

Cote d'Ivoire

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

```
## # A tibble: 18 x 4
##   aggr.age `1975` `1988` `2014`
## *   <dbl>   <dbl>   <dbl>   <dbl>
## 1       0 621138. 1046985. 1784869.
## 2       5 492509. 830083. 1520933.
## 3      10 368542. 638771. 1261144.
## 4      15 316352. 545814. 1099778.
## 5      20 304252. 507866. 1064794.
## 6      25 276639. 437045. 1012909.
## 7      30 227829. 336423. 848101.
## 8      35 177208. 250658. 634792.
## 9      40 135509. 194050. 467558.
## 10     45 101617. 155443. 368570.
## 11     50 74754. 122787. 293861.
## 12     55 53300. 93078. 217269.
## 13     60 38404. 67803. 155691.
## 14     65 26807. 46244. 112287.
## 15     70 17664. 28278. 76841.
## 16     75 10813. 16458. 48695.
## 17     80 7739. 9897. 27932.
## 18     85 9920. 11300. 31437.
```

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

```
## # A tibble: 18 x 4
##   aggr.age `1975` `1988` `2014`
## *   <dbl>   <dbl>   <dbl>   <dbl>
## 1       0 636967. 1075950. 1902603.
## 2       5 523312. 865430. 1641441.
## 3      10 394231. 656646. 1373912.
## 4      15 319030. 526637. 1141588.
## 5      20 302633. 485830. 1029647.
## 6      25 280540. 443970. 981760.
## 7      30 237963. 368939. 890094.
## 8      35 199308. 288184. 738560.
## 9      40 166025. 221936. 569072.
## 10     45 132220. 178647. 433252.
## 11     50 100558. 145443. 333872.
## 12     55 73855. 112940. 250459.
## 13     60 51653. 83029. 181380.
## 14     65 33245. 56206. 124672.
## 15     70 20052. 32992. 79906.
## 16     75 10866. 17367. 48162.
## 17     80 5920. 8892. 26252.
## 18     85 8558. 7561. 29586.
```

Thiele log-Normal Hump RW

```
## Warning in fit_tmb(input.thiele.loghump.oag.vec.RW, inner_verbose = FALSE, : convergence error: false c
```

```
##    user  system elapsed
##    5.34    0.19    5.59
```

```
## [1] "false convergence (8)"
```

Thiele log-Normal Hump RW (Pop 5-9 to 70-74, DHS 15-19 to 45-49)

```
## Warning in fit_tmb(input.thiele.loghump.oag.vec.RW.re, inner_verbose = FALSE, : convergence error: fals
```

```
##    user  system elapsed
##    4.17    0.16    4.33
```

```
## [1] "false convergence (8)"
```

