

Liberia

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

```
## # A tibble: 18 x 5
```

```
##   aggr.age `1962` `1974` `1984` `2008`
## *   <dbl>   <dbl>   <dbl>   <dbl>   <dbl>
## 1      0 83757 112473 175096 263911
## 2      5 64953 101734. 148912. 242940.
## 3     10 52698.  86102. 124522. 212606.
## 4     15 47194.  77449. 113220. 190090.
## 5     20 47225.  71126. 102939. 174774.
## 6     25 47357  64640.  84985. 148747.
## 7     30 43429.  57040.  66985. 119966
## 8     35 36193.  45099.  53004  98793.
## 9     40 27916  33255.  40937.  76878.
## 10    45 20892  25422.  31991.  55524.
## 11    50 15643.  19339.  25344  39151.
## 12    55 12050.  14584  19994.  29099.
## 13    60  9246.  12546.  17390  25189
## 14    65  7298  9567  13581.  20468.
## 15    70  4358  5539  7838  14674
## 16    75  6865  8263  15661  10667
## 17    80    NA    NA    NA   6599
## 18    85    NA    NA    NA   8749
```

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

```
## # A tibble: 18 x 5
```

```
##   aggr.age `1962` `1974` `1984` `2008`
## *   <dbl>   <dbl>   <dbl>   <dbl>   <dbl>
## 1      0 81625 115252 175525 270564
## 2      5 68809 107996. 156238. 247061.
## 3     10 52433.  91310. 132812. 217634
## 4     15 43001.  73288 111146. 188906
## 5     20 38585.  59558.  93543. 163579.
## 6     25 37145.  52254.  78034. 137822.
## 7     30 36123.  48819.  63022. 113698.
## 8     35 33761.  44476  51116.  96817
## 9     40 29697.  37813.  42878  81576.
## 10    45 24926.  31391.  36068.  63548.
## 11    50 20001.  25404  29160.  46136.
## 12    55 15733.  20186  24042.  33073.
## 13    60 11897.  17028  21570.  25293.
## 14    65  8808  13044.  17269.  19079
## 15    70  4963  8855  11361  13879
## 16    75  8212  11788  21859  10228.
## 17    80    NA    NA    NA   5408
## 18    85    NA    NA    NA   8889
```

Thiele log-Normal Hump RW

```
##   user  system elapsed
## 20.55   0.42   21.03
```

