

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
##   6.61    0.16     6.86
```

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

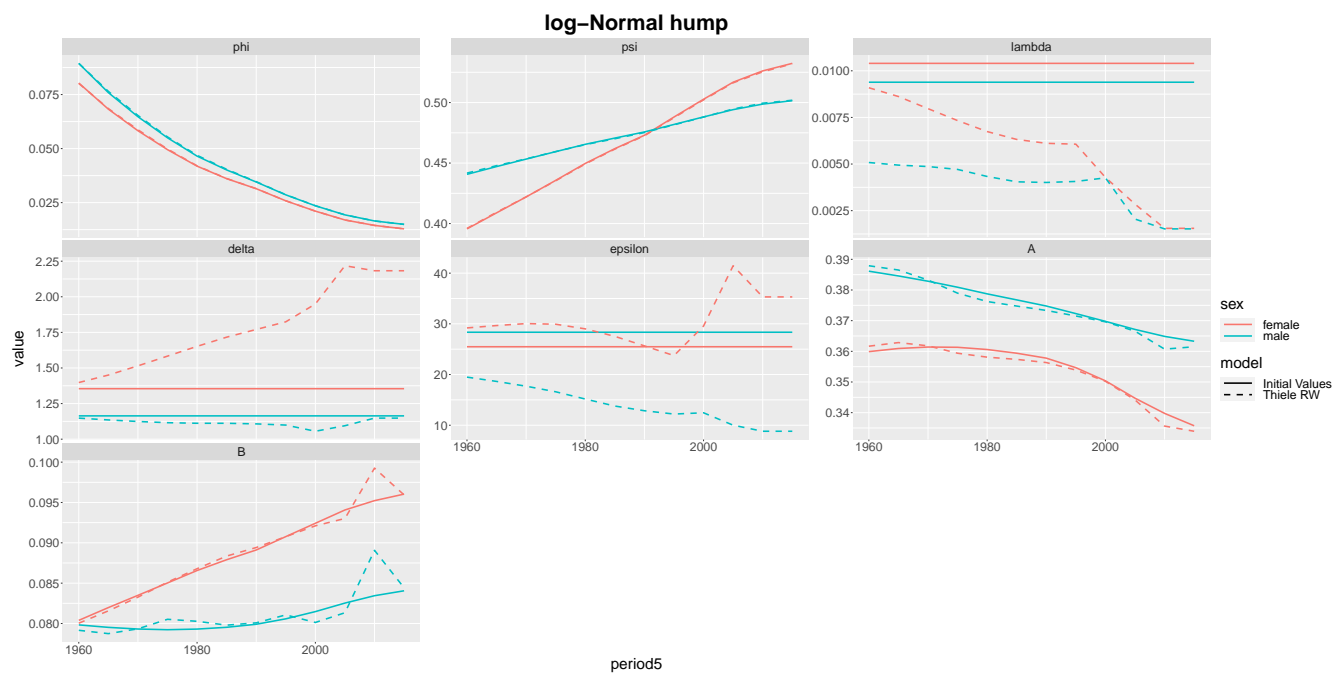