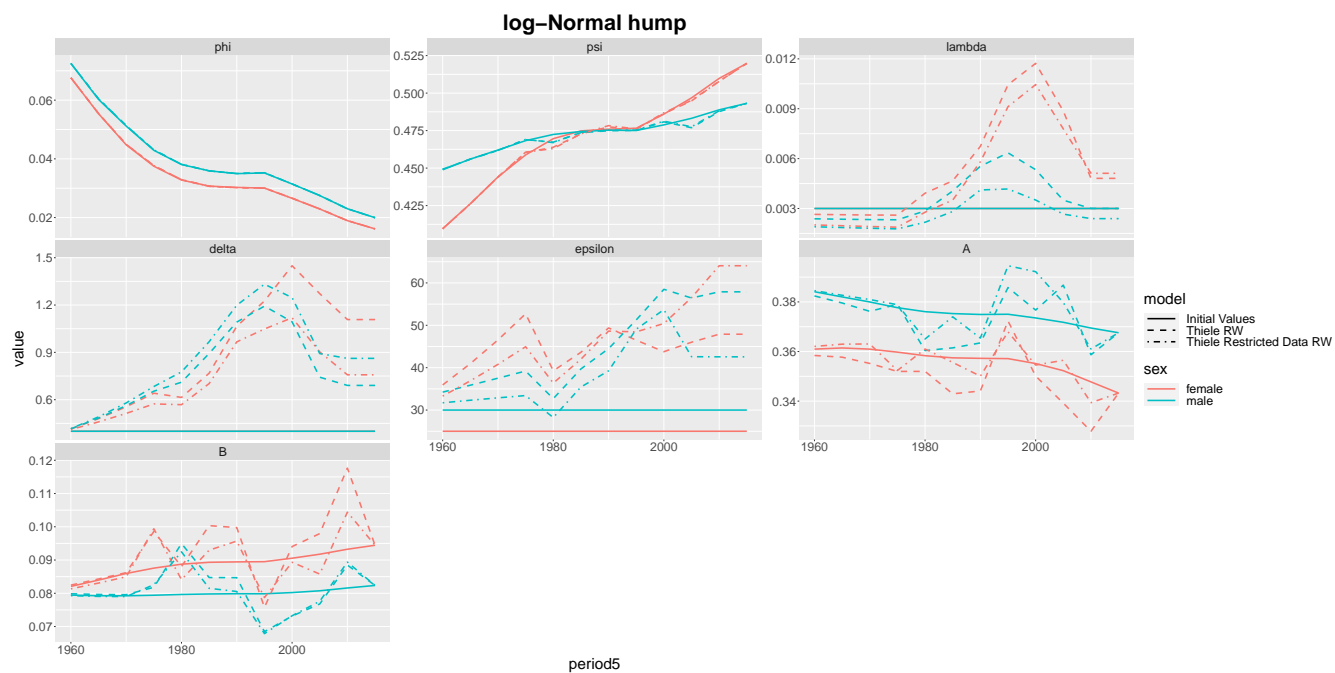


Figure 1: Estimated parameters



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

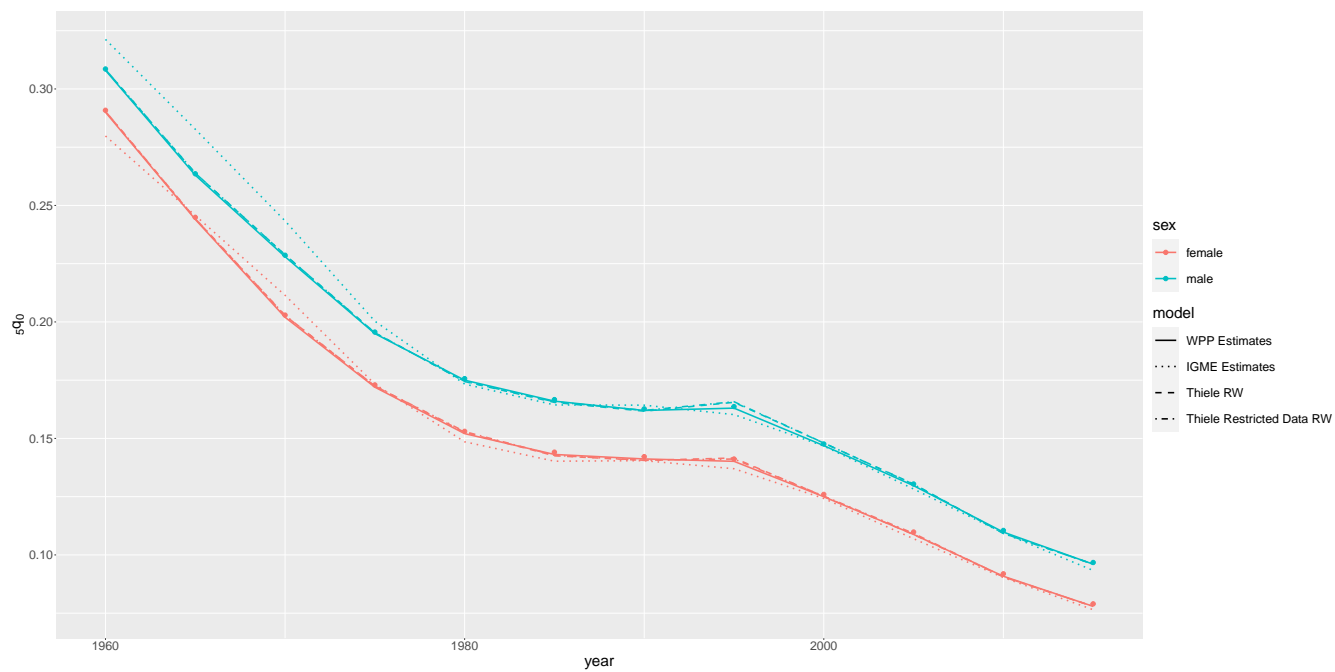


