

Gambia

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

## # A tibble: 18 x 4
##   aggr.age `1973` `1983` `1993`
## *   <dbl>   <dbl>   <dbl>   <dbl>
## 1     0 41563 58907. 84738.
## 2     5 32722 51790. 78245.
## 3    10 28776 40376. 66020.
## 4    15 26267 33801. 55768.
## 5    20 22723 32666. 49818.
## 6    25 19208 30671. 44550.
## 7    30 16072 24542. 35807.
## 8    35 13316 17901. 26473.
## 9    40 10972 13703. 19807.
## 10   45  9005 10504. 14542.
## 11   50  7169  7968. 10650.
## 12   55  5534  6007.  8081.
## 13   60  4004  4853.  6742.
## 14   65  2756  3772.  5340.
## 15   70  1671  2740.  3912.
## 16   75   894  2128.  2900.
## 17   80   338  2199.  2065.
## 18   85   123  1982.  3121.
```

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

## # A tibble: 18 x 4
##   aggr.age `1973` `1983` `1993`
## *   <dbl>   <dbl>   <dbl>   <dbl>
## 1     0 41216 59160. 86350.
## 2     5 31932 52458. 79005.
## 3    10 28118 40522. 65591.
## 4    15 25827 31264. 53832.
## 5    20 24121 28238. 46618.
## 6    25 21434 26239. 40040.
## 7    30 18192 21919. 32335.
## 8    35 15095 17687. 25870.
## 9    40 12287 14759. 21359.
## 10   45  9638 12170. 17496.
## 11   50  7526  9702. 13833.
## 12   55  5669  7613. 10744.
## 13   60  4036  6255.  8615.
## 14   65  2719  4804.  6432.
## 15   70  1440  3414.  4508.
## 16   75   779  2471.  3126.
## 17   80   274  2228.  2038.
## 18   85    83  2025.  2814.
```

Thiele log-Normal Hump RW

```
##   user  system elapsed
##   7.53    0.09     7.64
```

