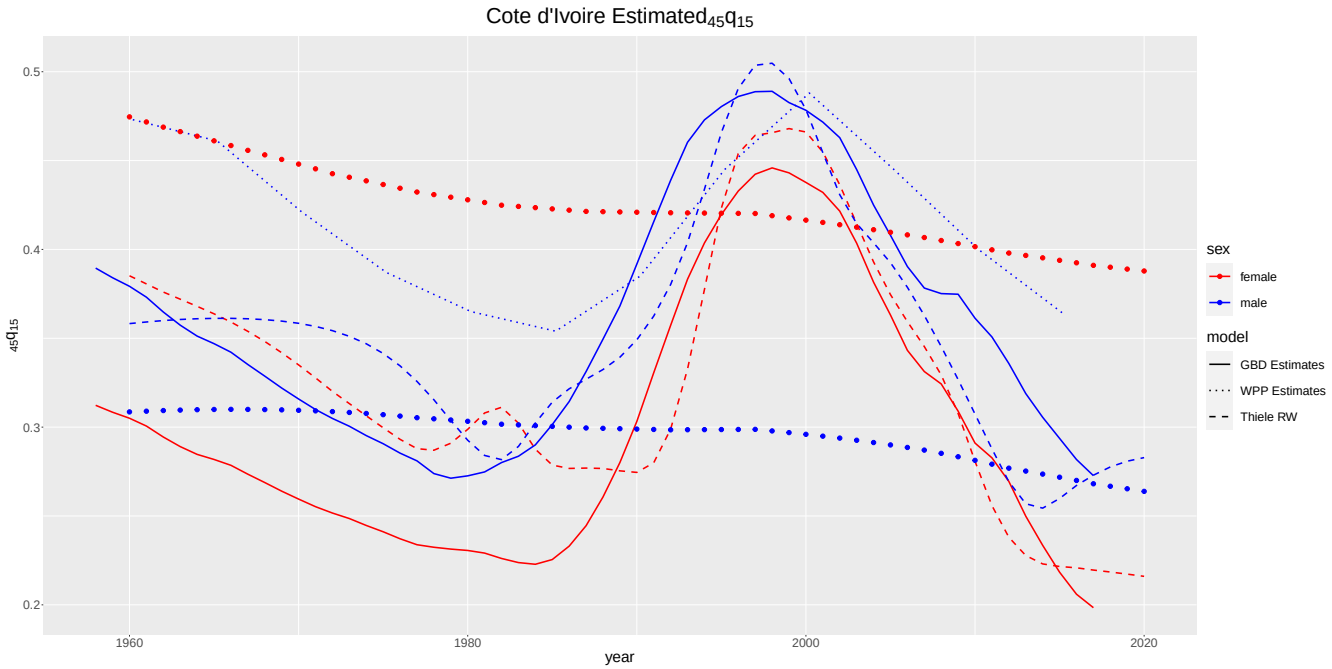

Figure 2: Estimated $_{45}q_{15}$

Figure 3: Estimated $_5q_0$

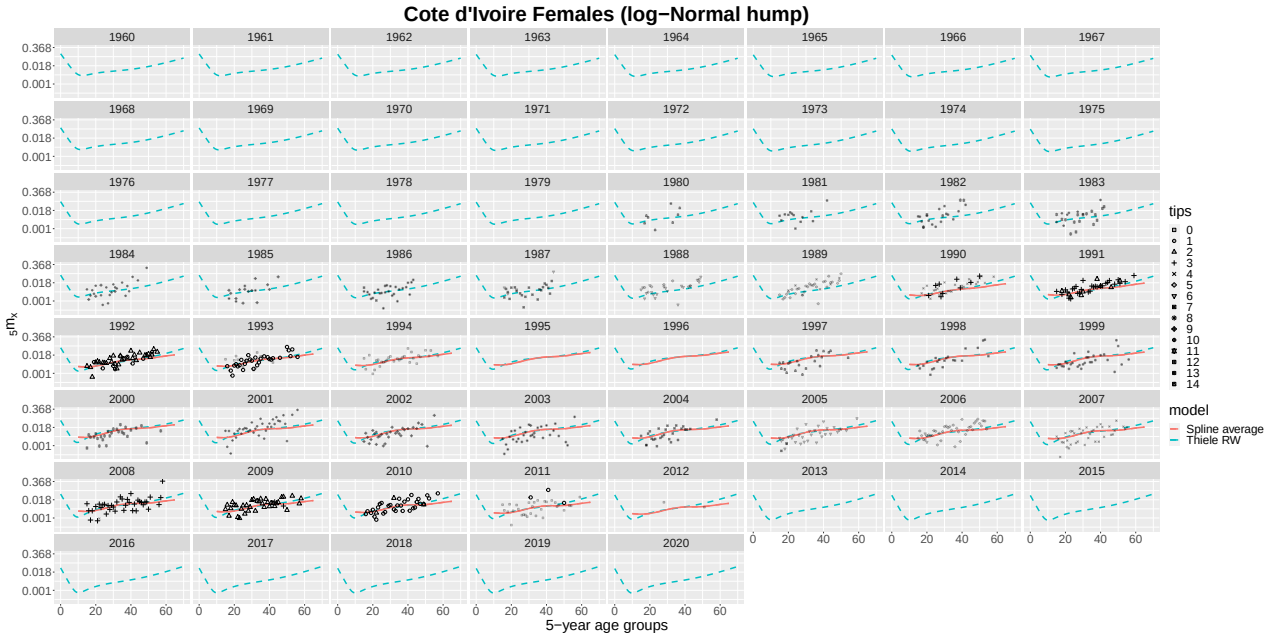