Figure 3: Estimated $_{5}q_0$

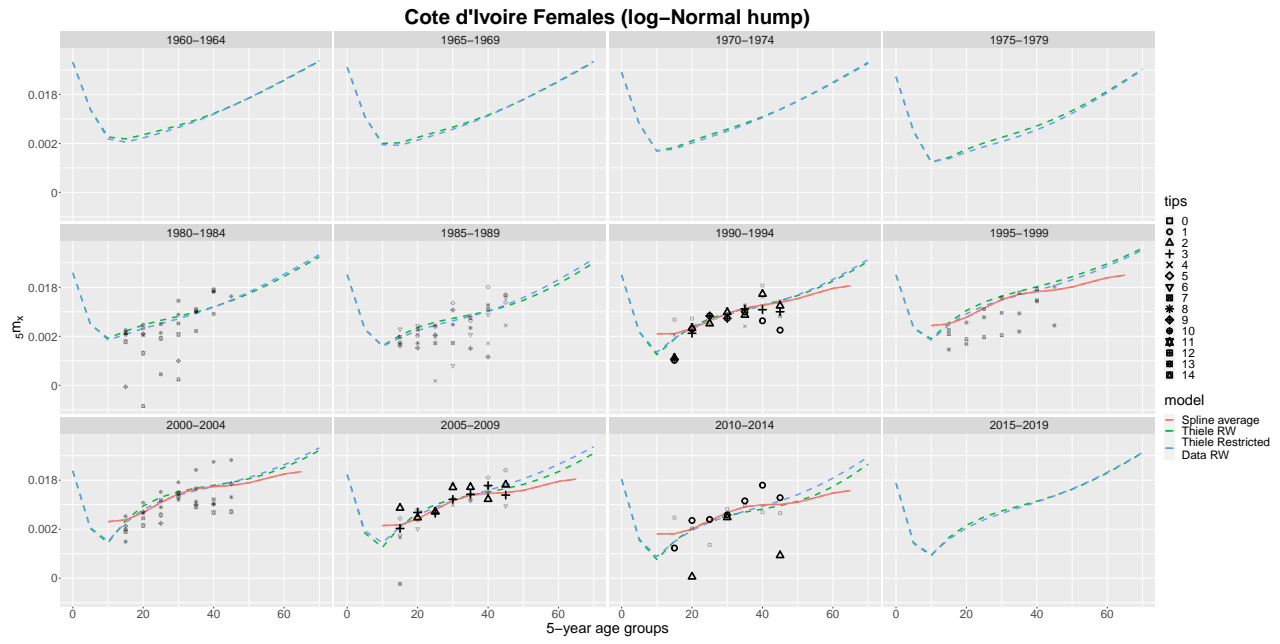


Figure 4: Mortality Schedules

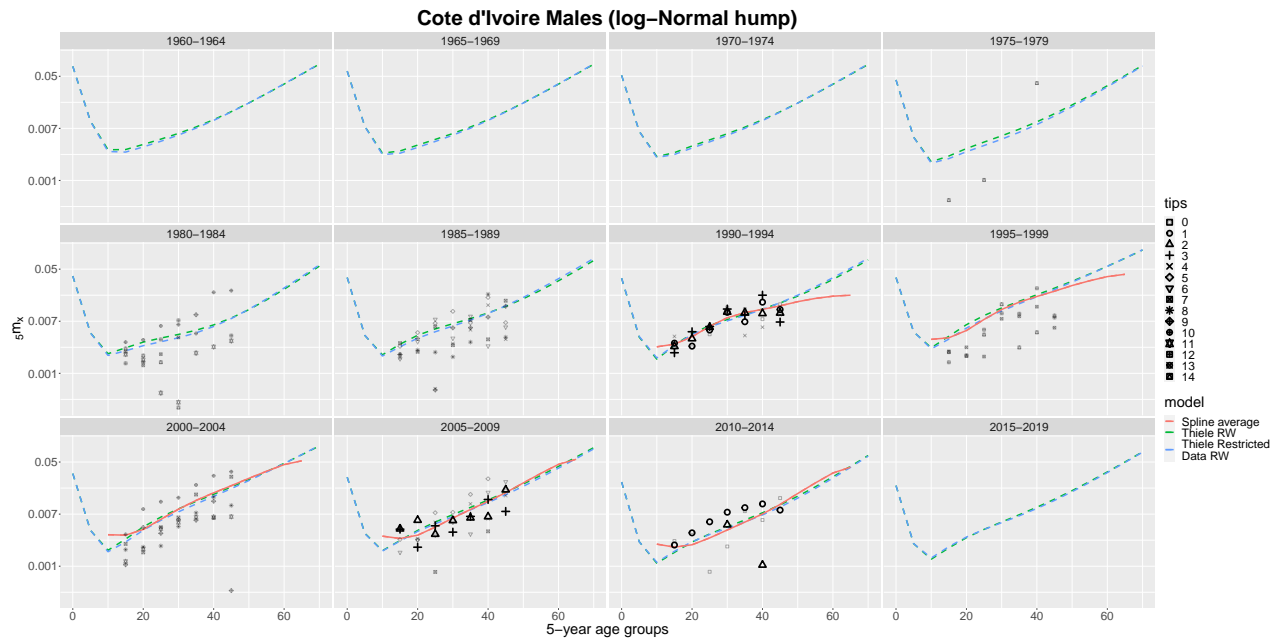


Figure 5: Mortality Schedules