Figure 1: Estimated parameters

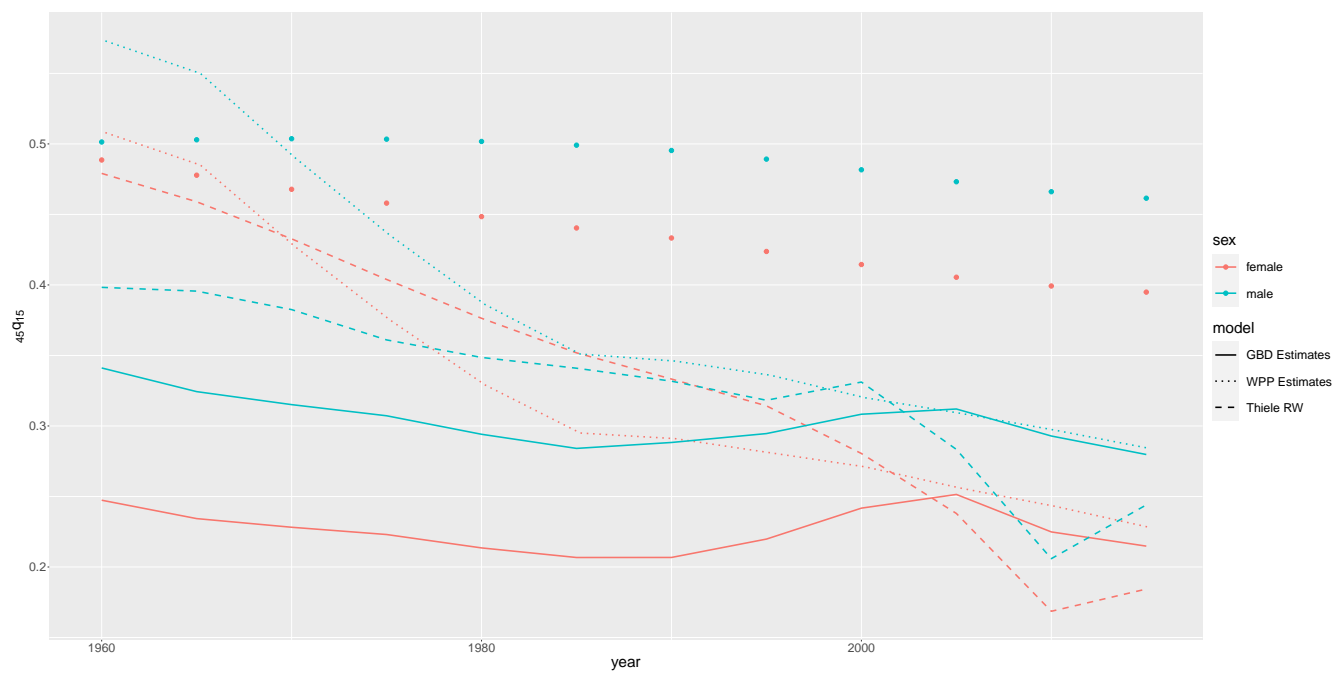


Figure 2: Estimated $_{45}q_{15}$

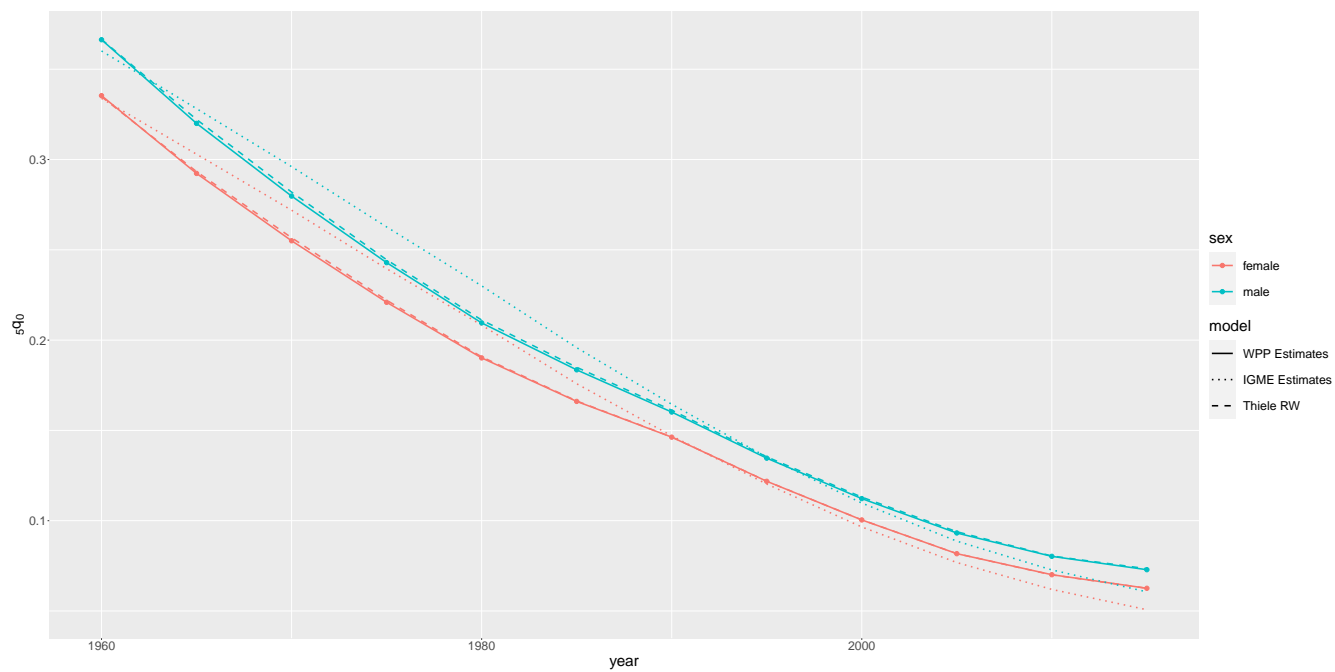