Figure 4: Mortality Schedules

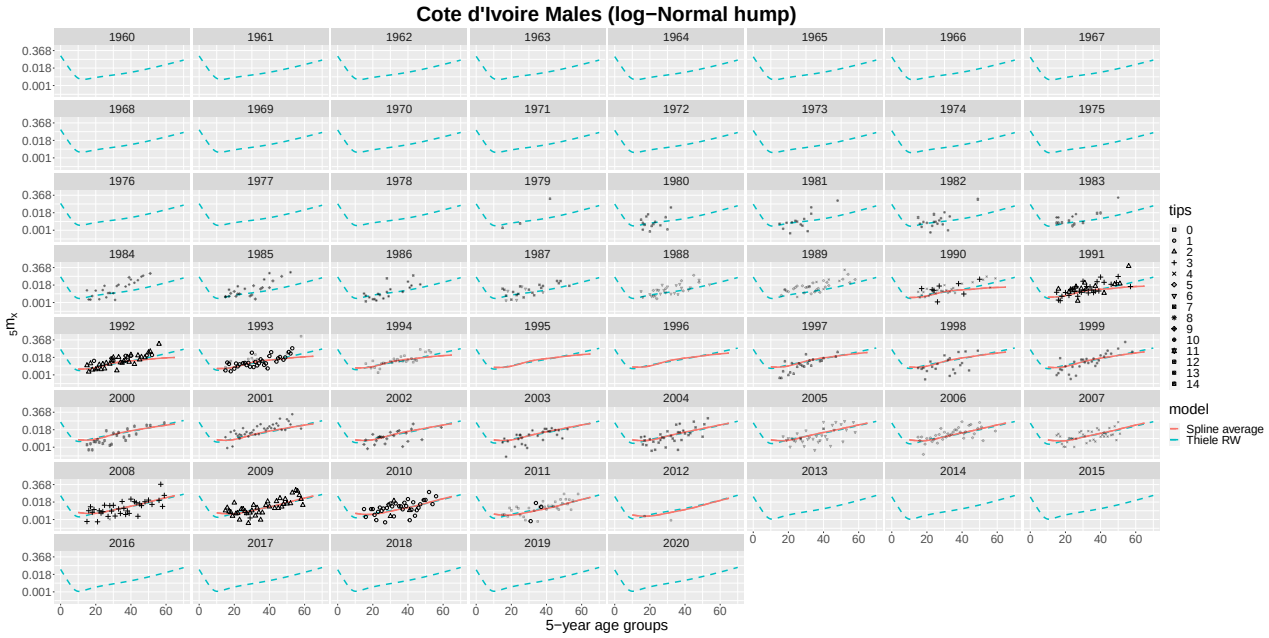

Figure 5: Mortality Schedules

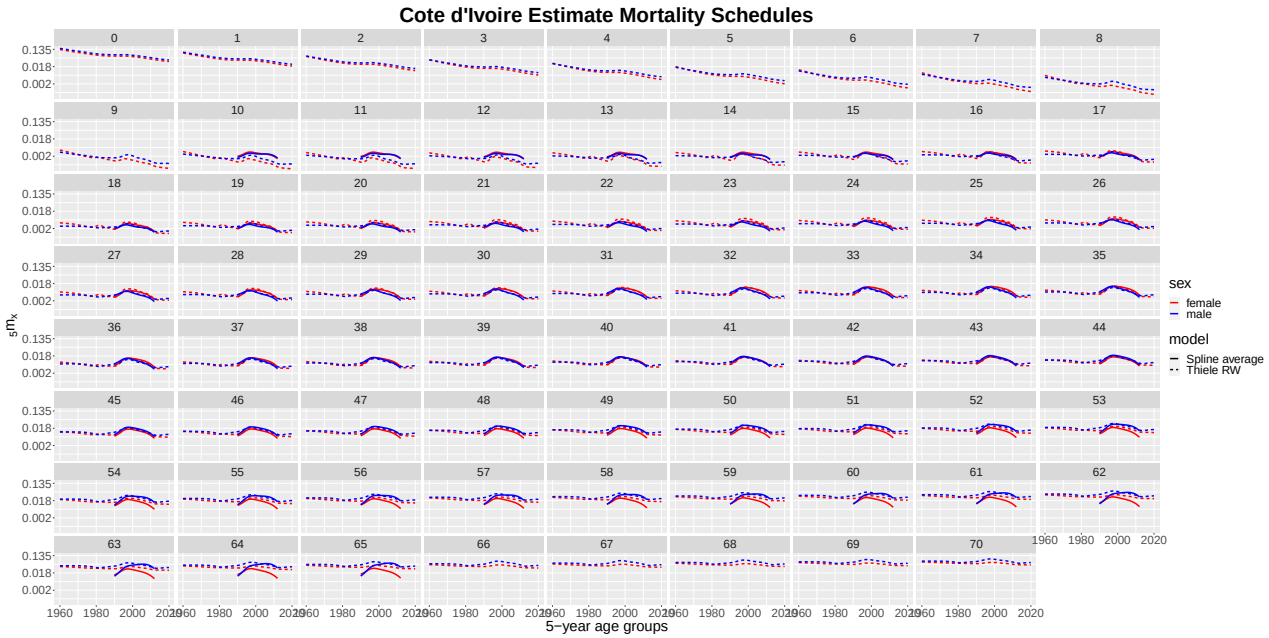