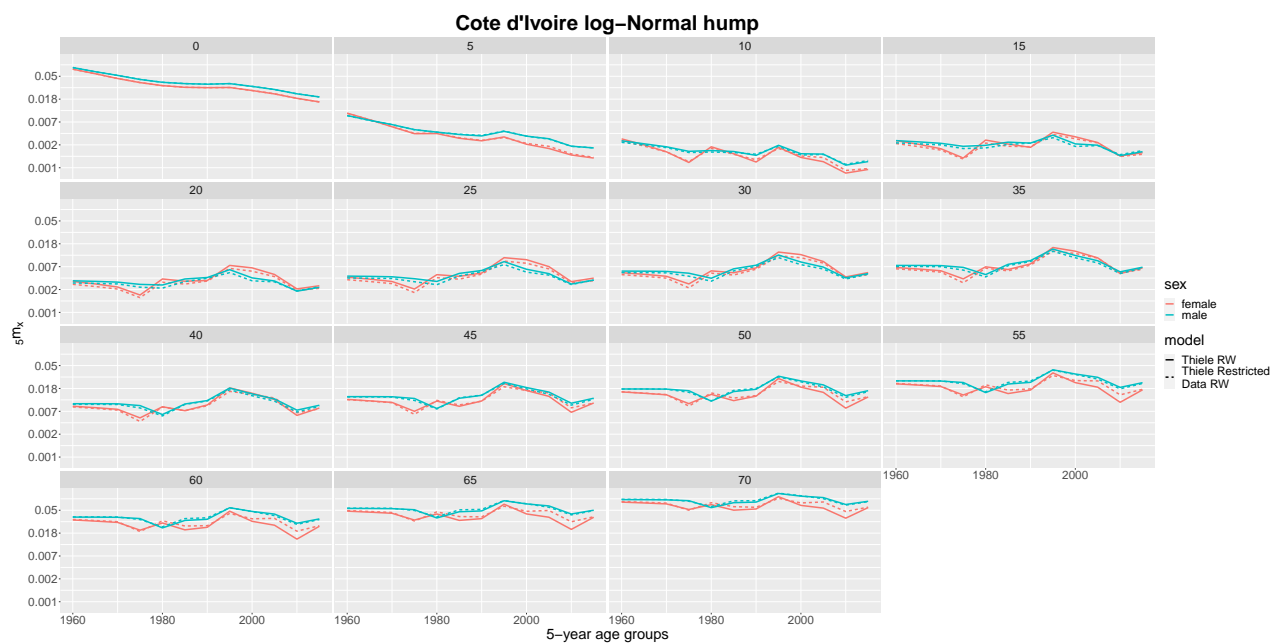


Figure 6: Mortality Schedules

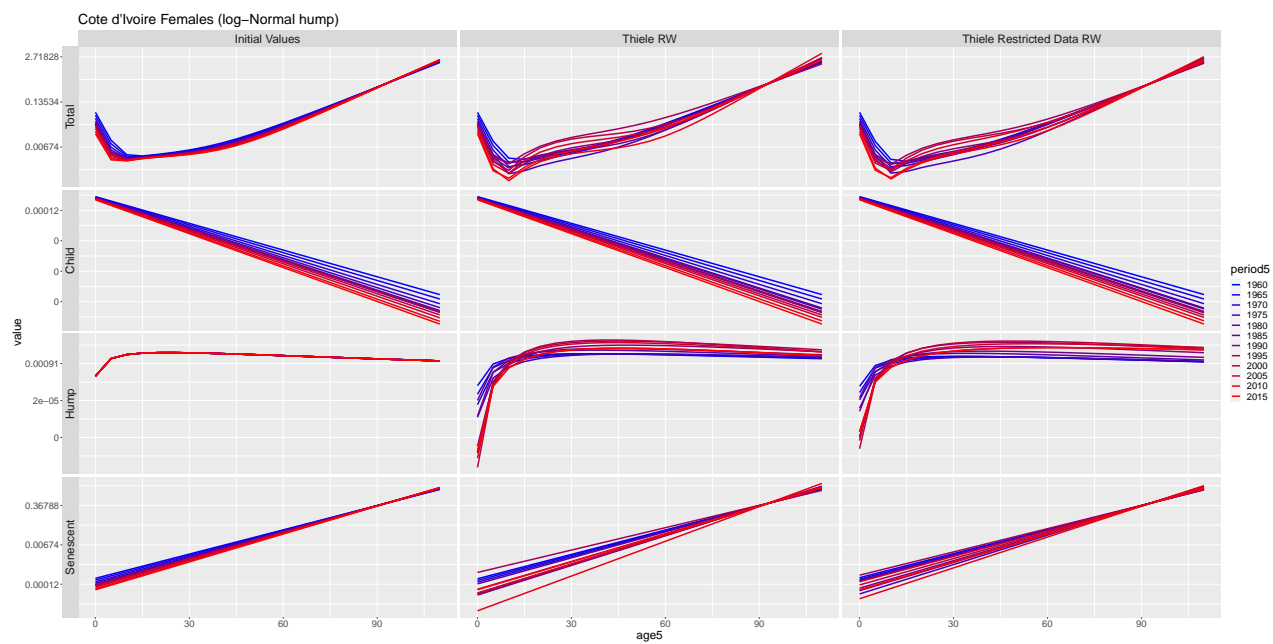


Figure 7: Thiele Decomposed

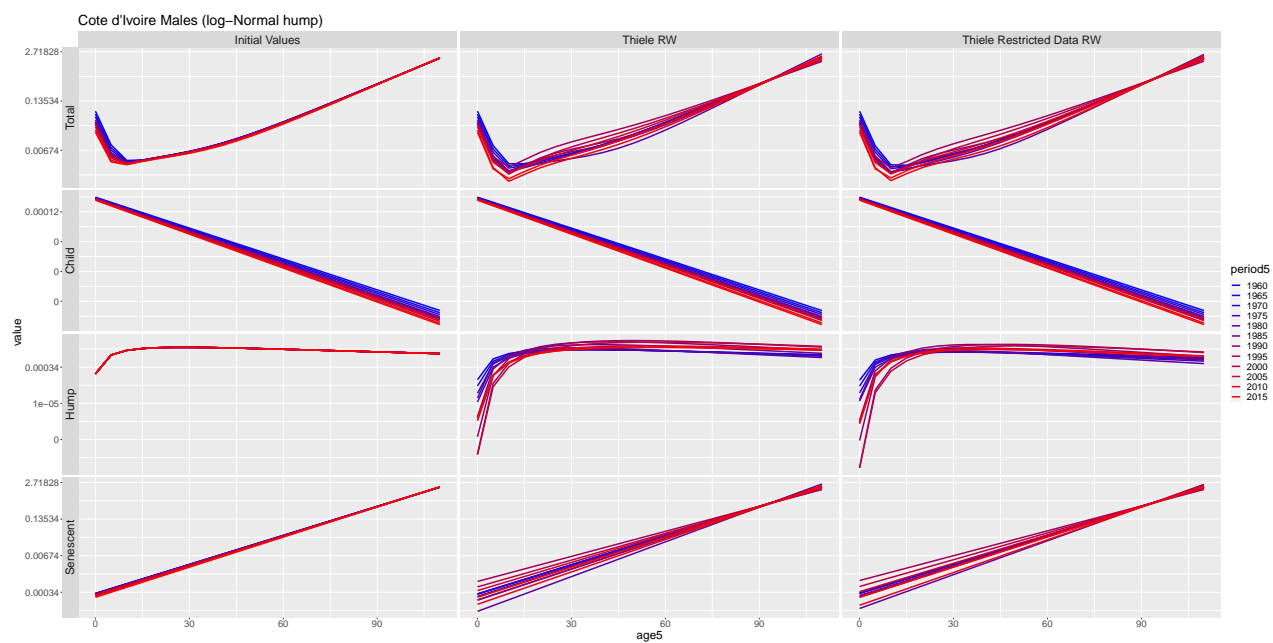