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

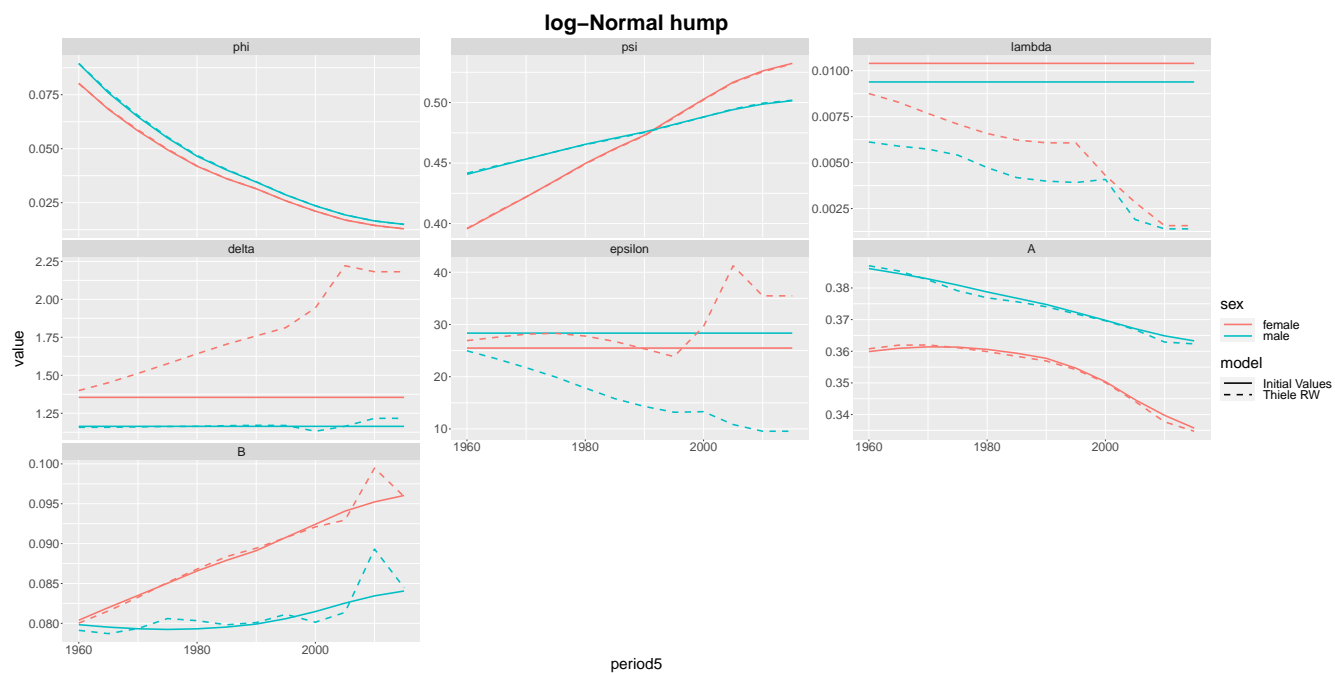


Figure 1: Estimated parameters

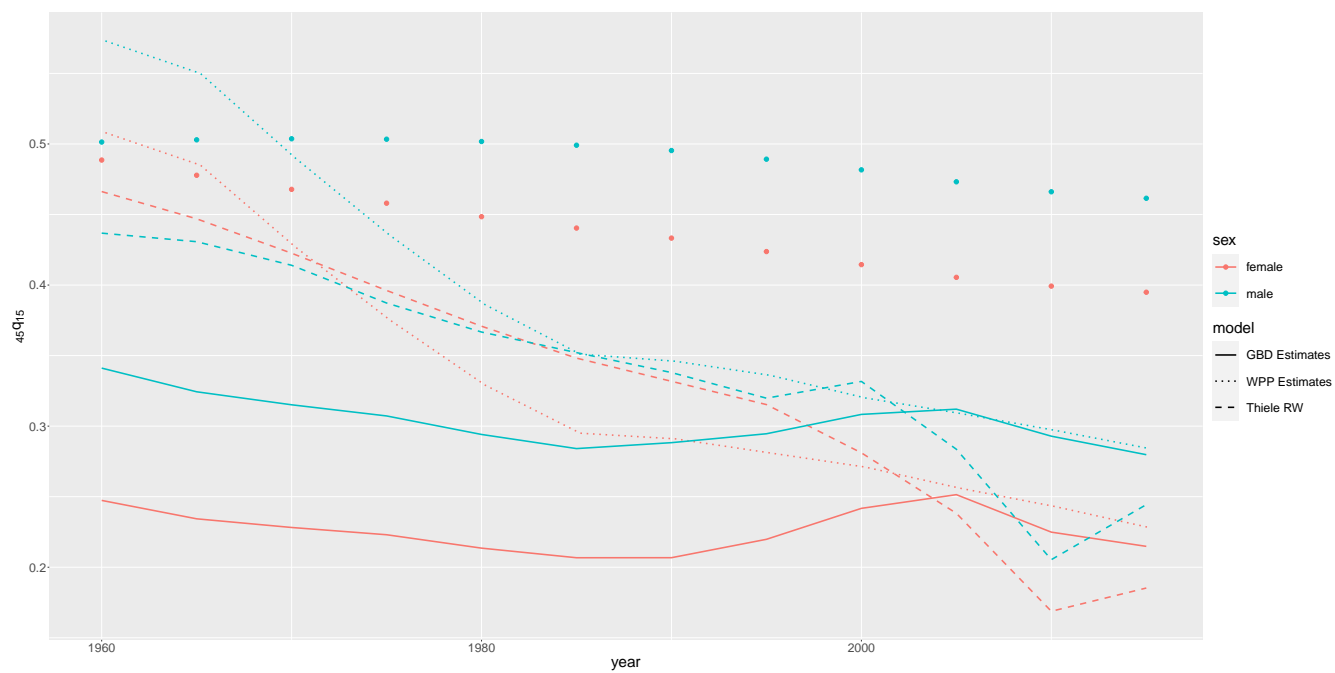