Figure 6: Mortality Schedules

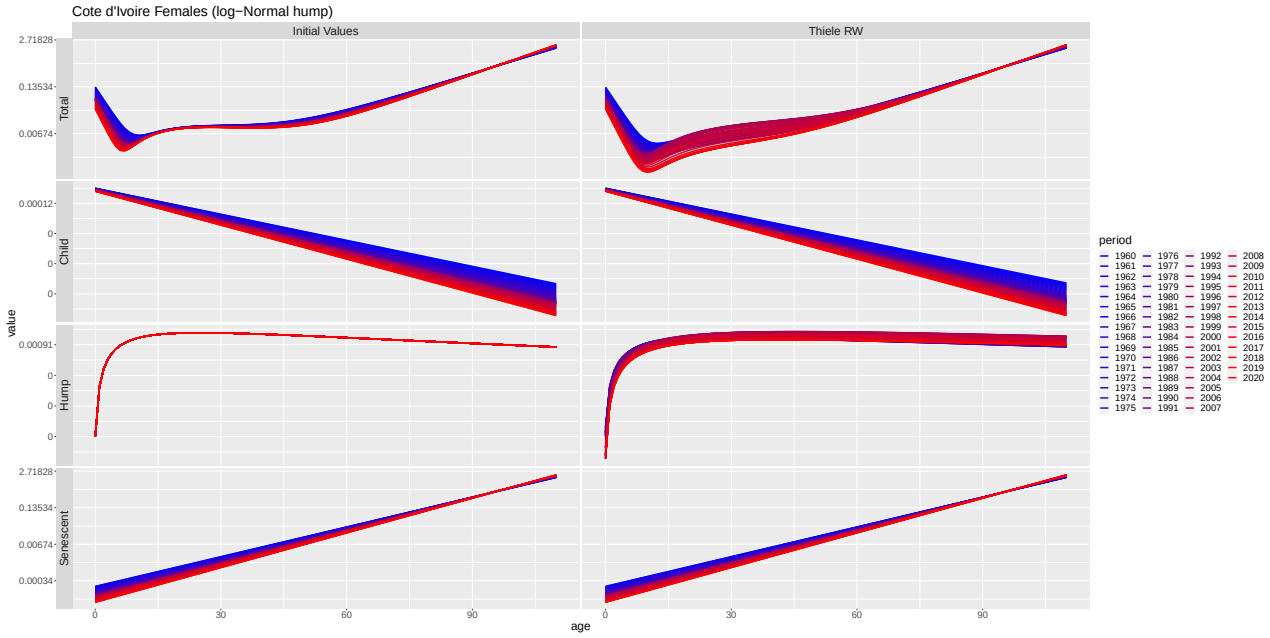

Figure 7: Thiele Decomposed

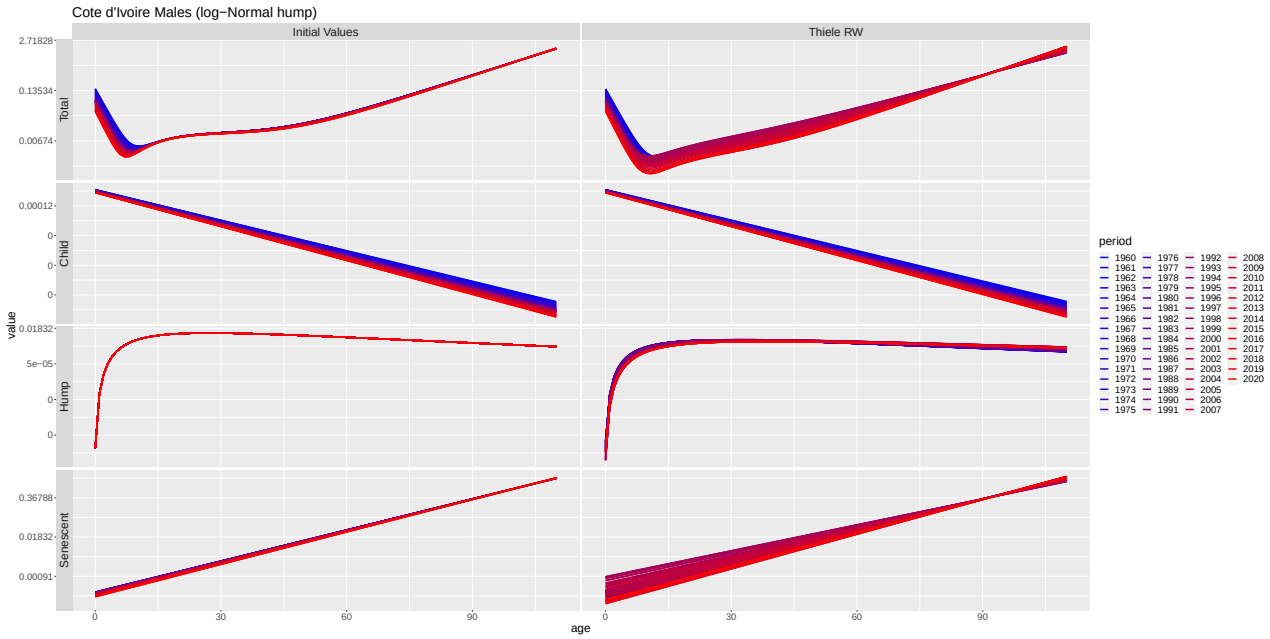