Figure 8: Thiele Decomposed

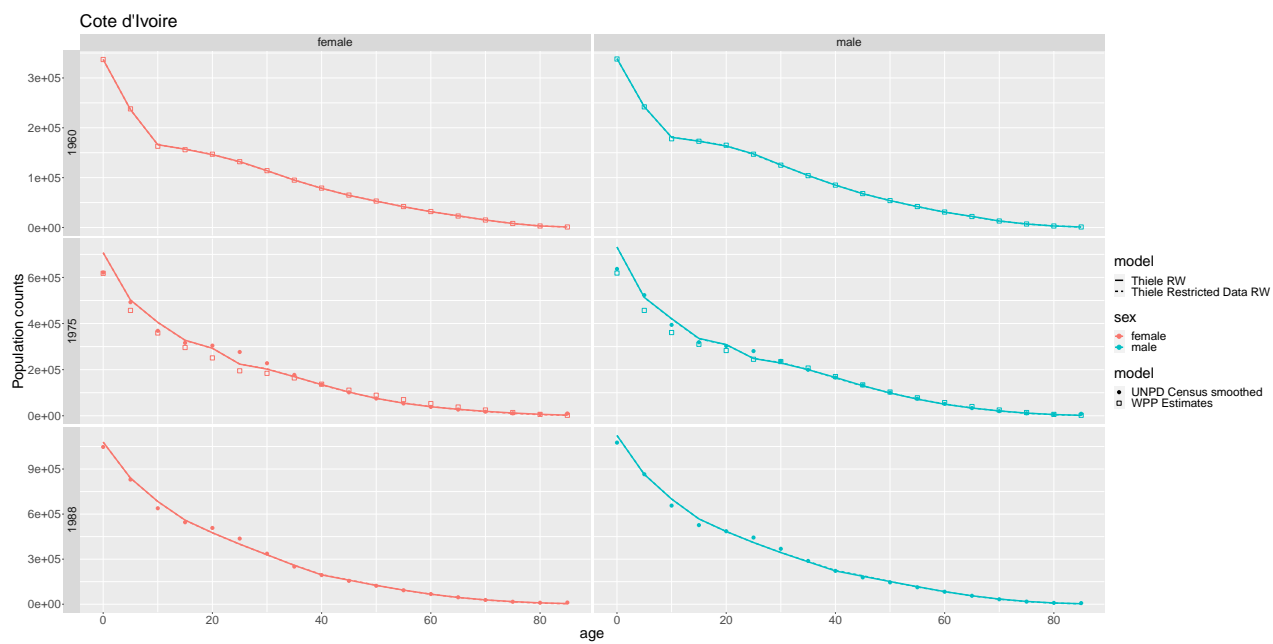


Figure 9: Population

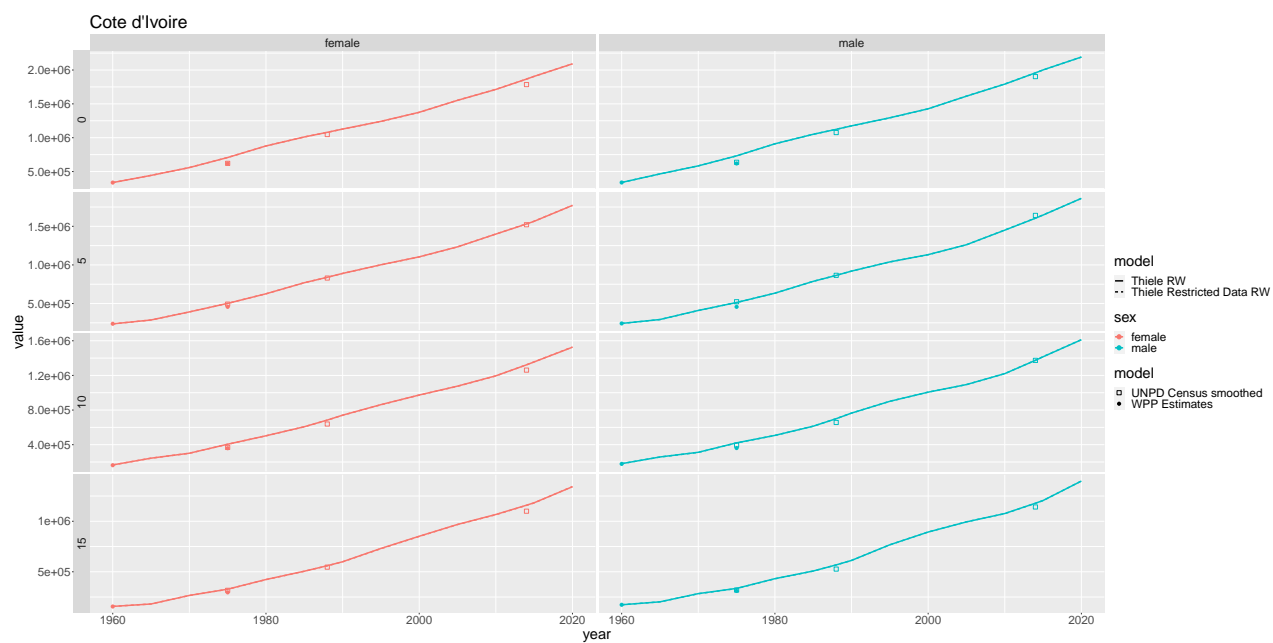


Figure 10: Population