Figure 2: Estimated $45q_{15}$

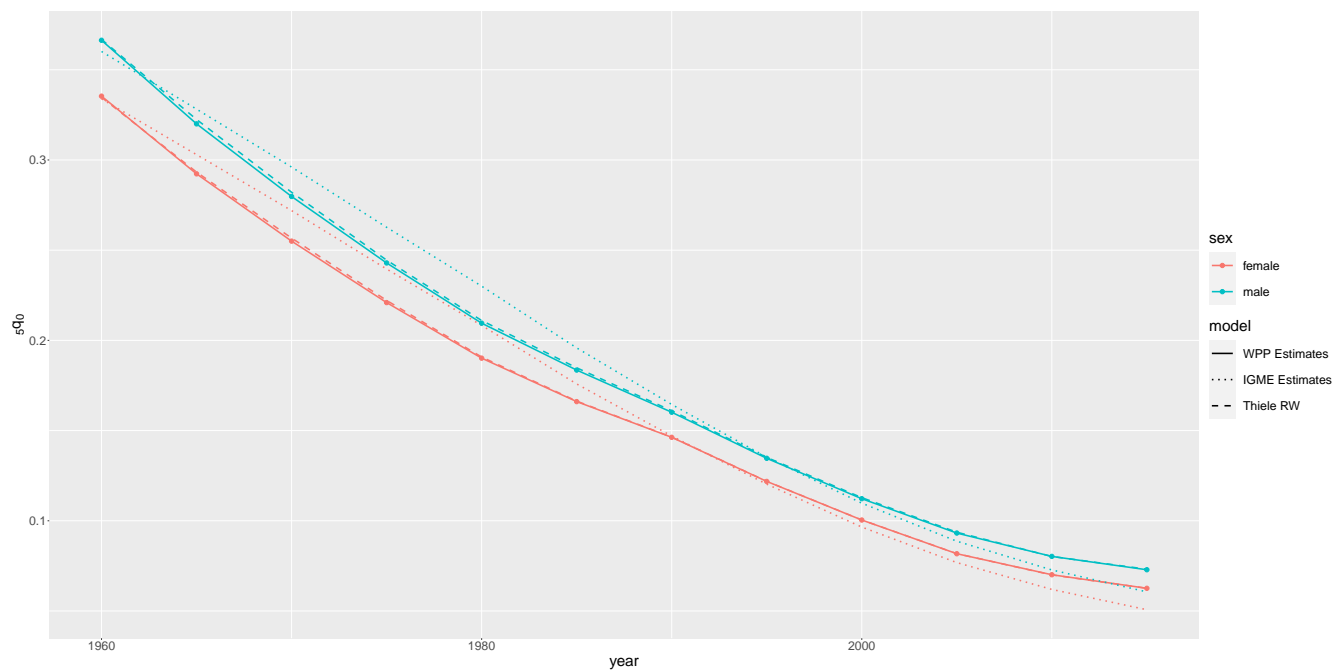


Figure 3: Estimated $5q_0$

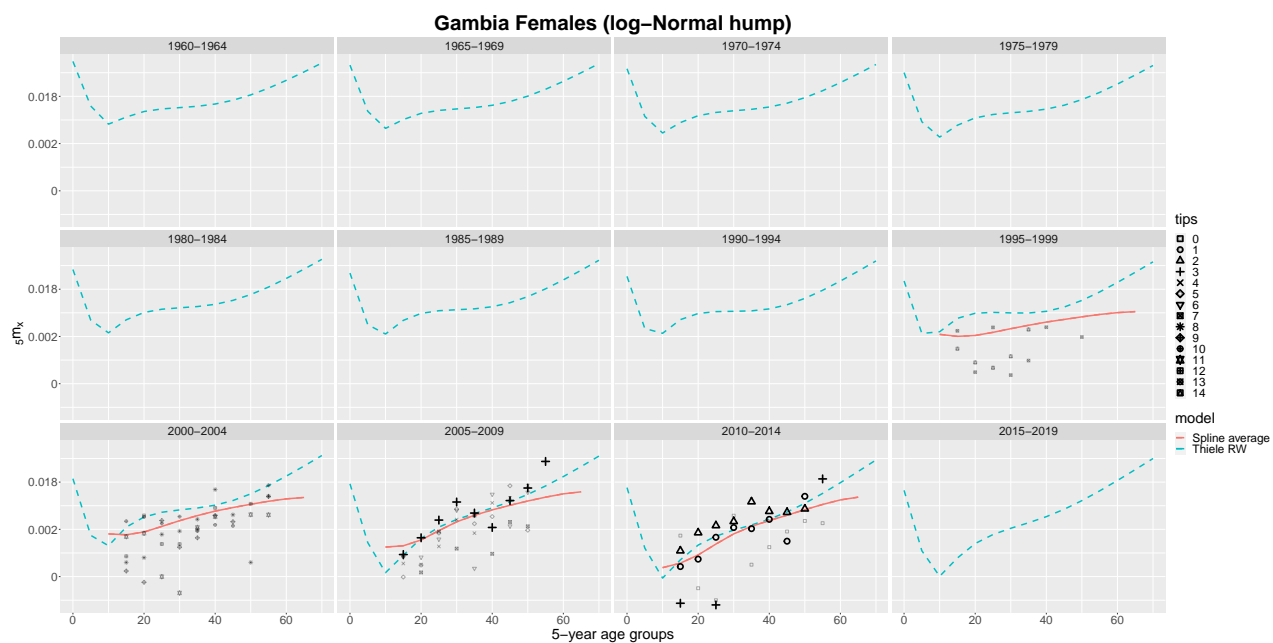


Figure 4: Mortality Schedules