Figure 8: Thiele Decomposed

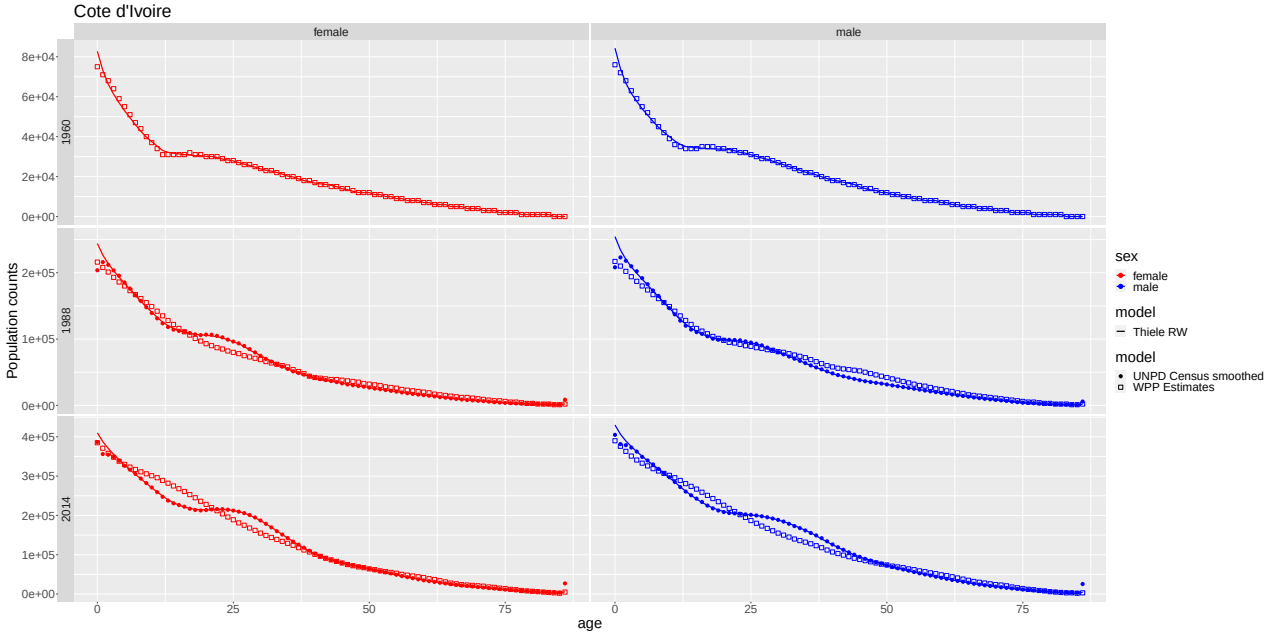

Figure 9: Population

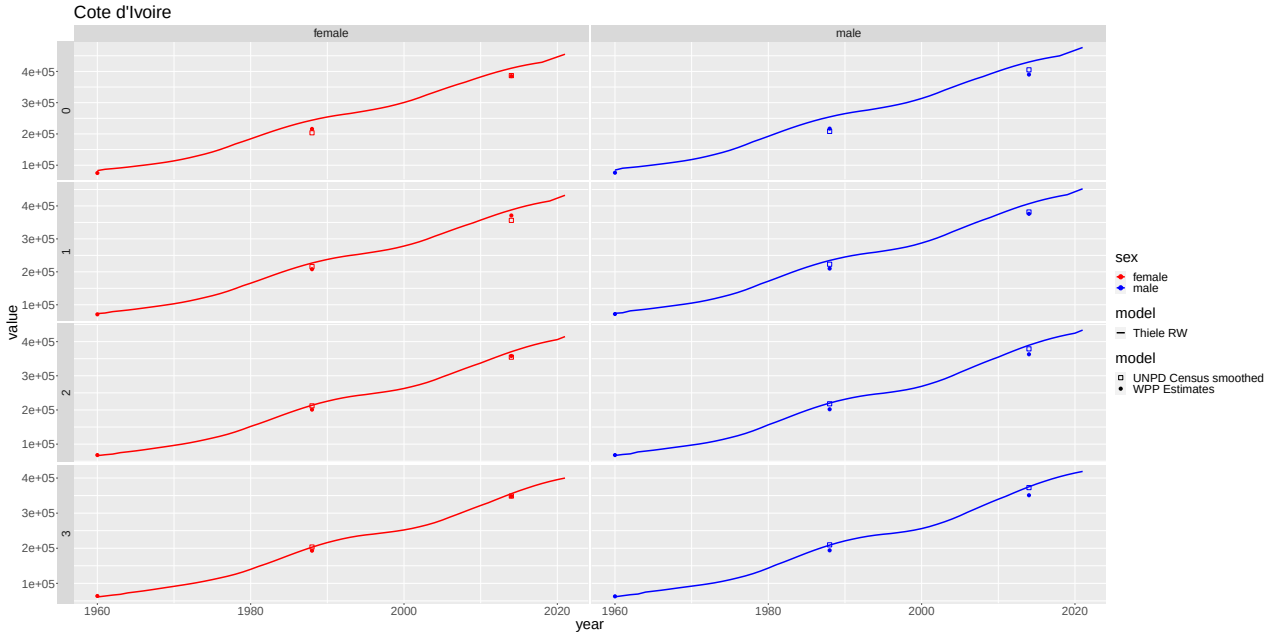

Figure 10: Population