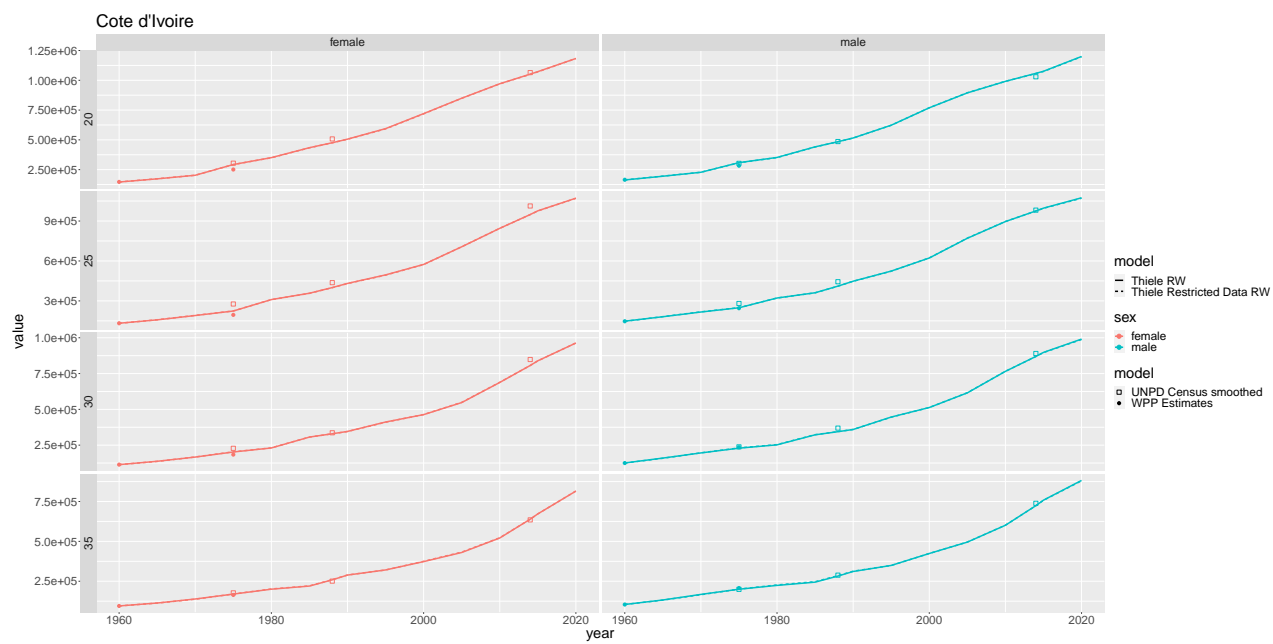


Figure 11: Population

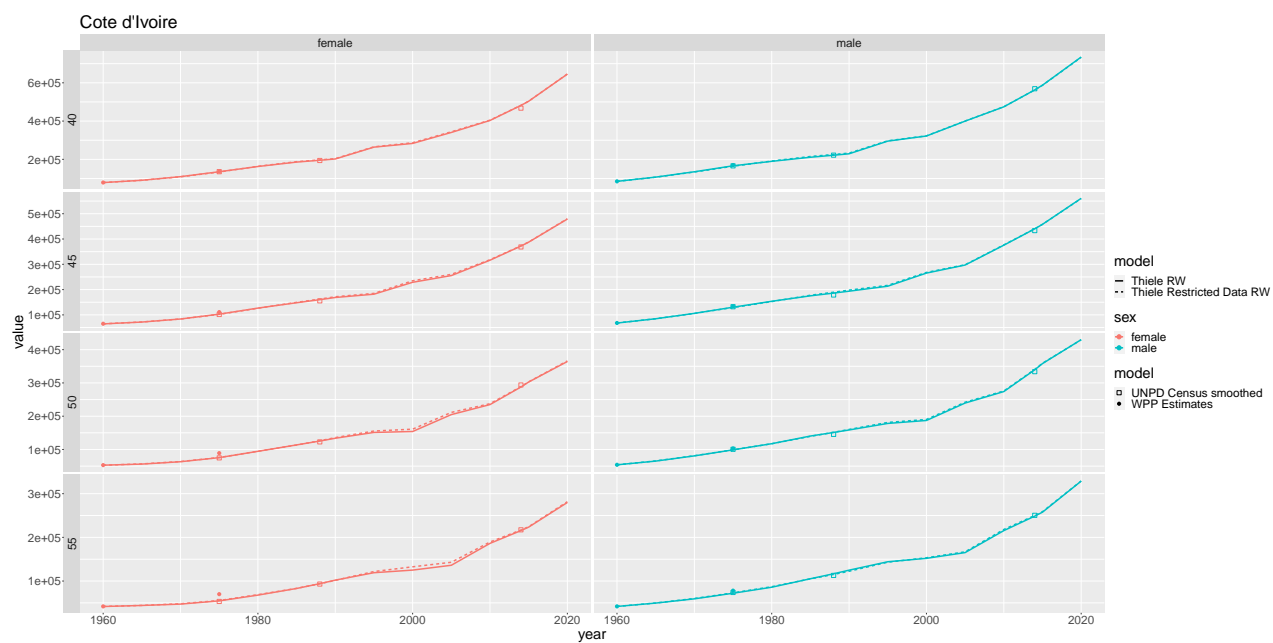


Figure 12: Population

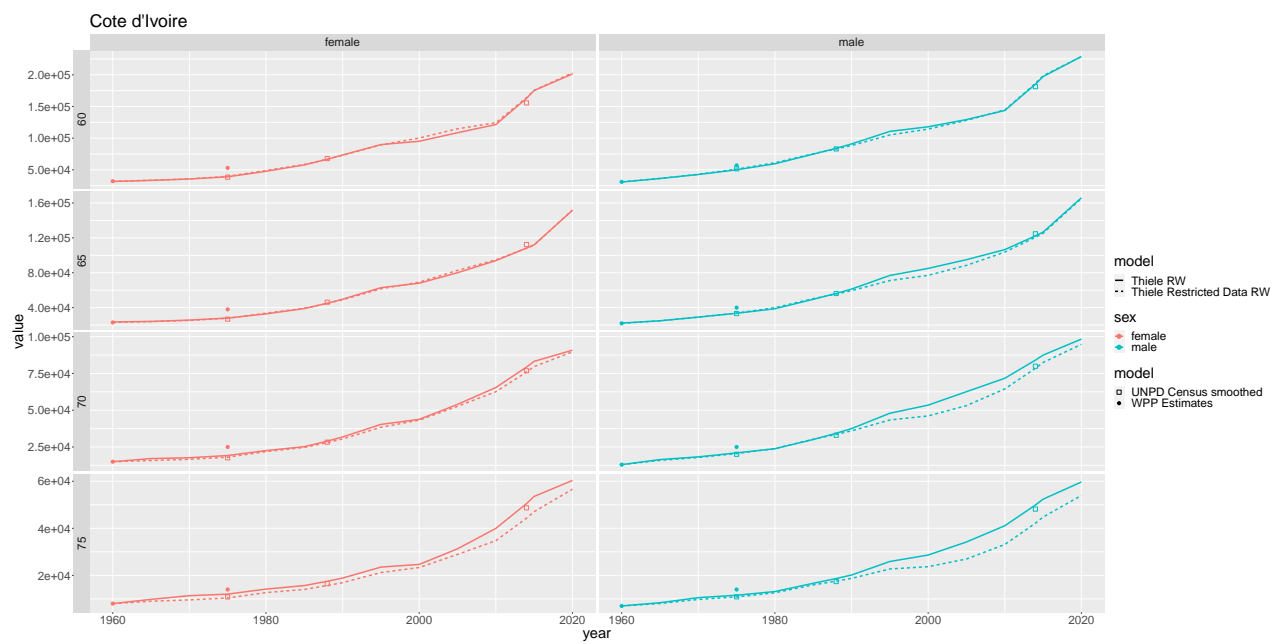