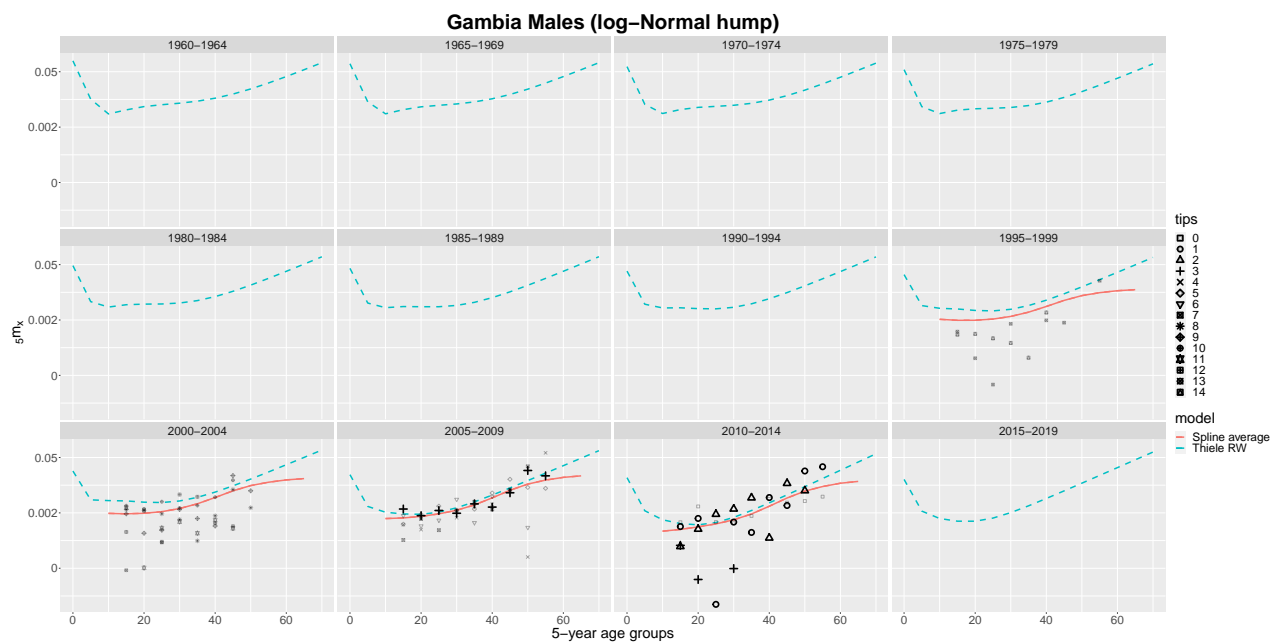


Figure 5: Mortality Schedules

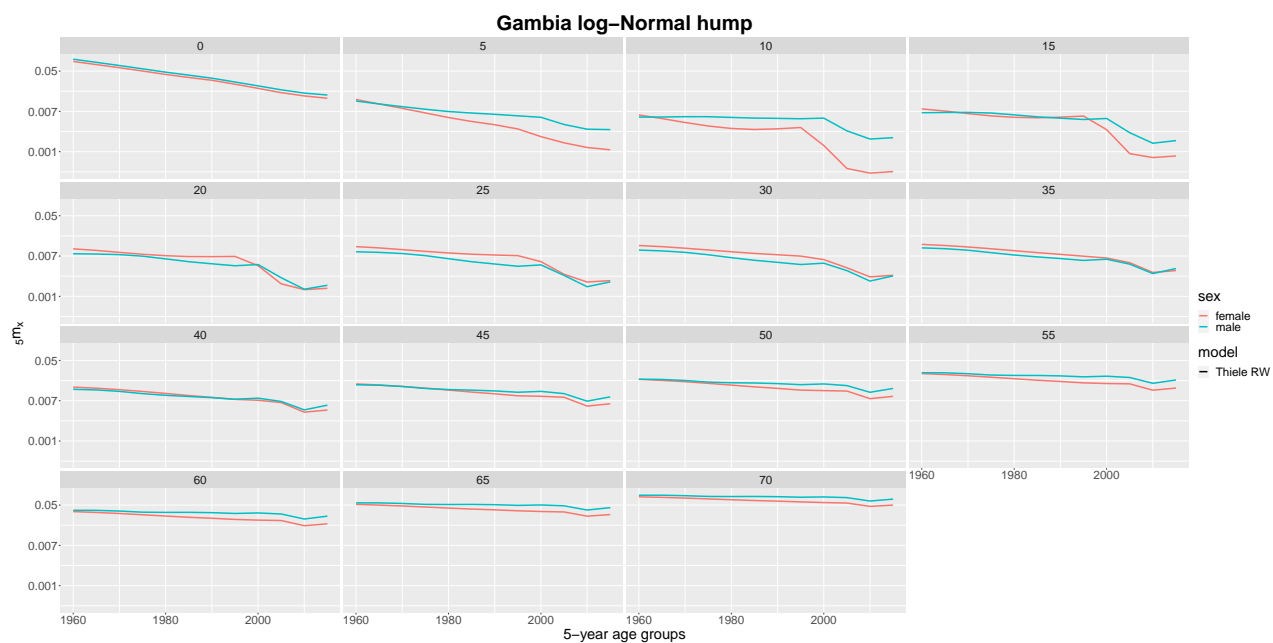


Figure 6: Mortality Schedules

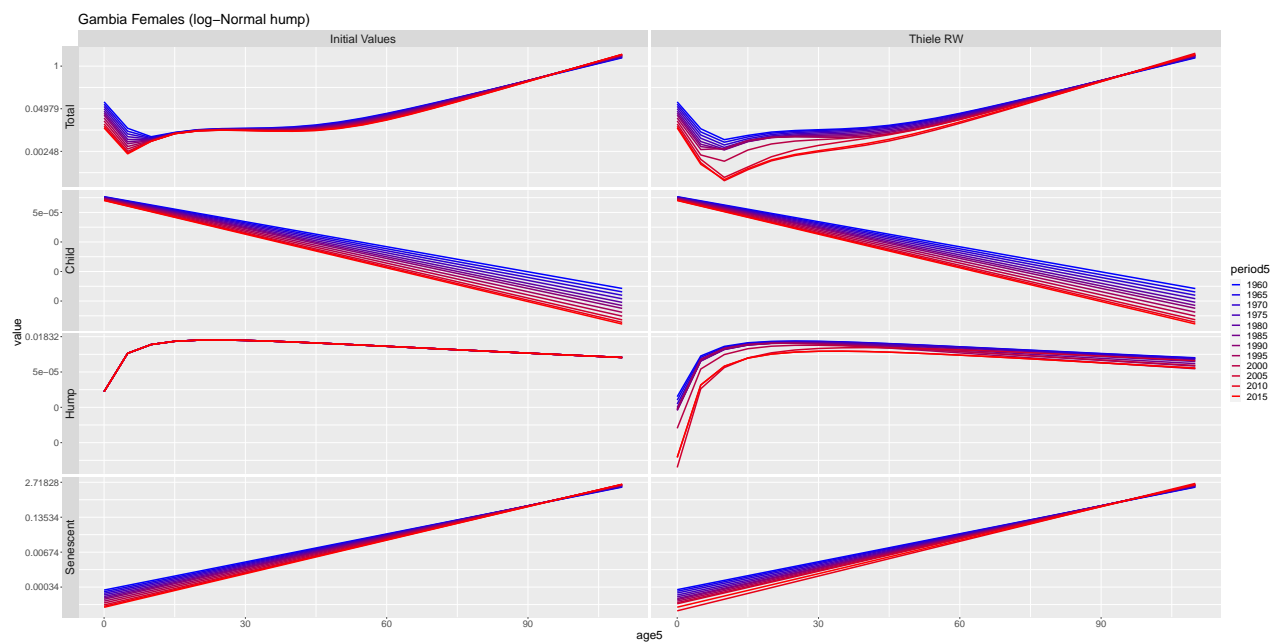