Figure 3: Estimated $_{5}q_0$

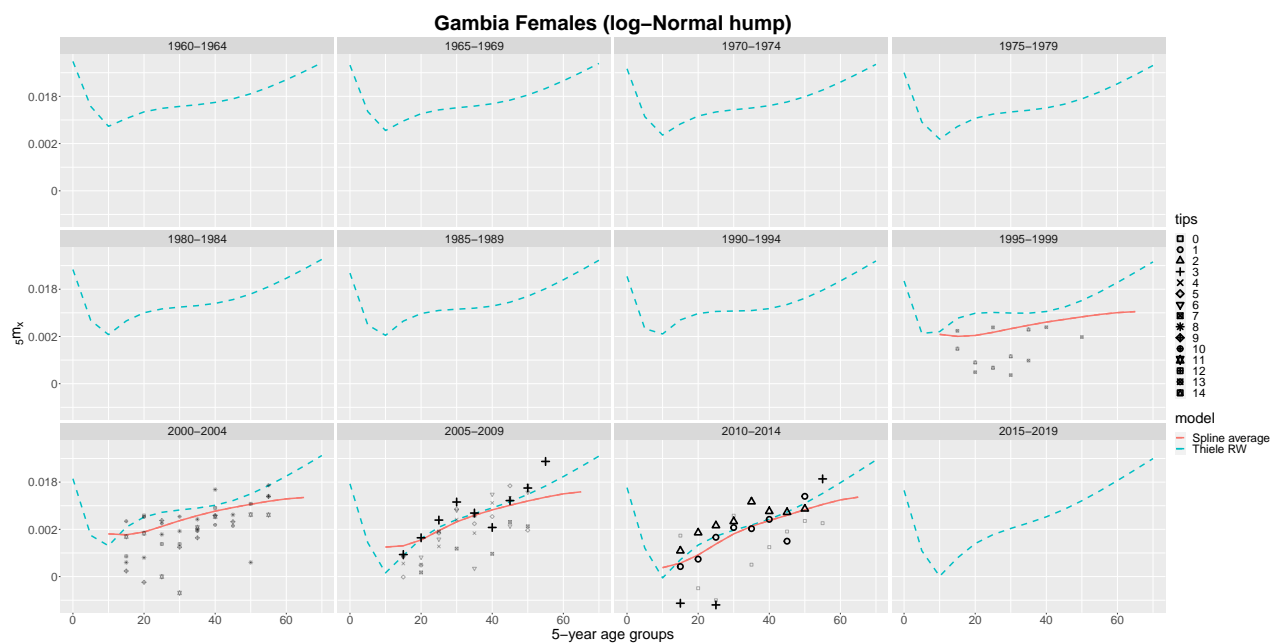


Figure 4: Mortality Schedules

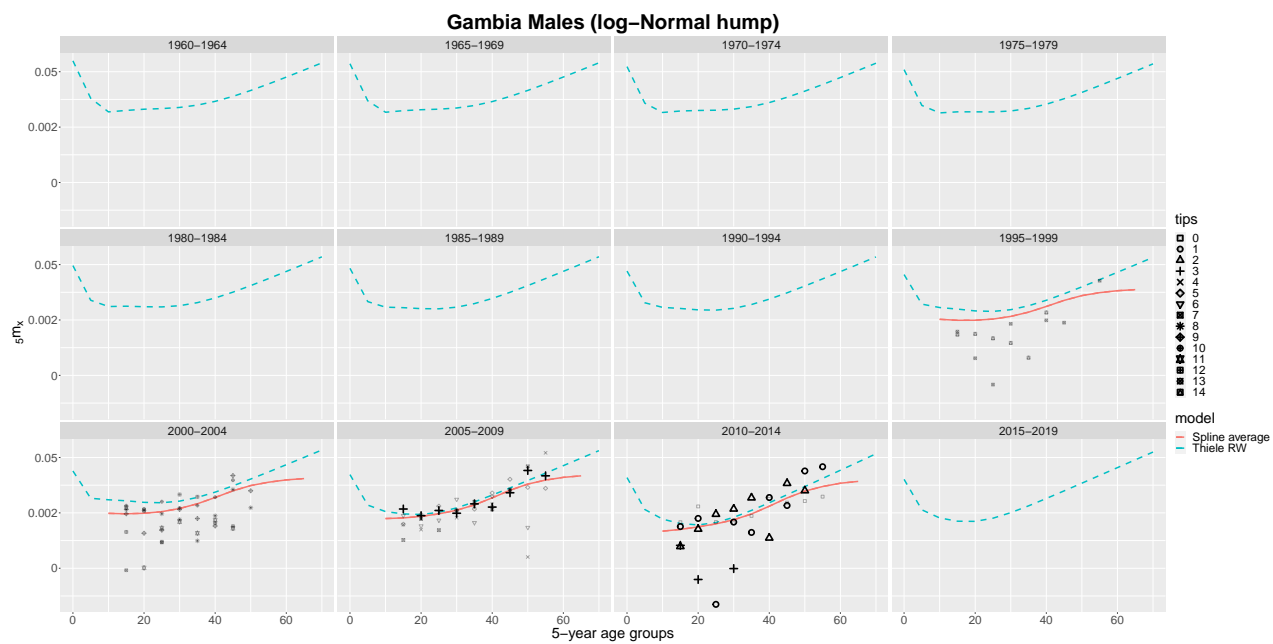


Figure 5: Mortality Schedules