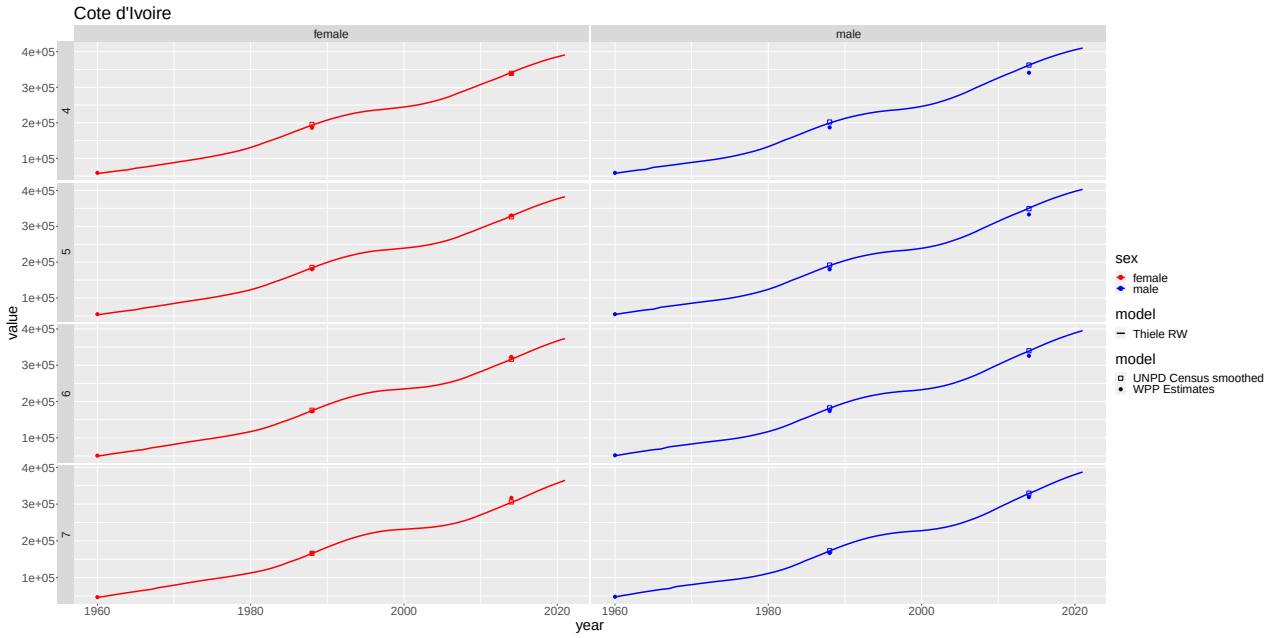

Figure 11: Population

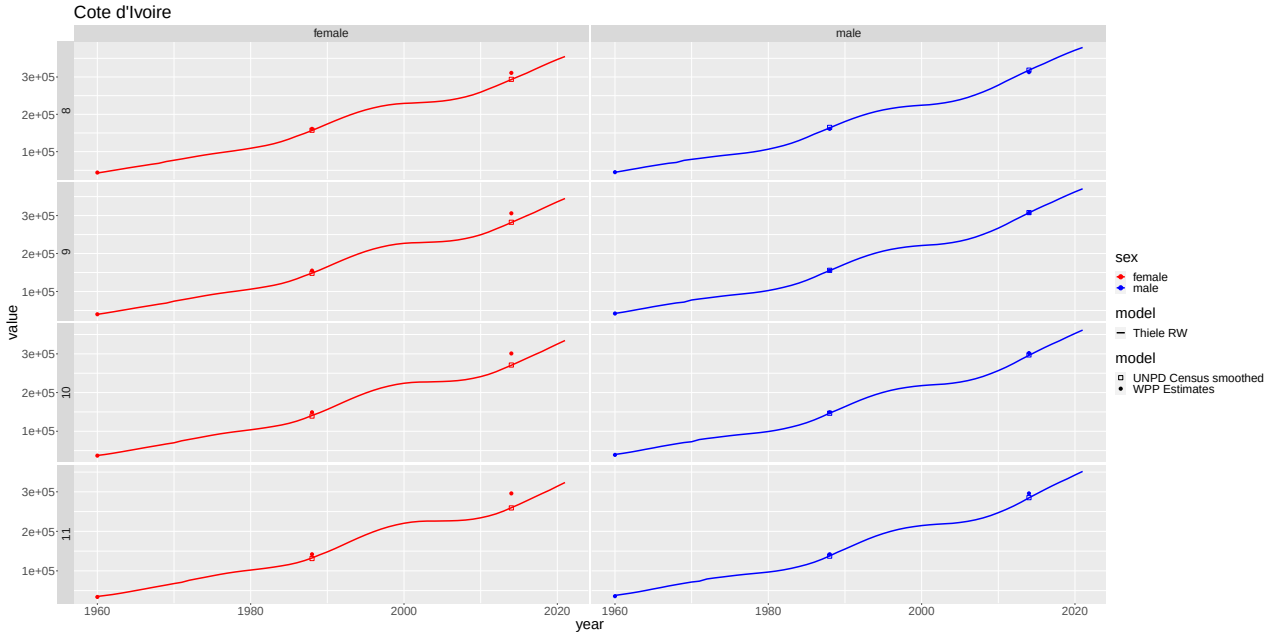

Figure 12: Population