Figure 7: Thiele Decomposed

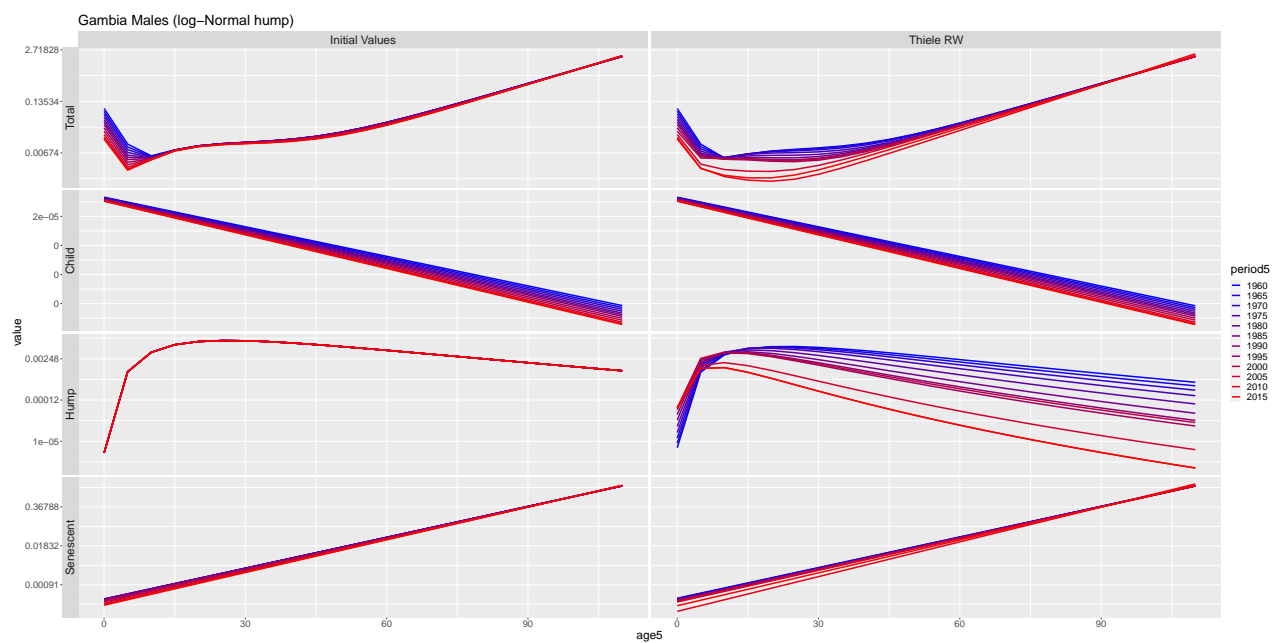


Figure 8: Thiele Decomposed

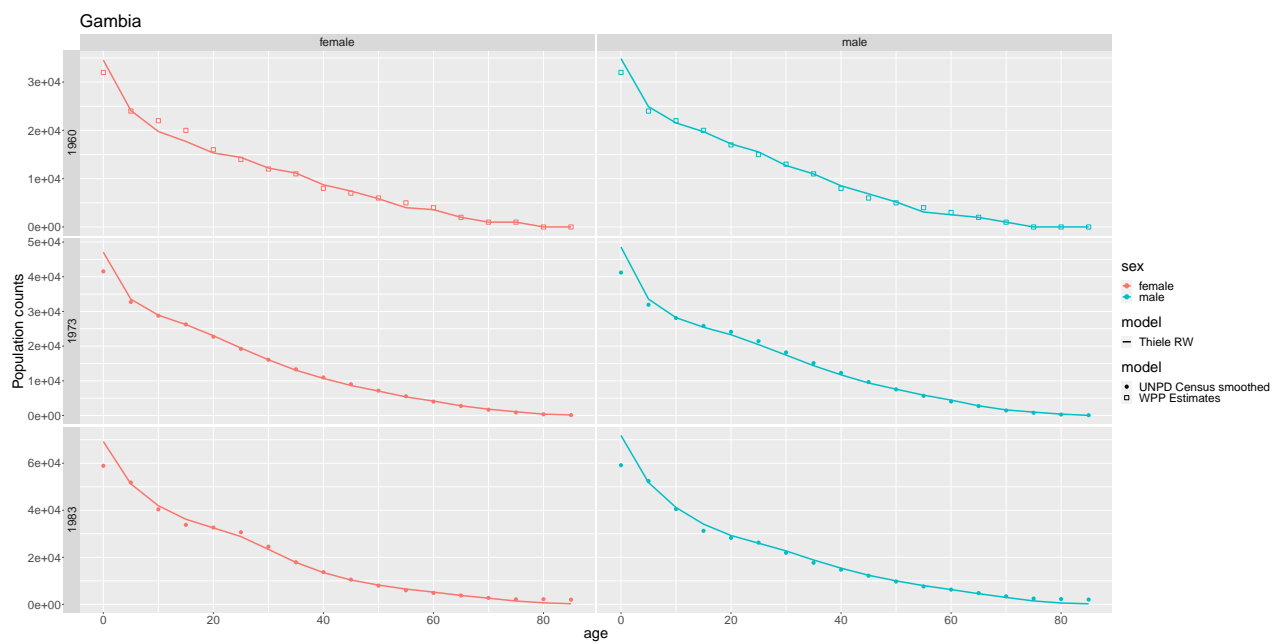


Figure 9: Population

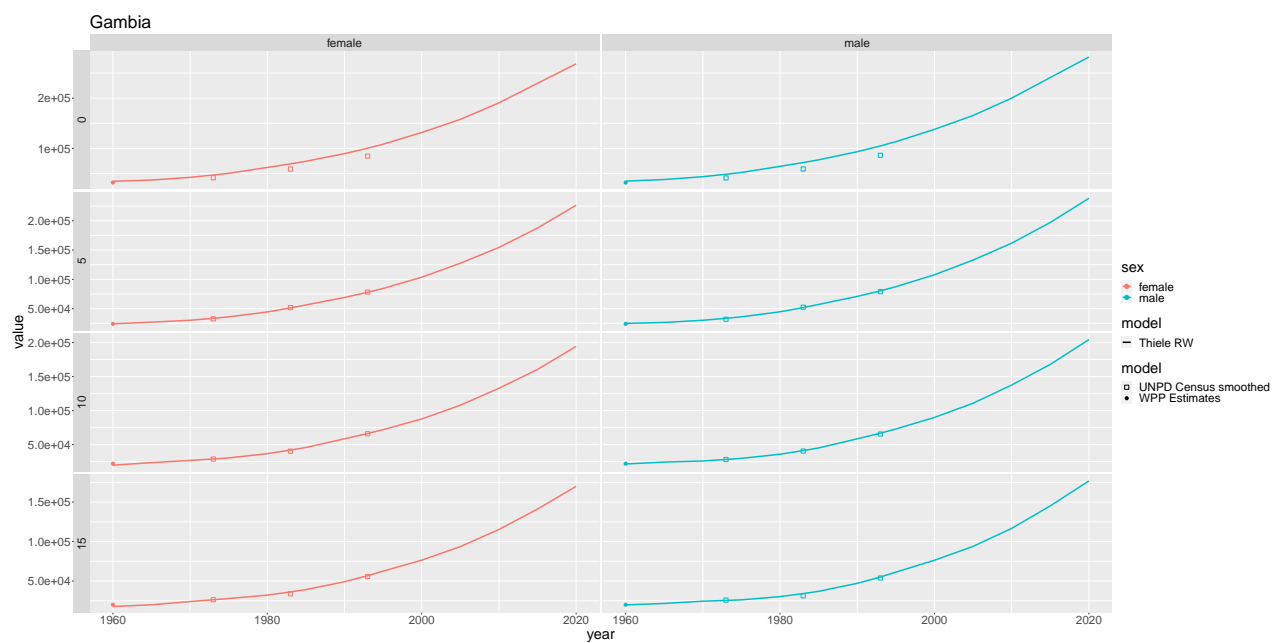