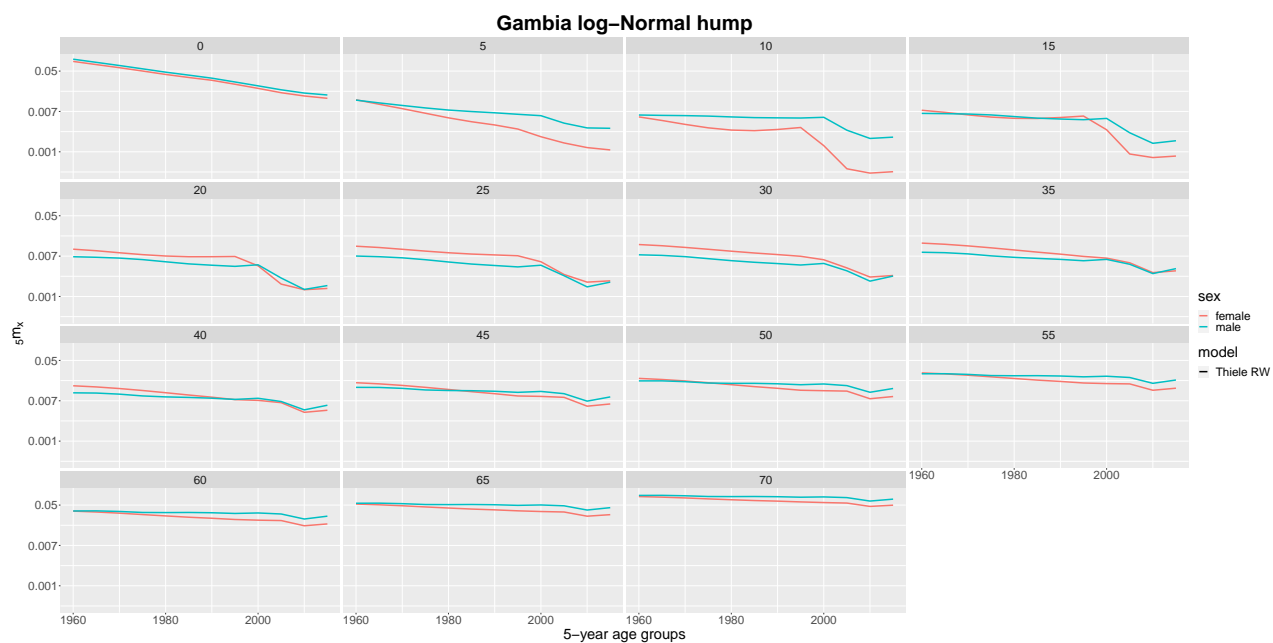


Figure 6: Mortality Schedules

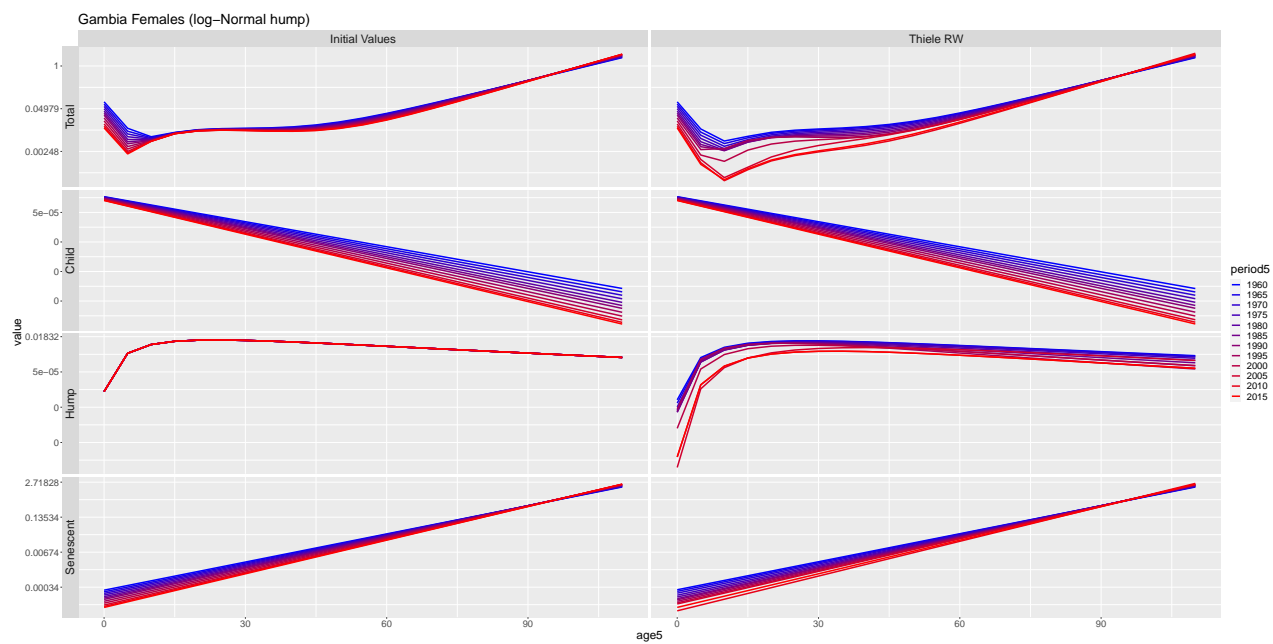


Figure 7: Thiele Decomposed

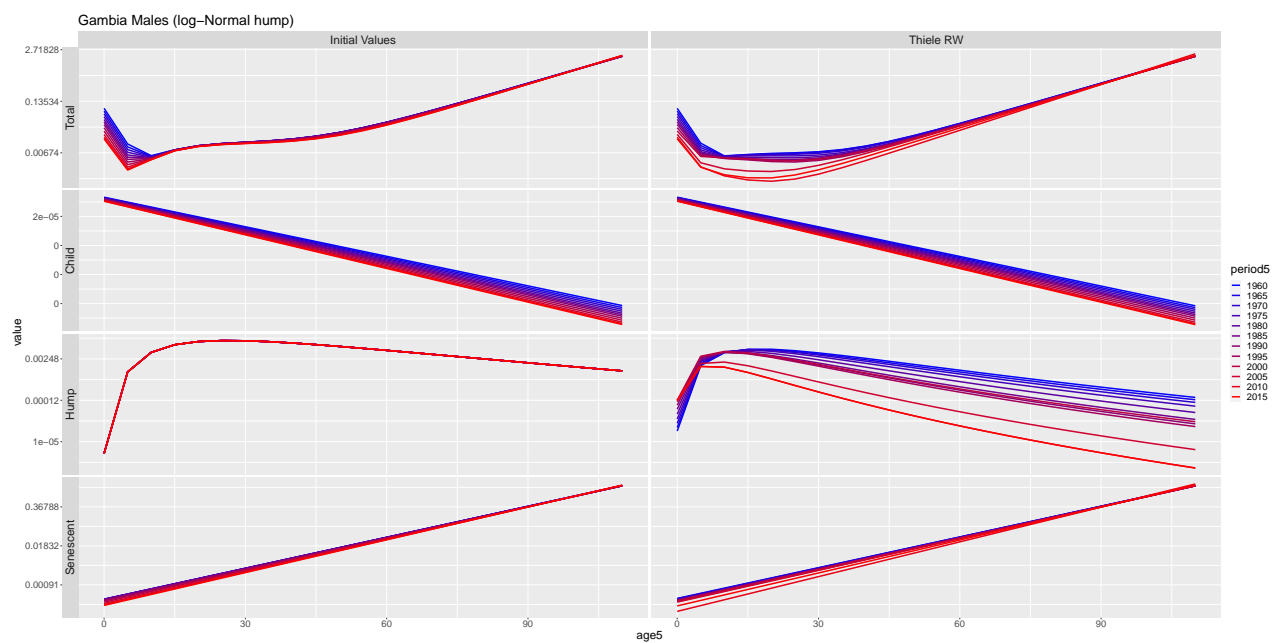