Figure 13: Population

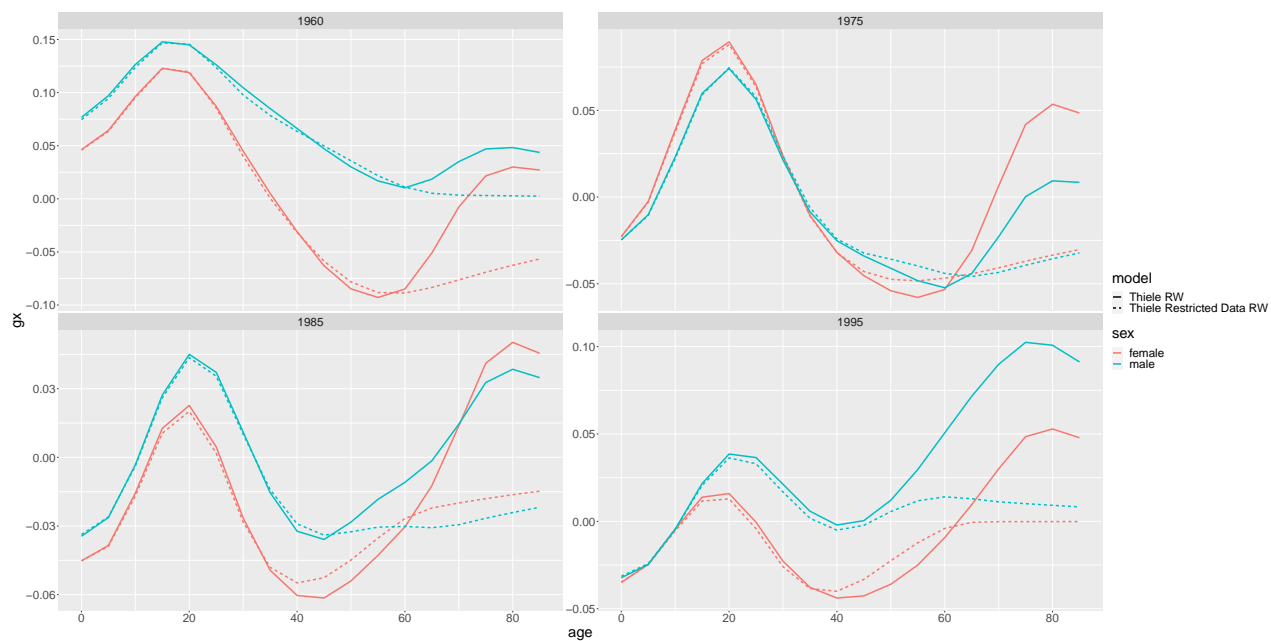


Figure 14: Migration

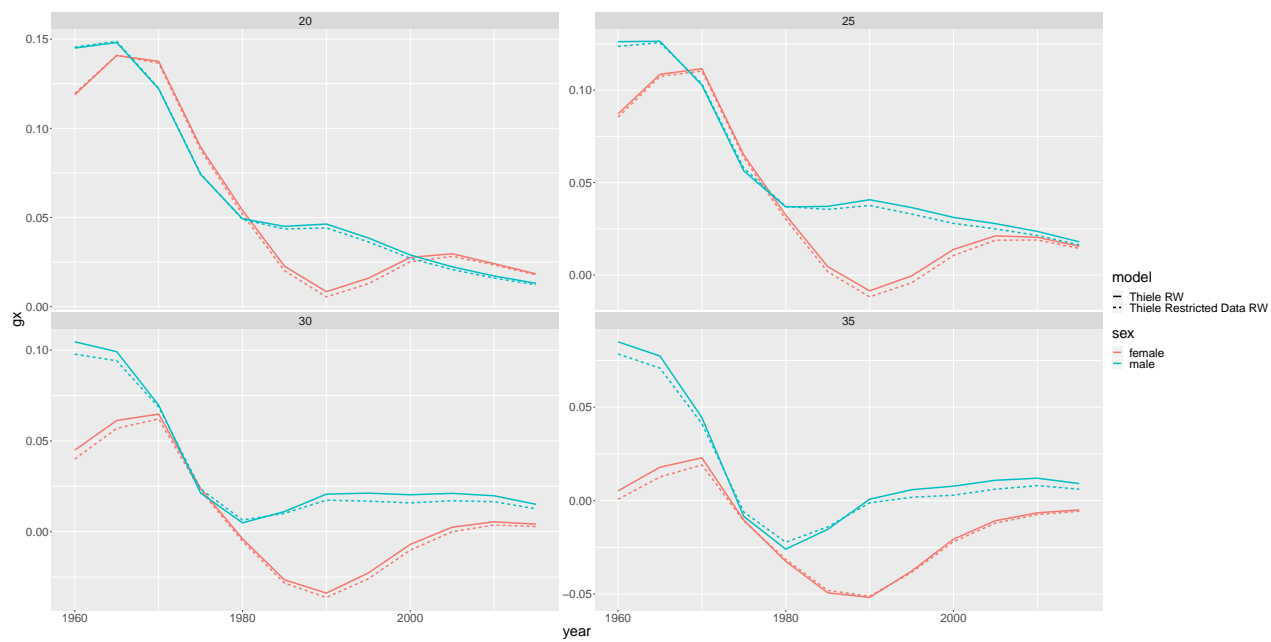


Figure 15: Migration