Figure 10: Population

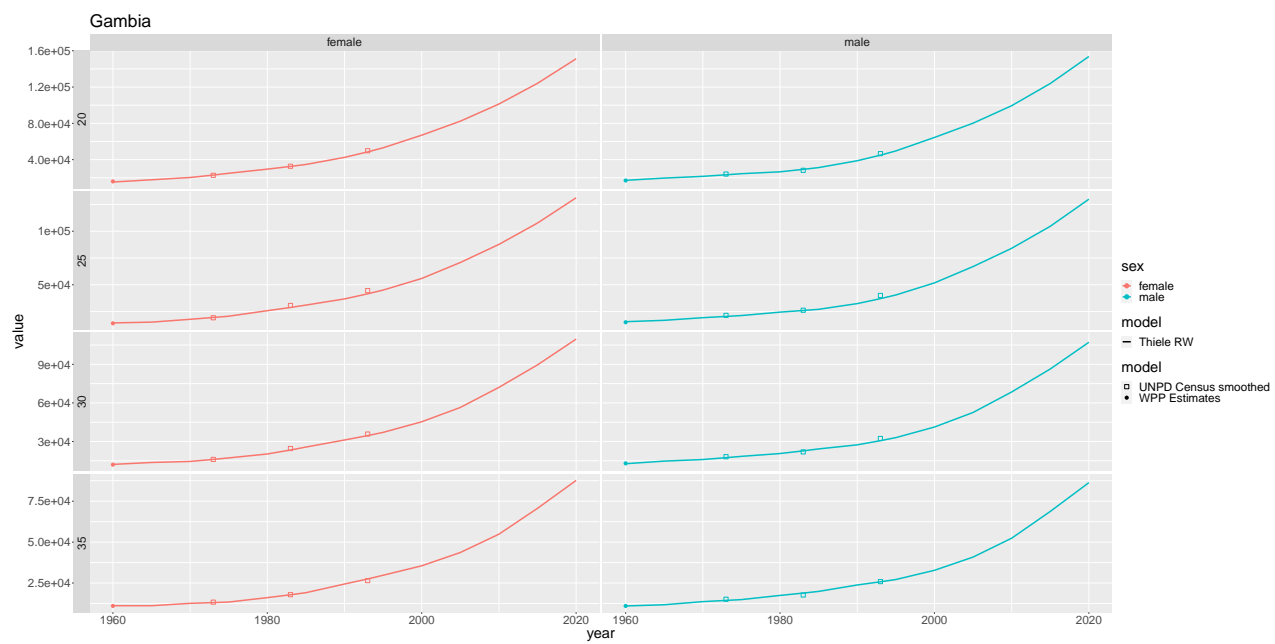


Figure 11: Population

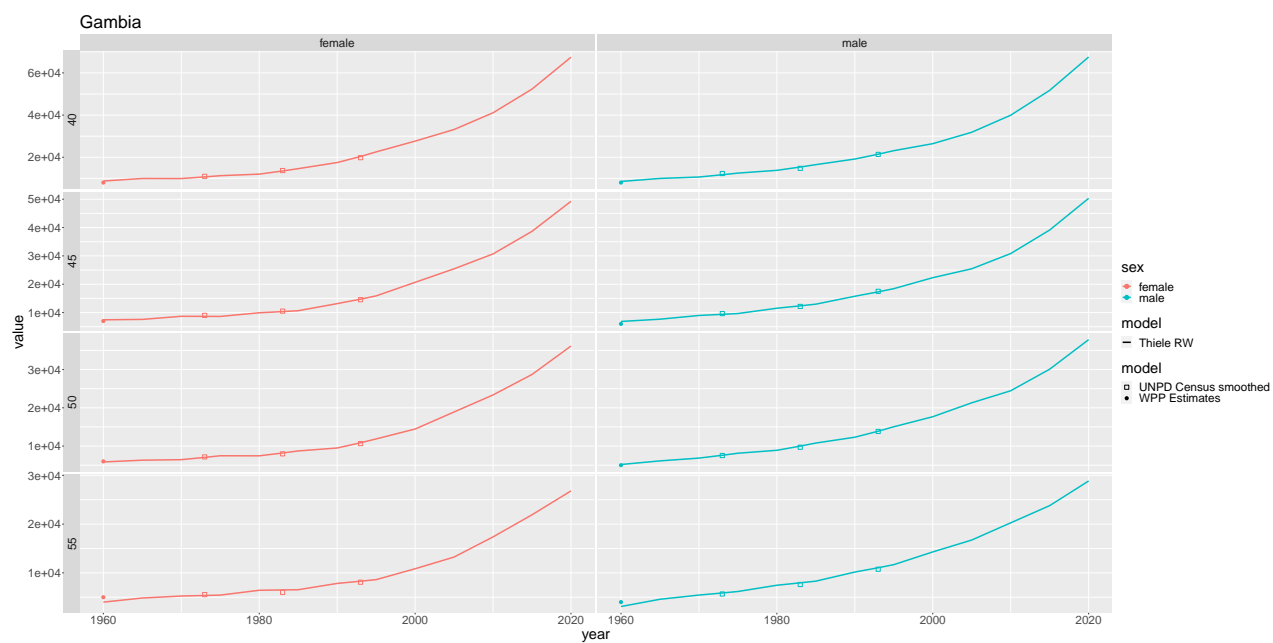


Figure 12: Population