Figure 8: Thiele Decomposed

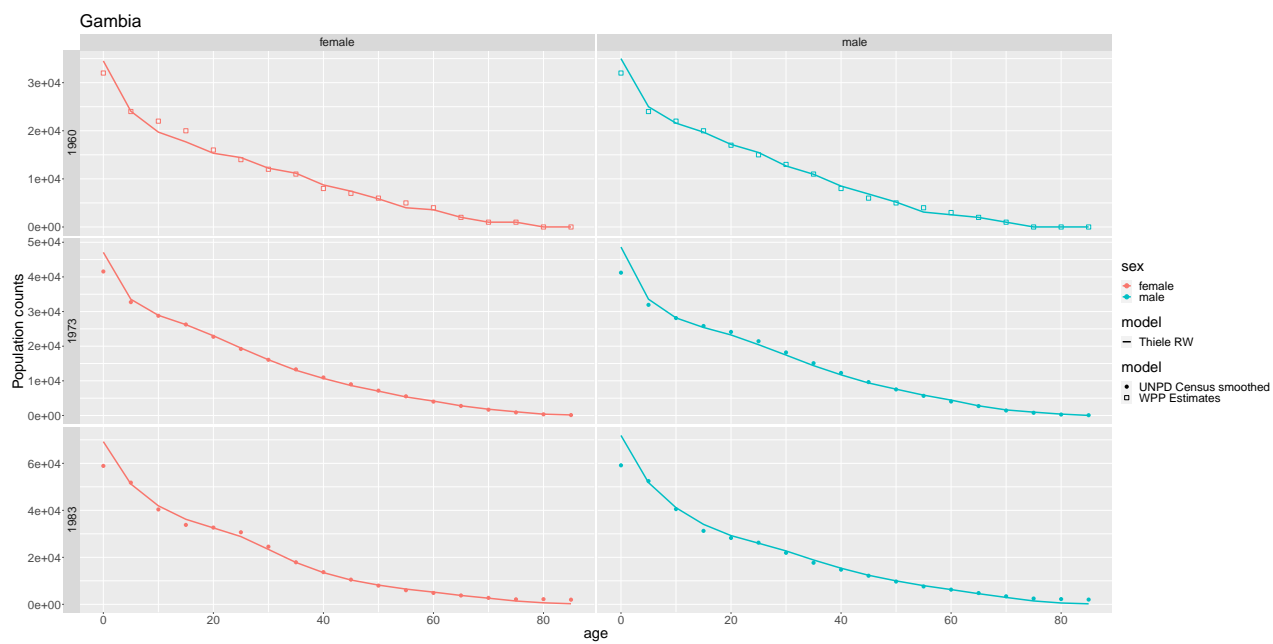


Figure 9: Population

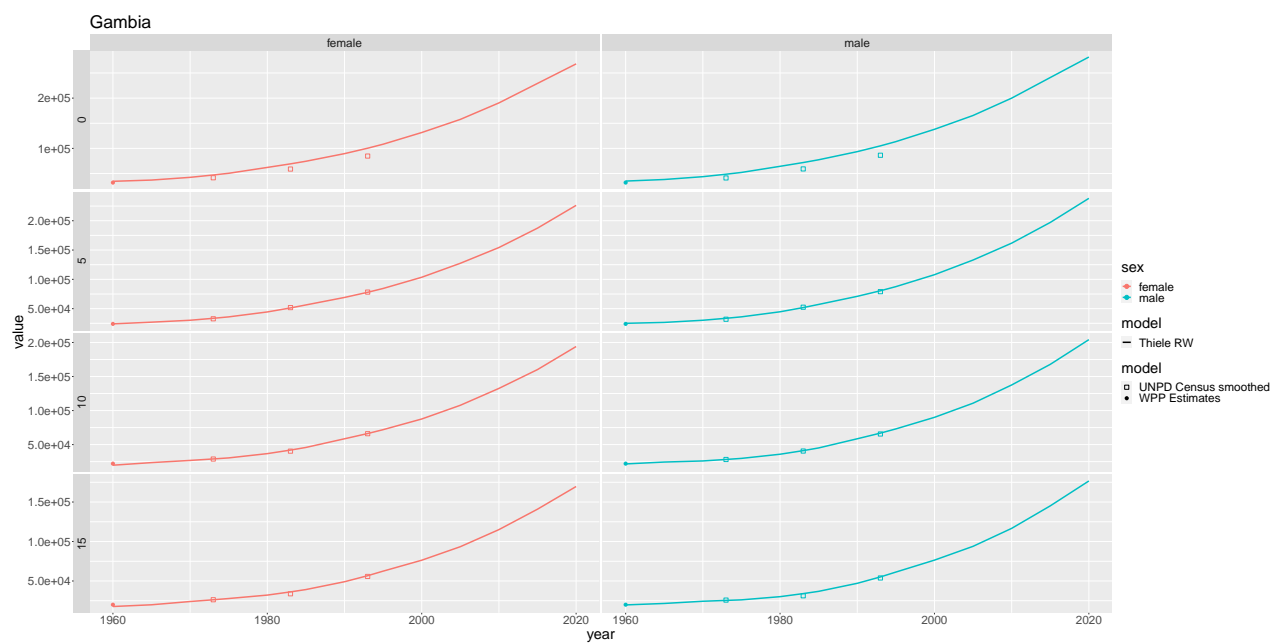


Figure 10: Population