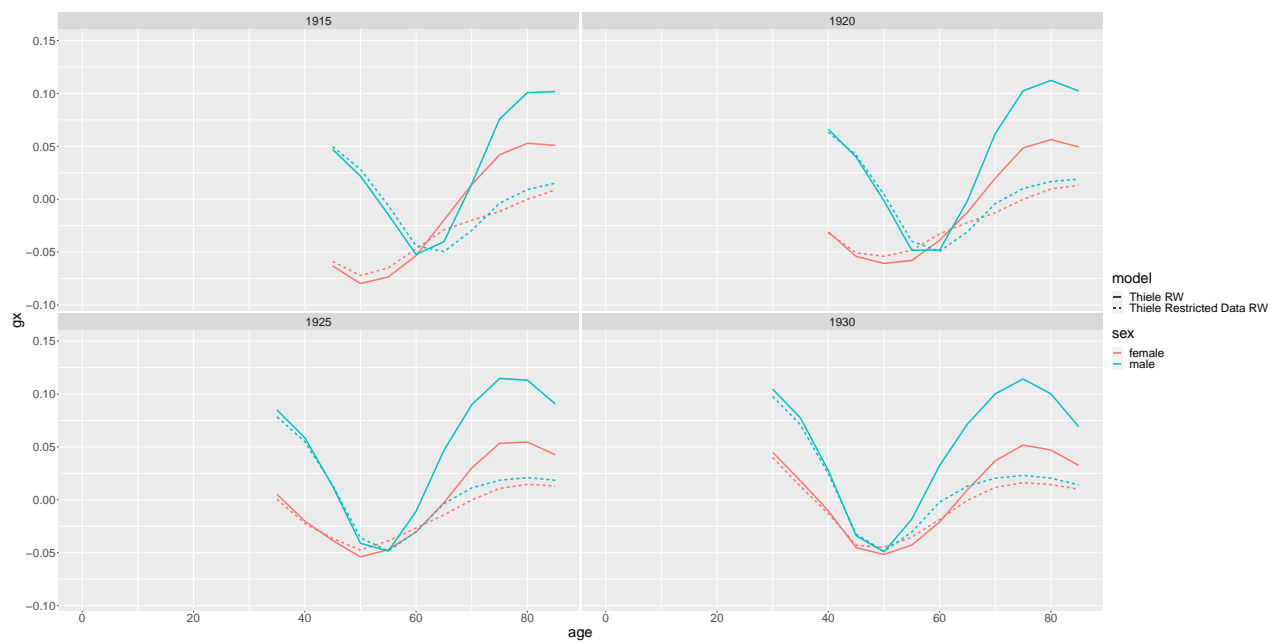


Figure 16: Migration

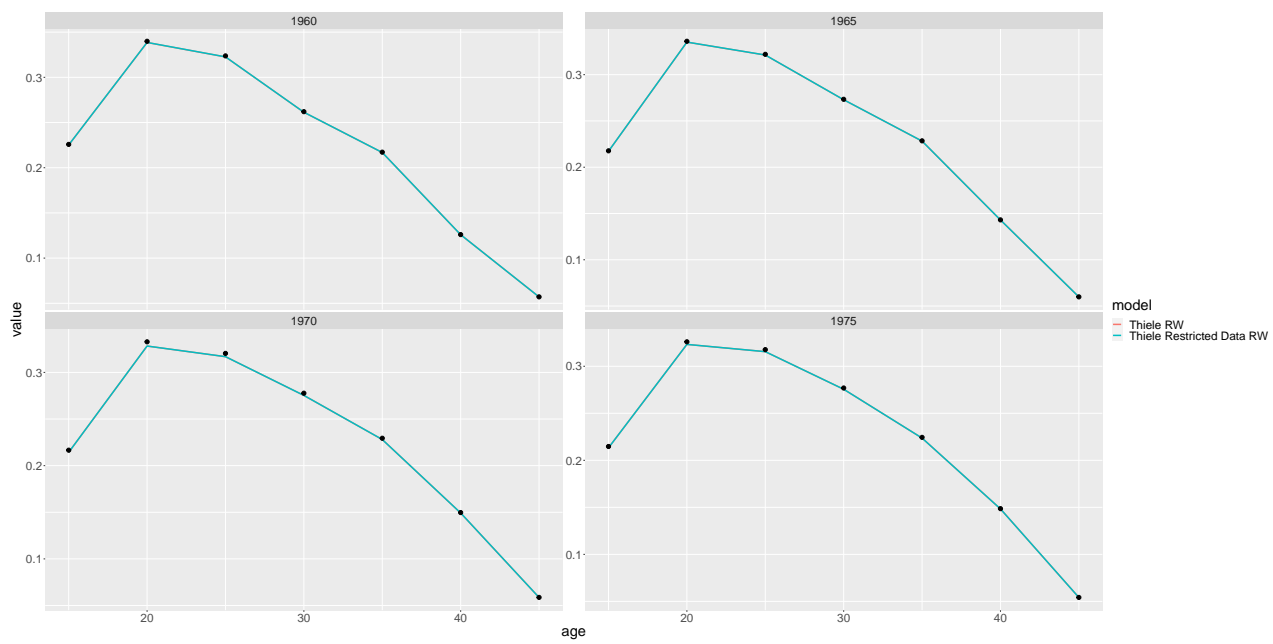


Figure 17: Fertility

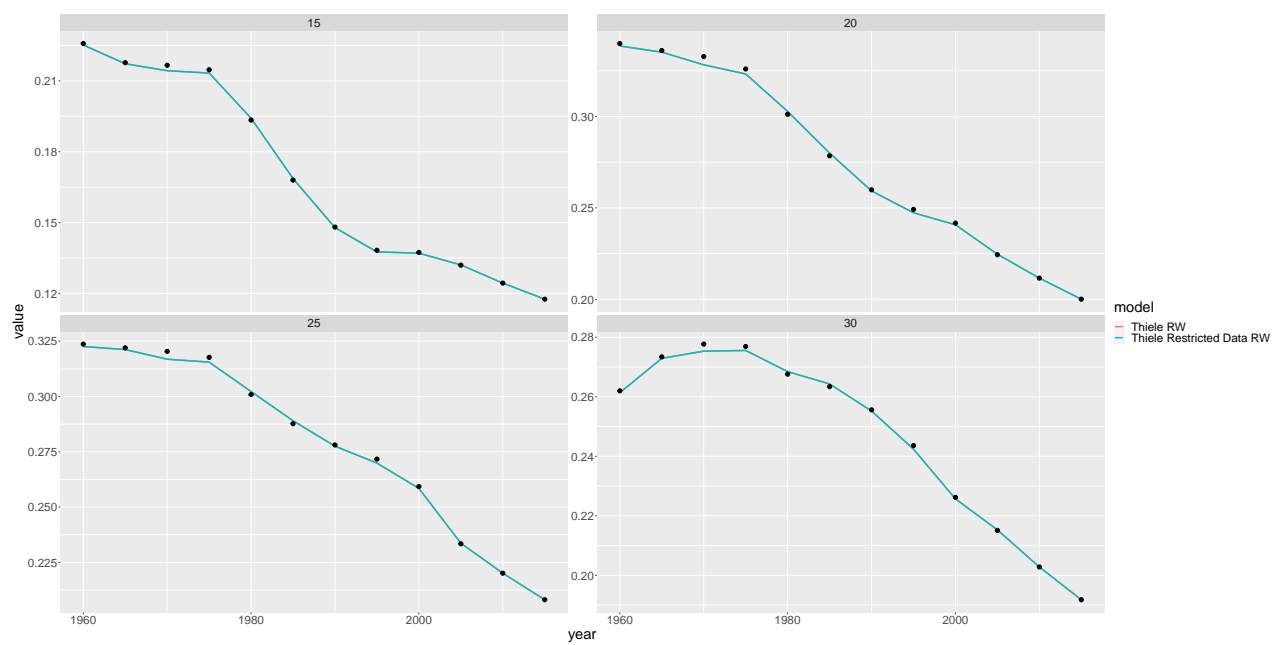


Figure 18: Fertility