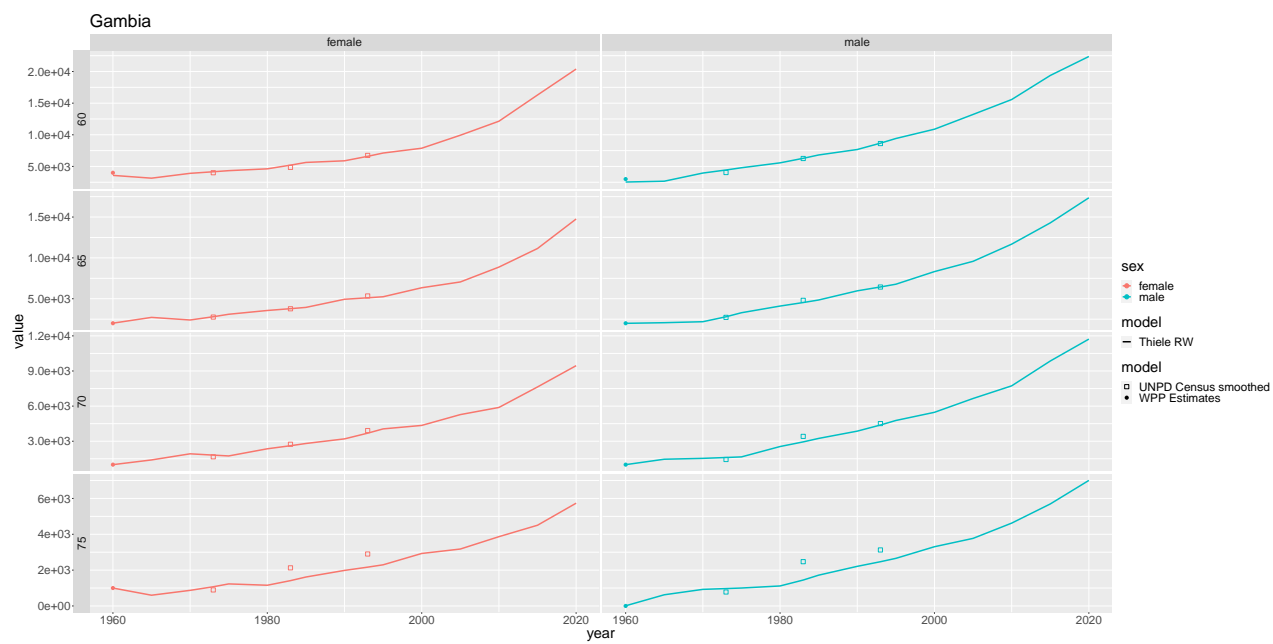


Figure 13: Population

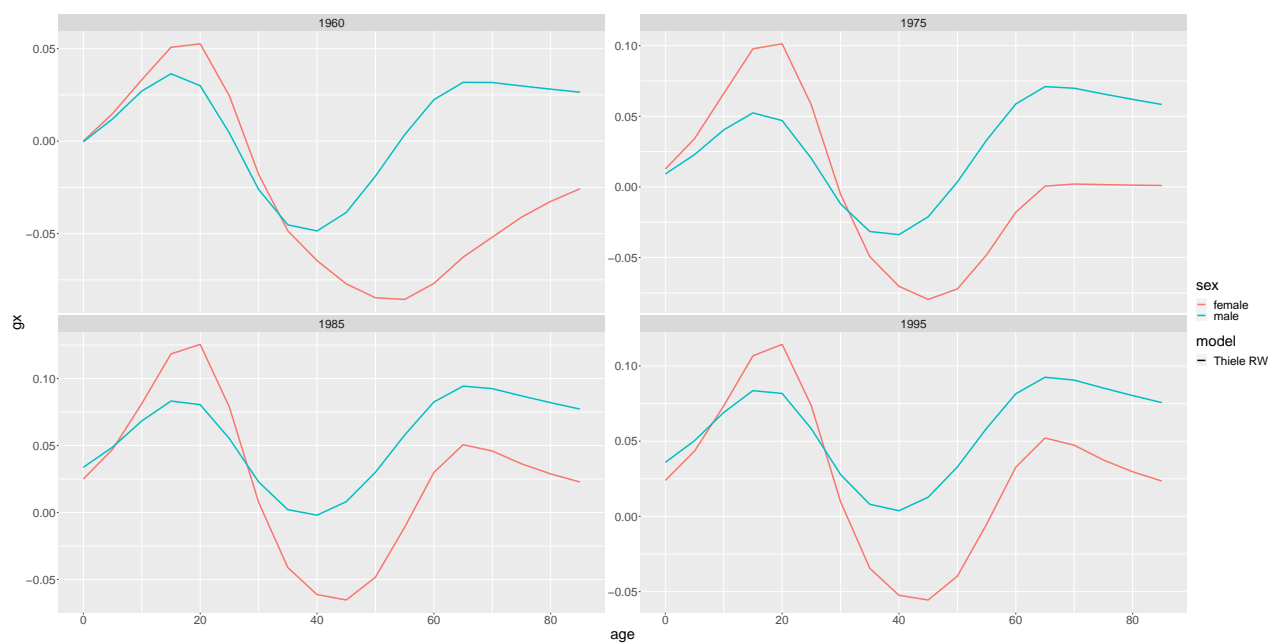


Figure 14: Migration

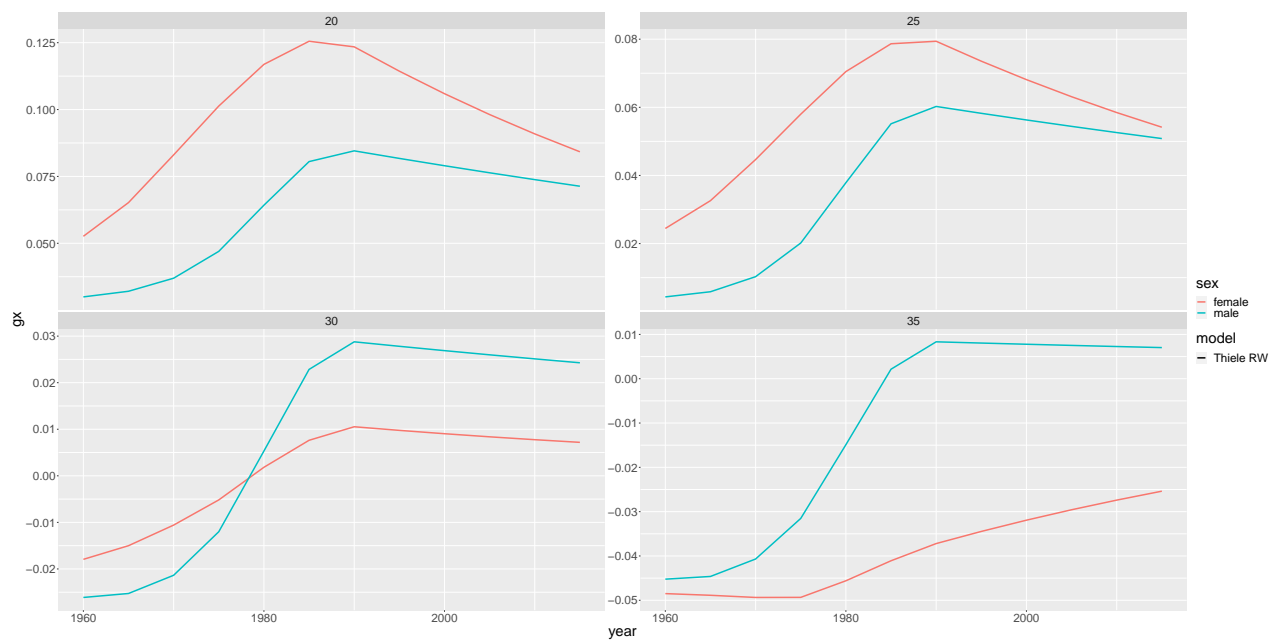


Figure 15: Migration