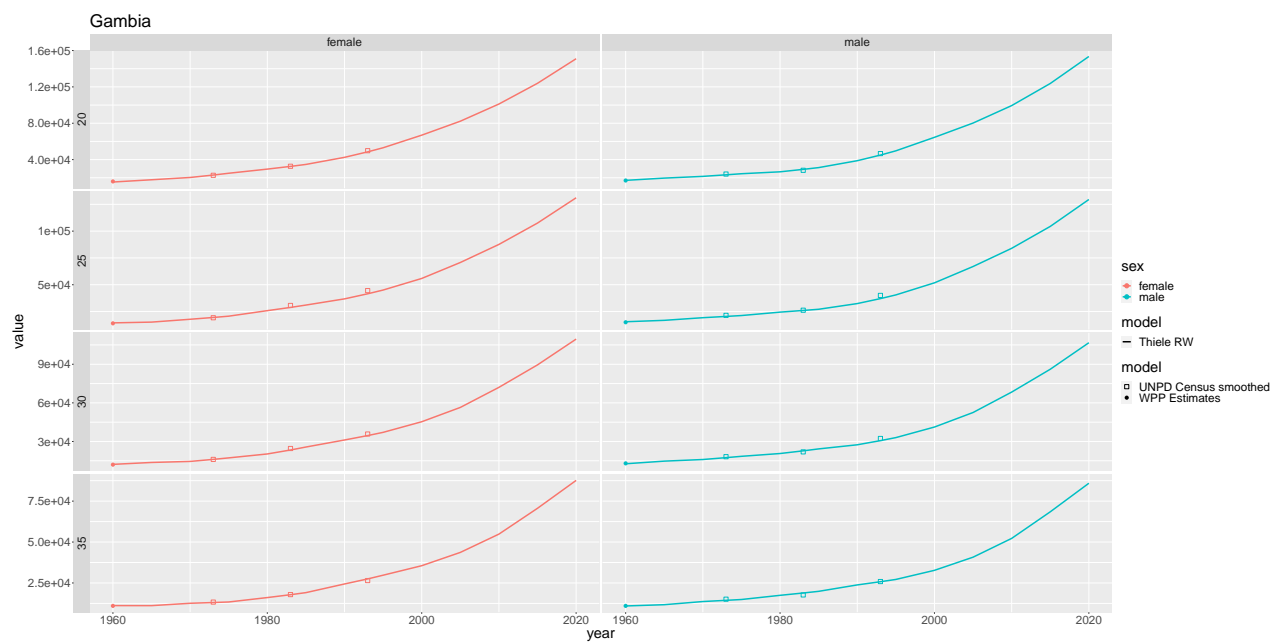


Figure 11: Population

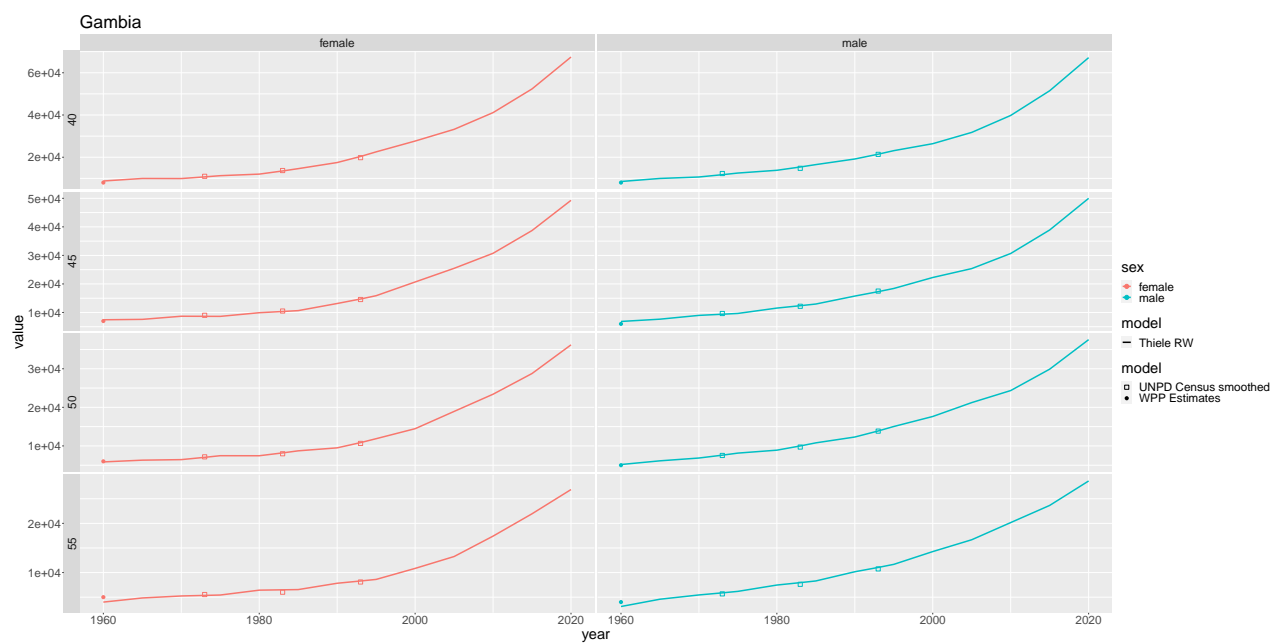


Figure 12: Population

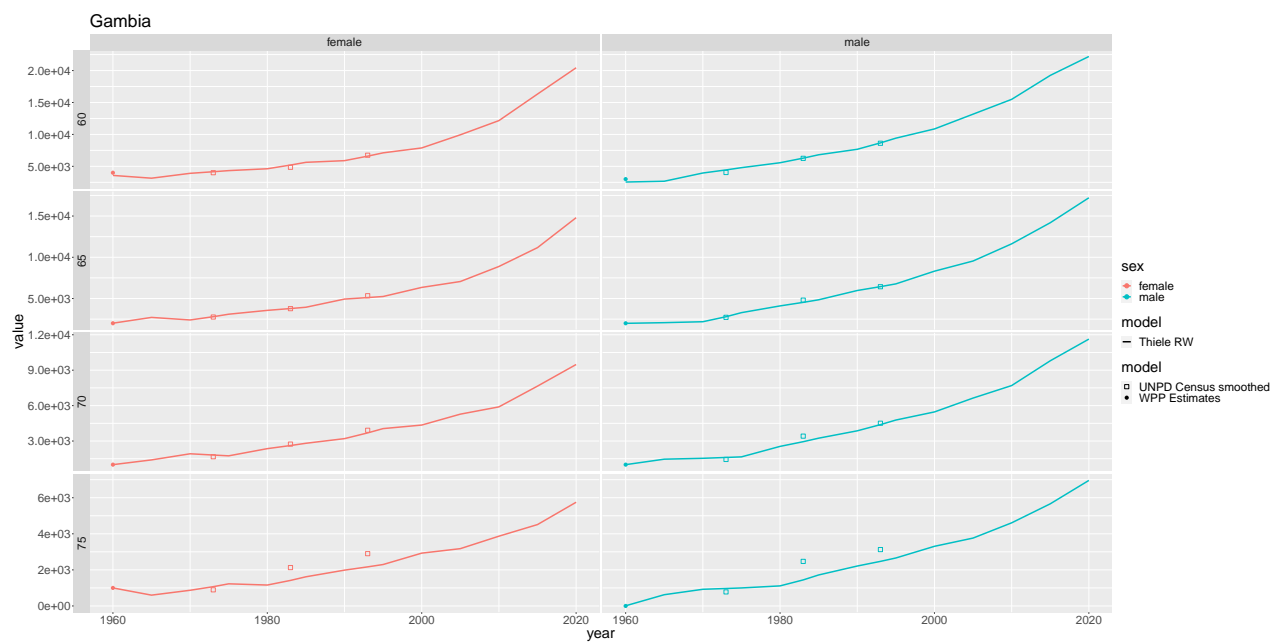