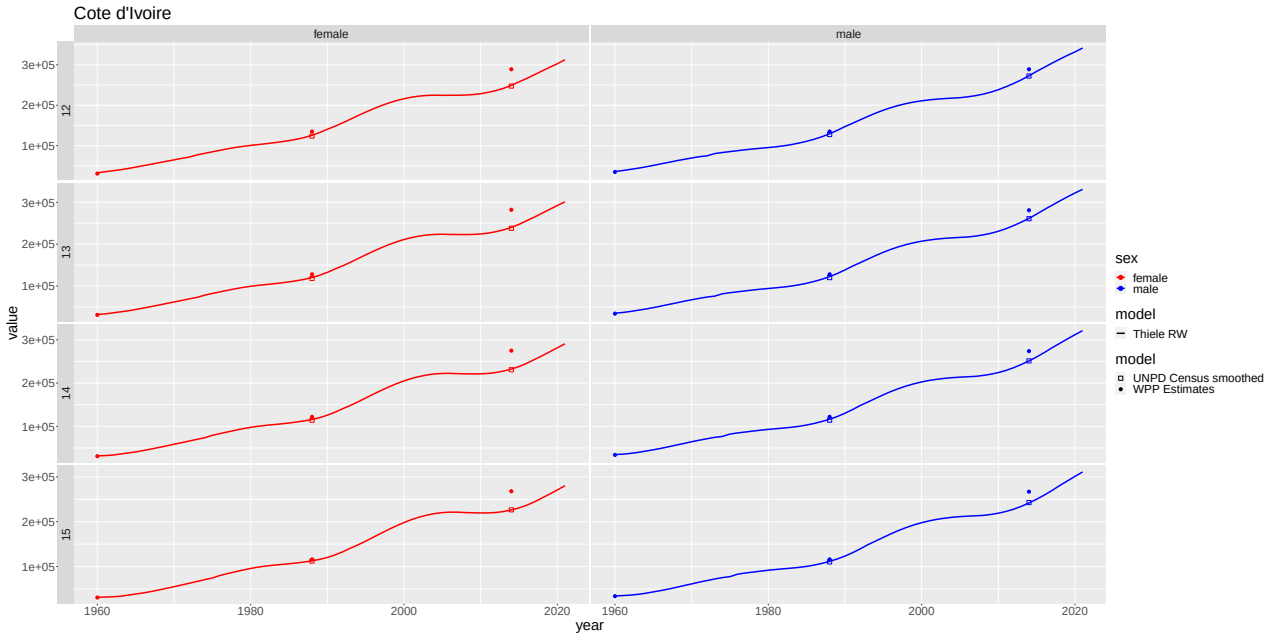

Figure 13: Population

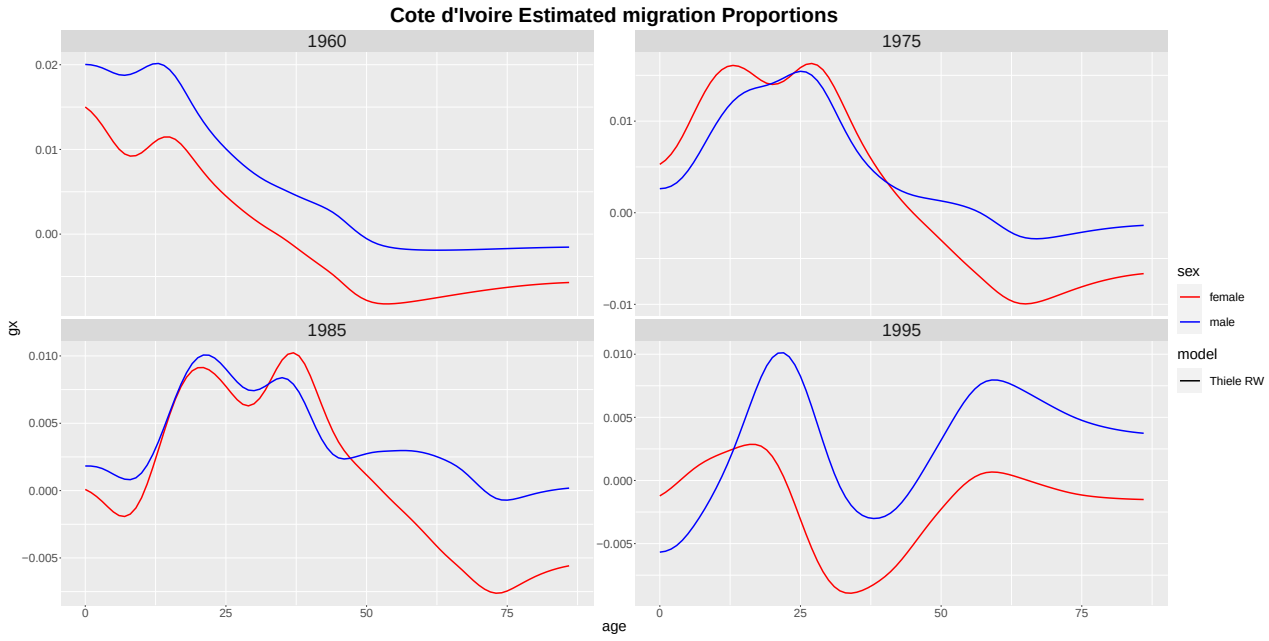

Figure 14: Migration

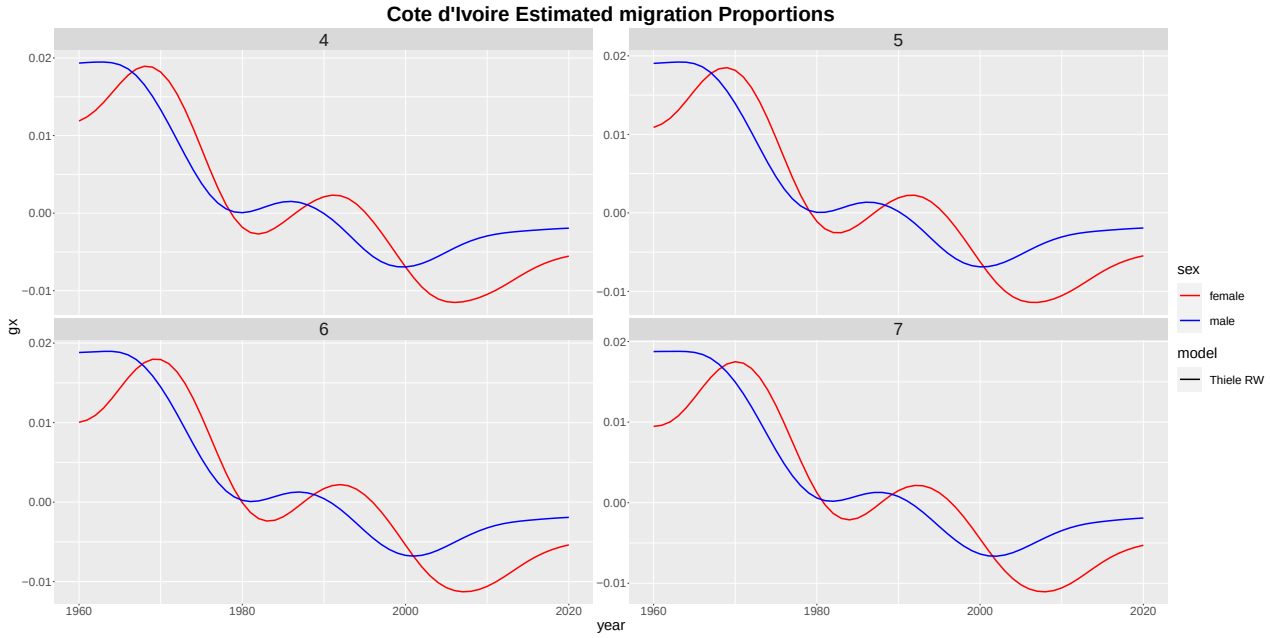