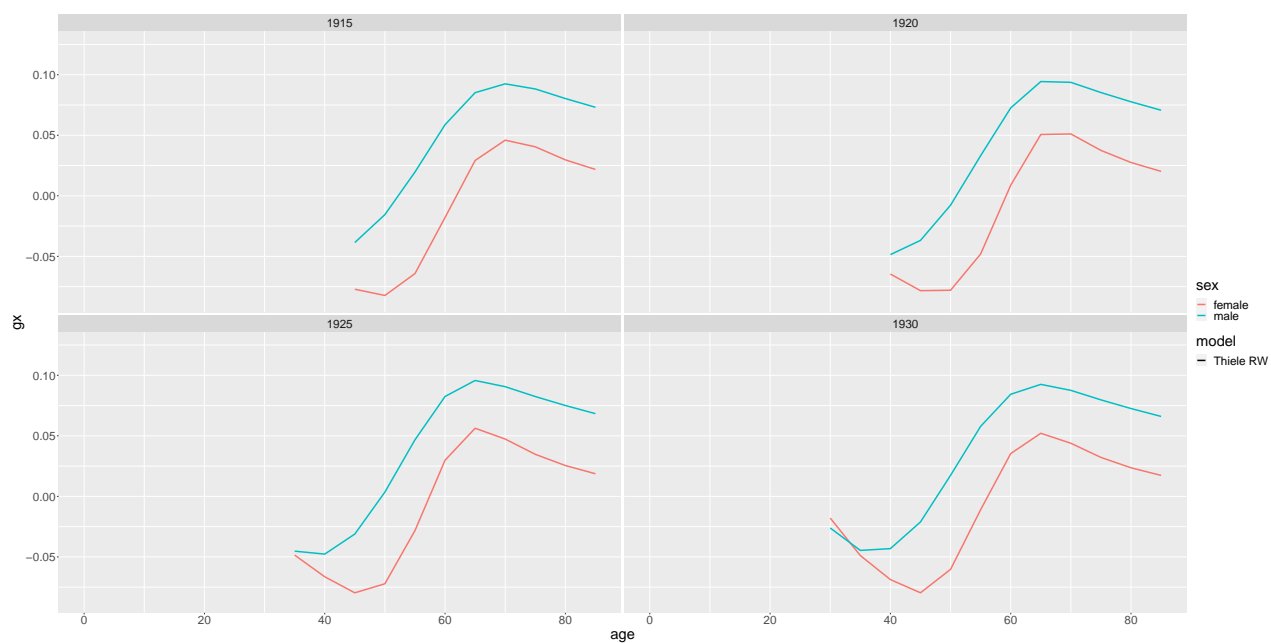


Figure 16: Migration

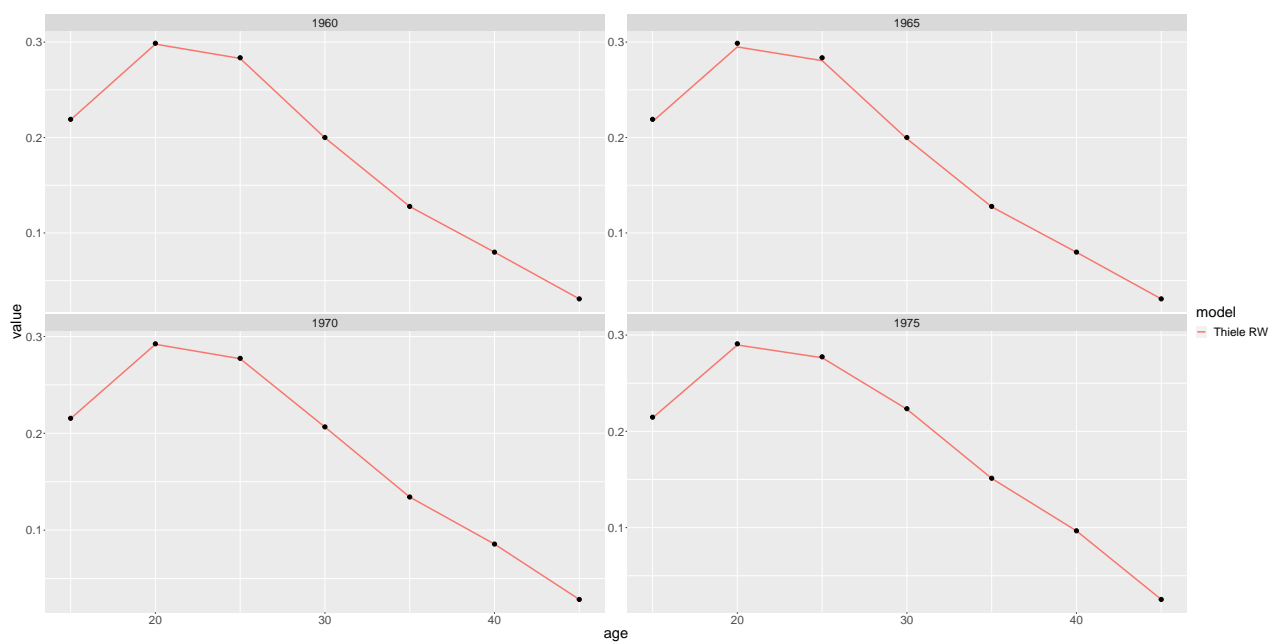


Figure 17: Fertility

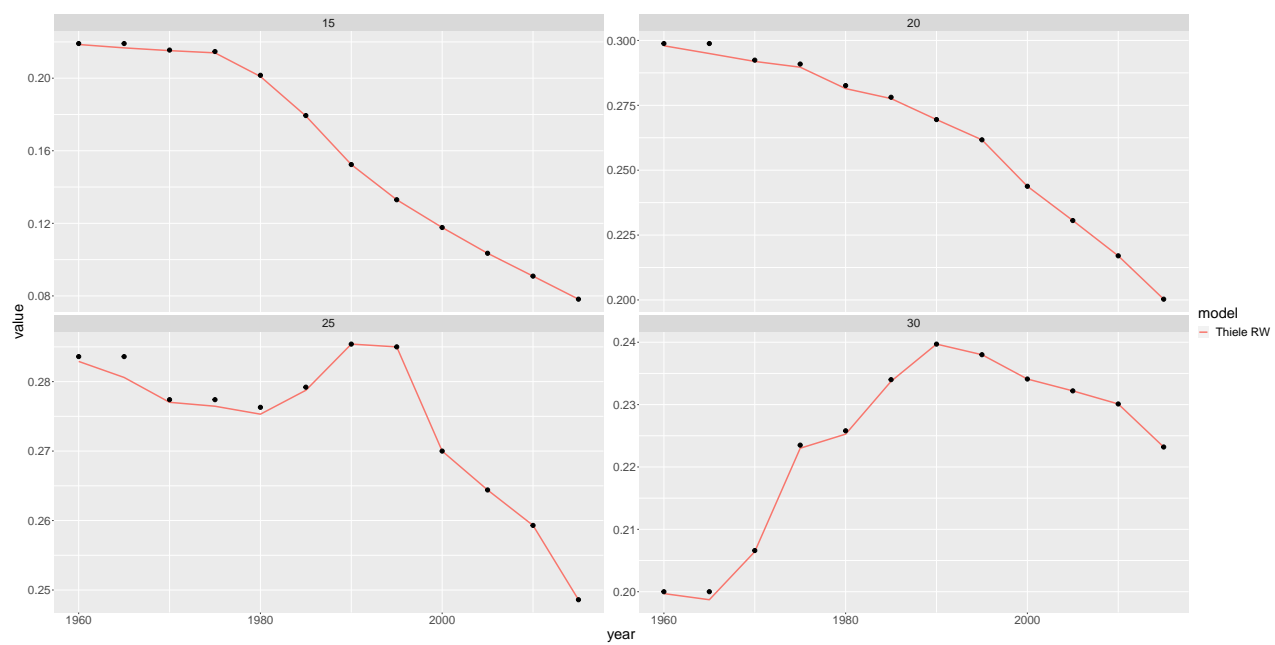


Figure 18: Fertility