Figure 13: Population

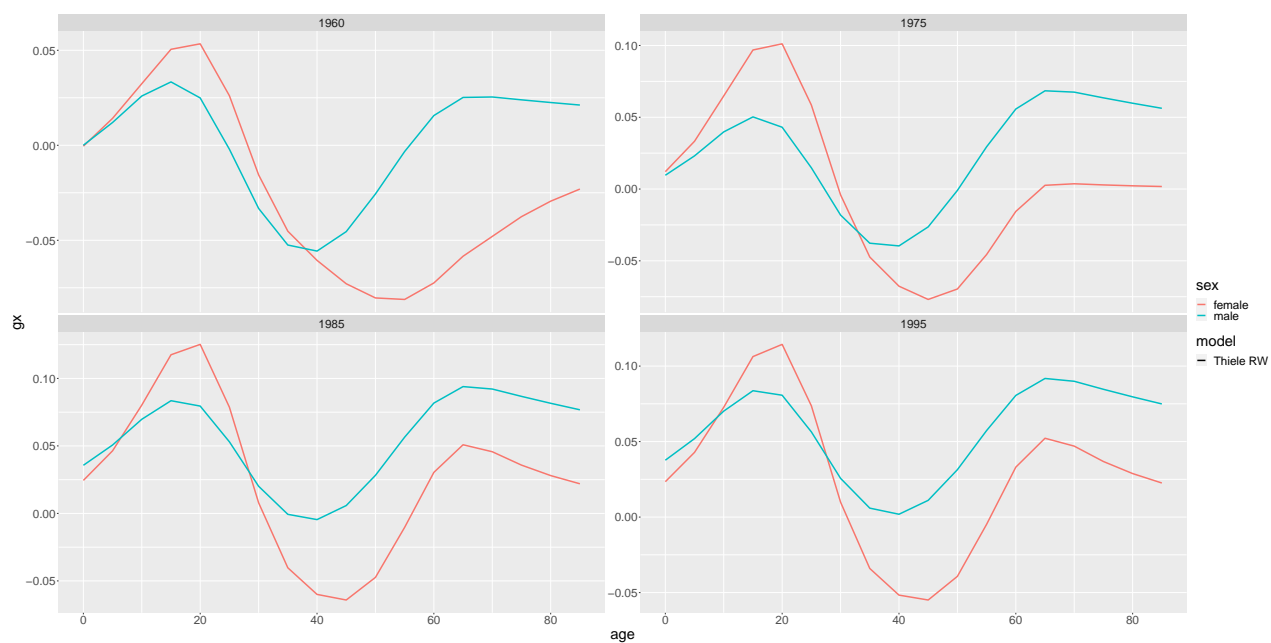


Figure 14: Migration

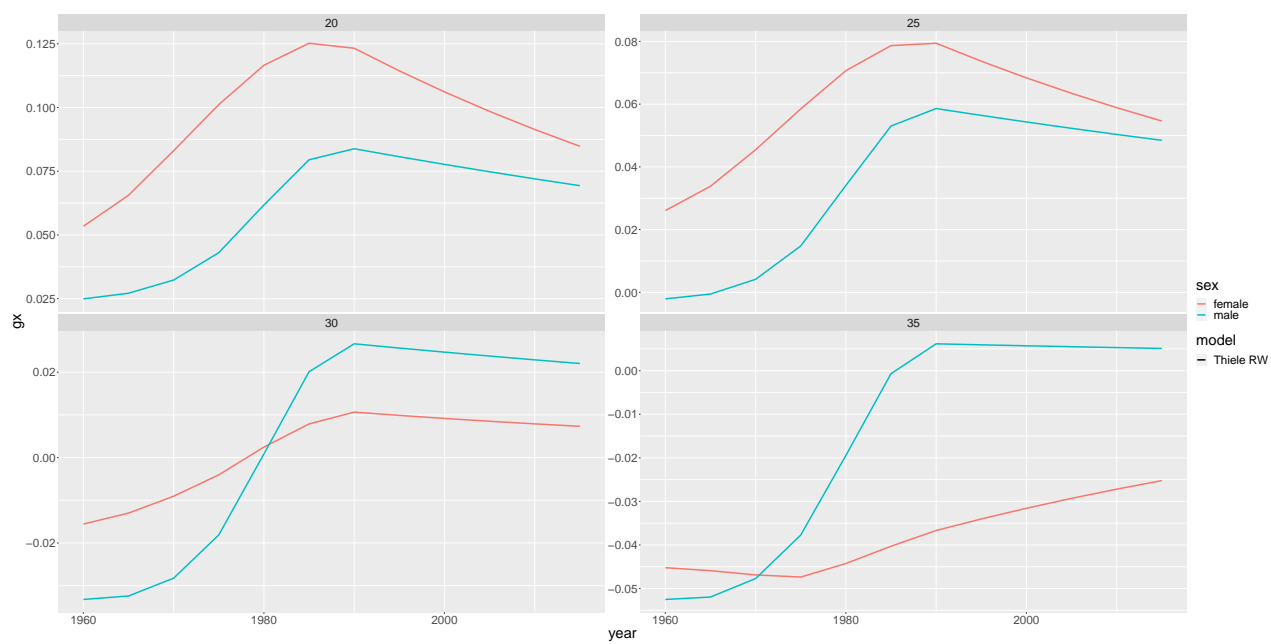


Figure 15: Migration