Figure 15: Migration

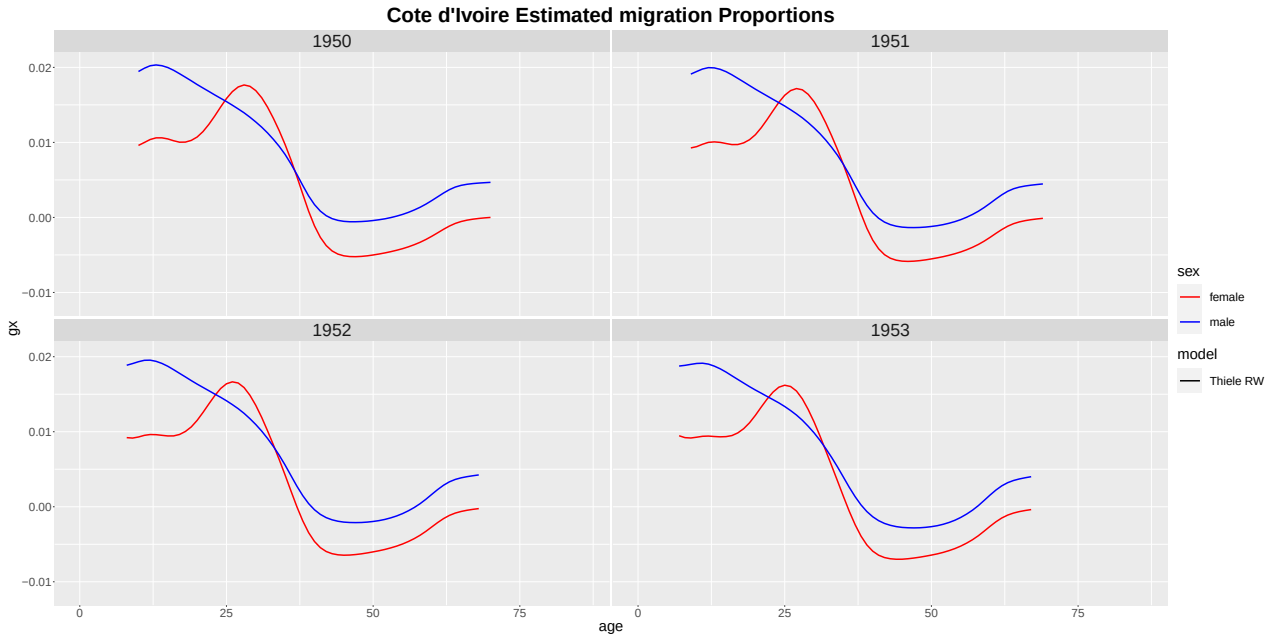

Figure 16: Migration

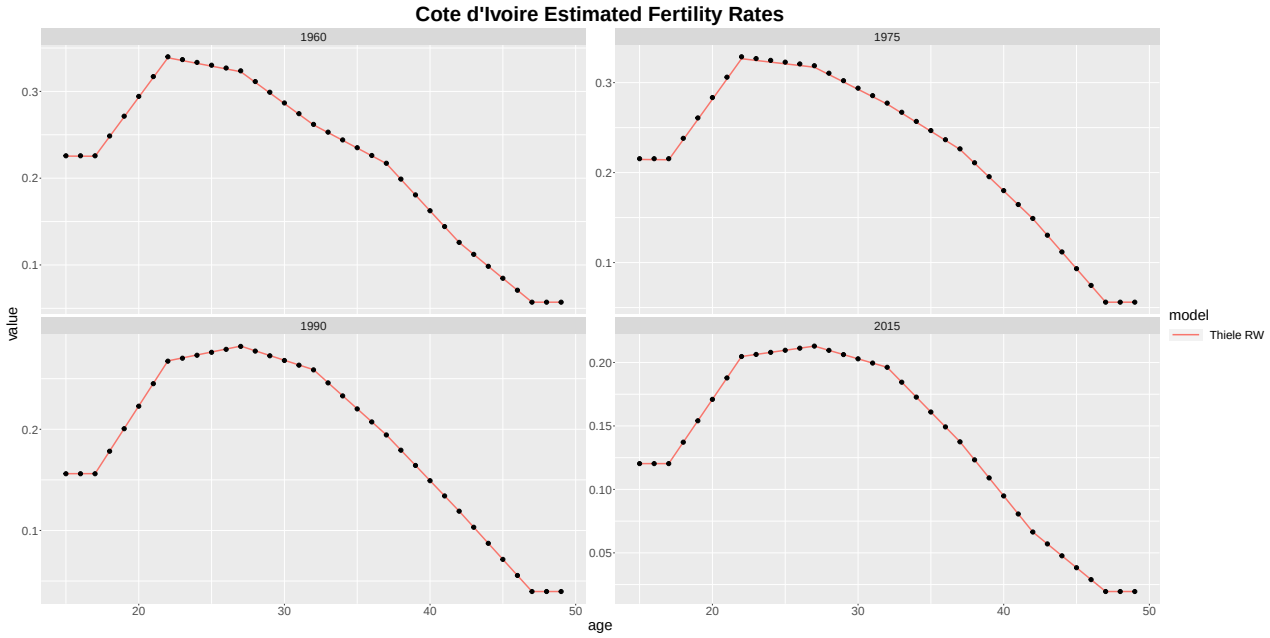