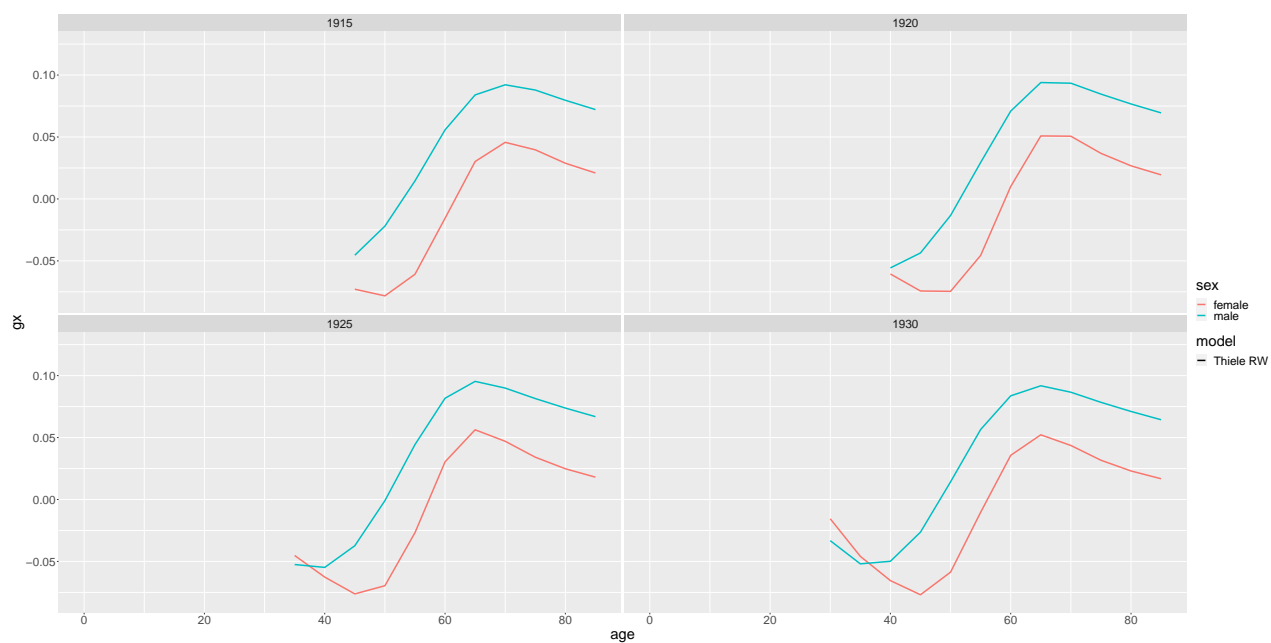


Figure 16: Migration

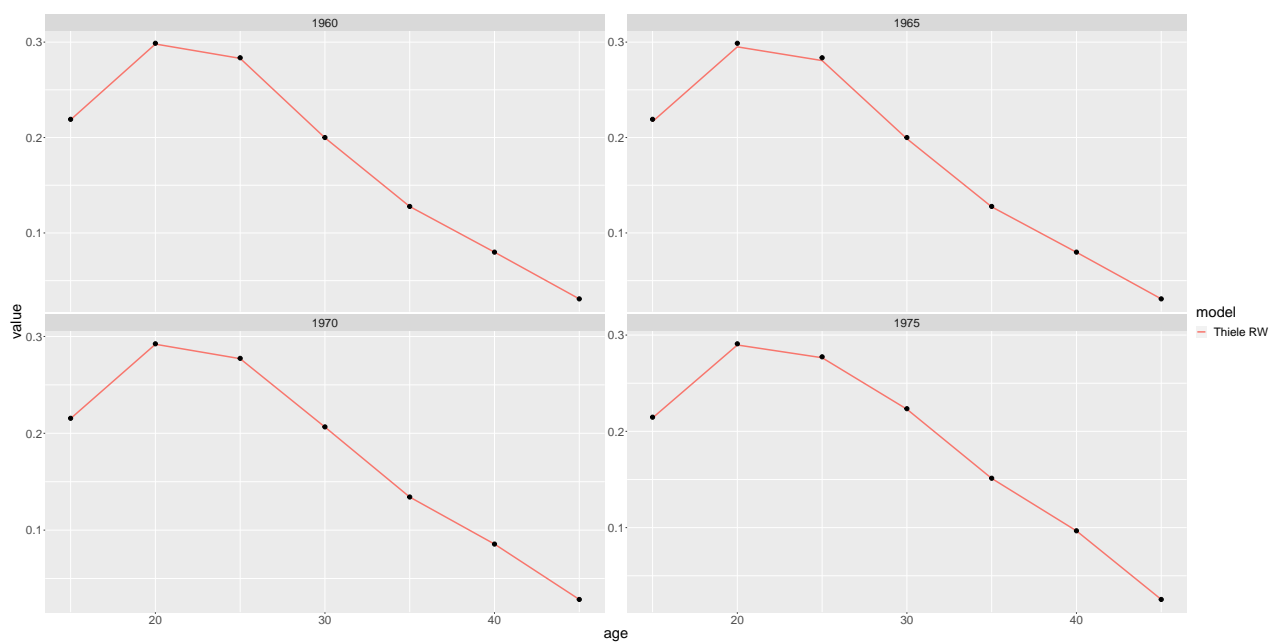


Figure 17: Fertility

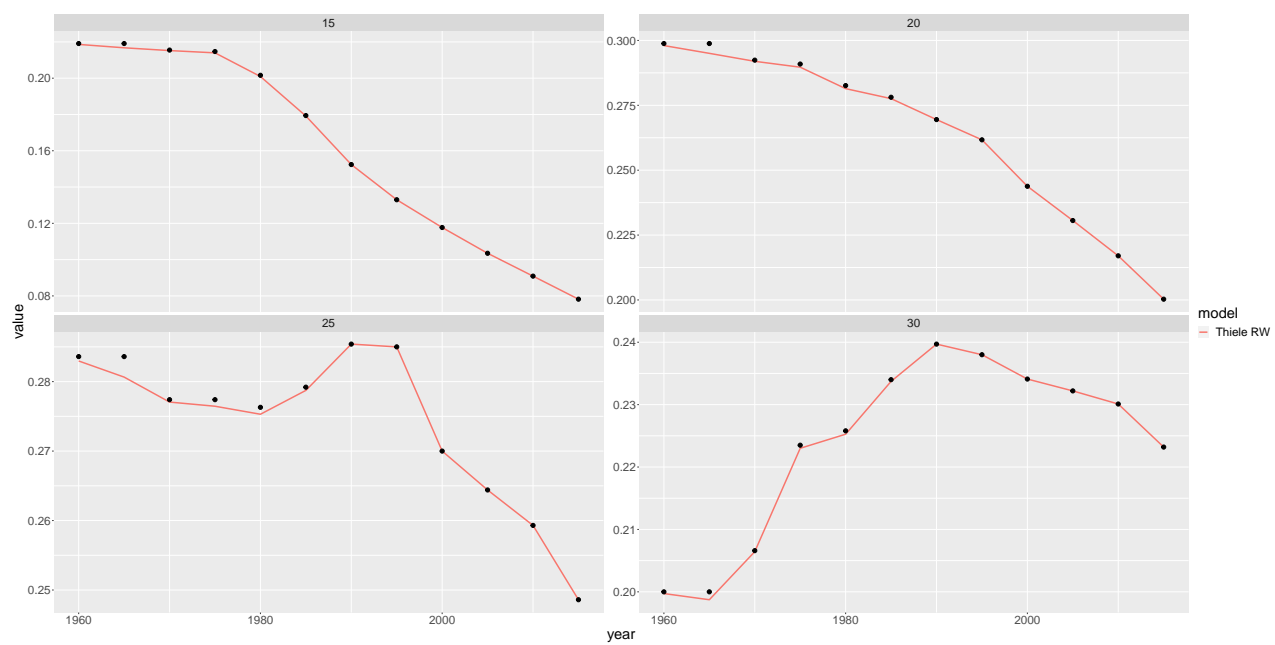


Figure 18: Fertility