Figure 17: Fertility

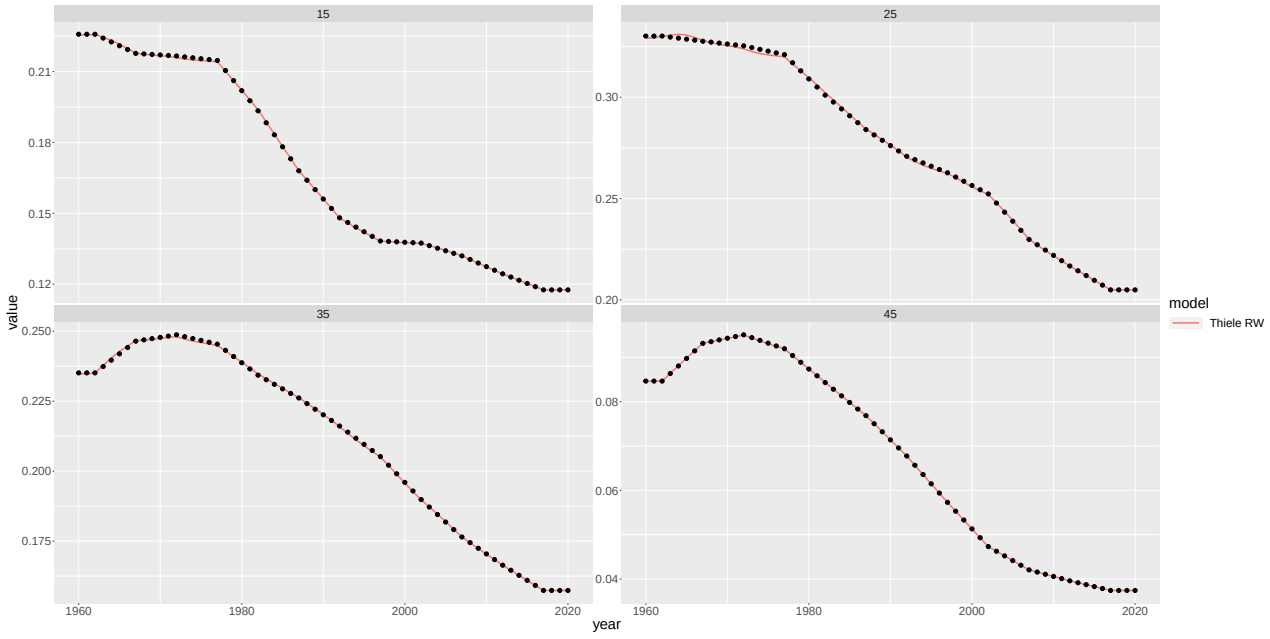

Figure 18: Fertility

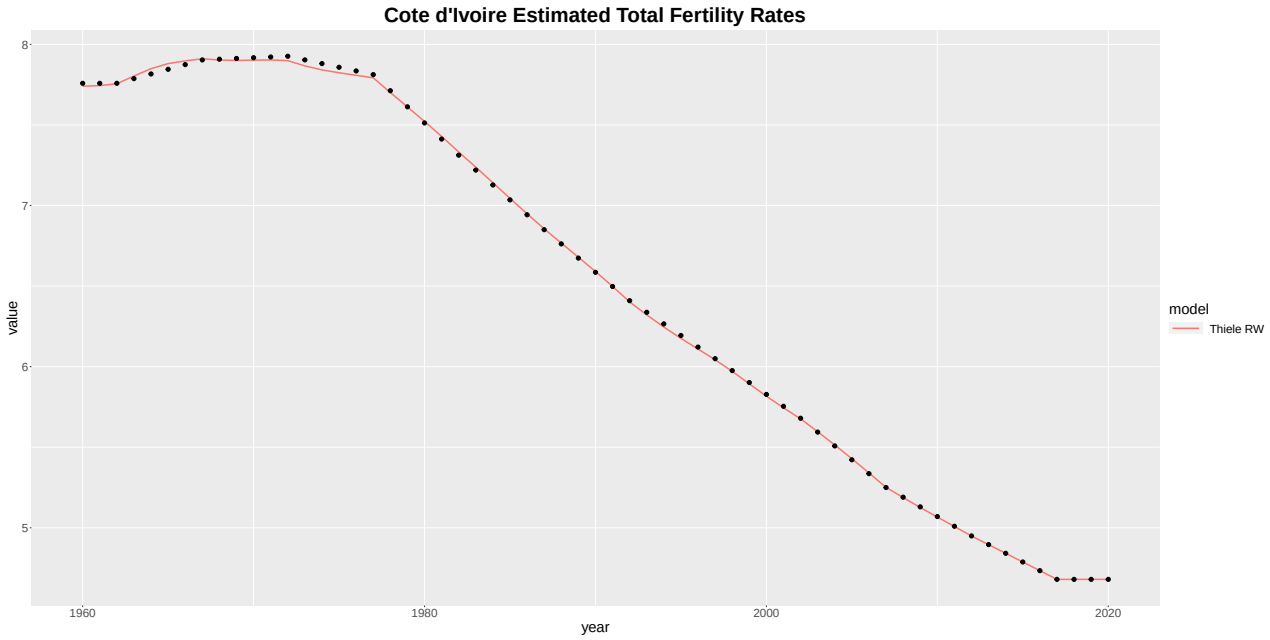

Figure 19: Total Fertility