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

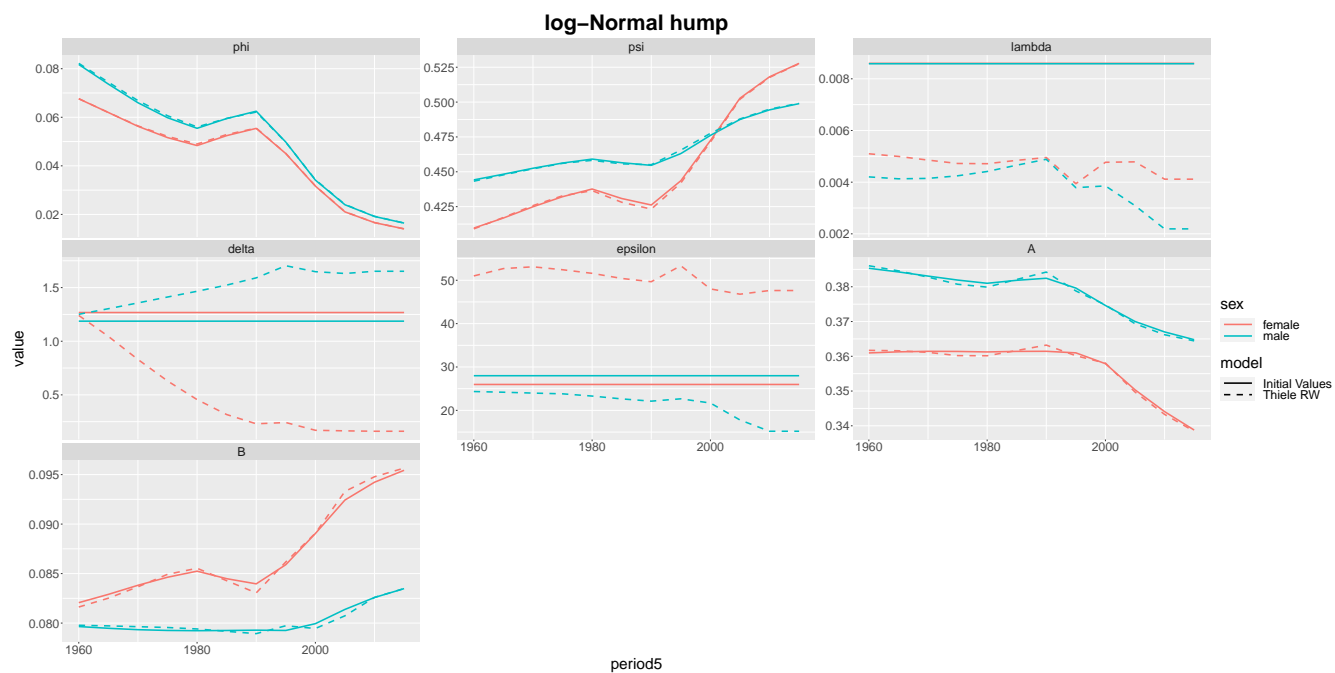


Figure 1: Estimated parameters

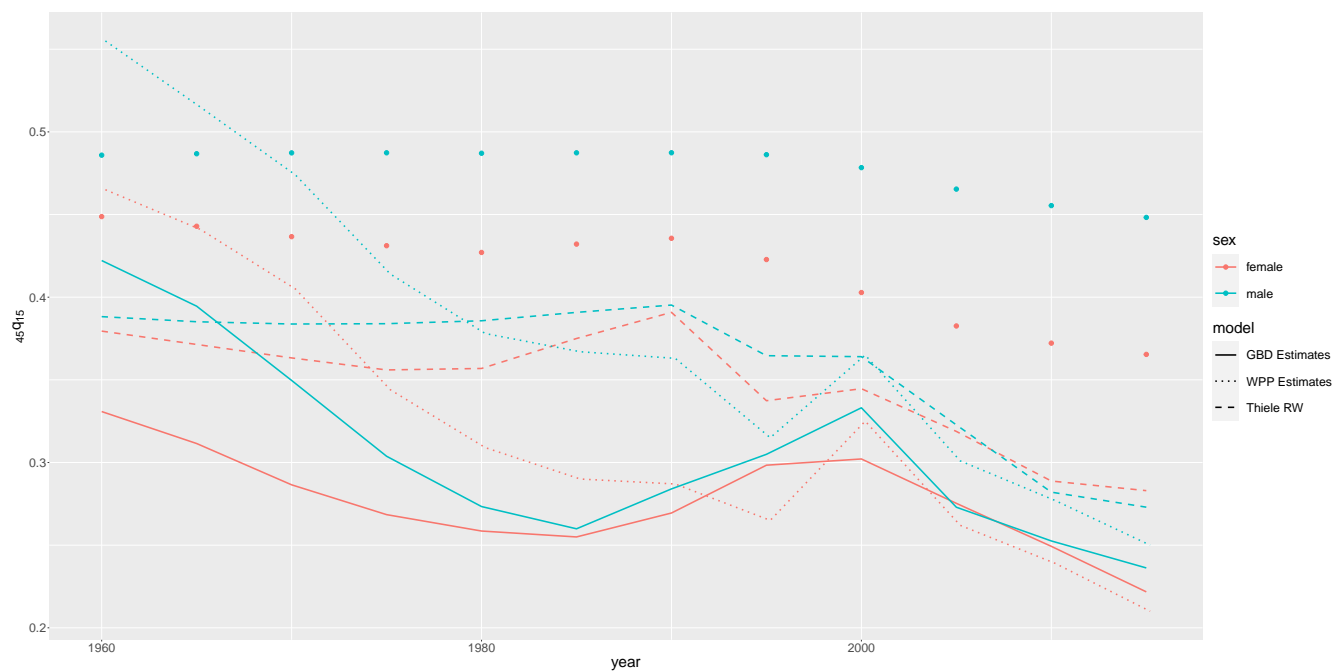


Figure 2: Estimated $_{45}q_{15}$

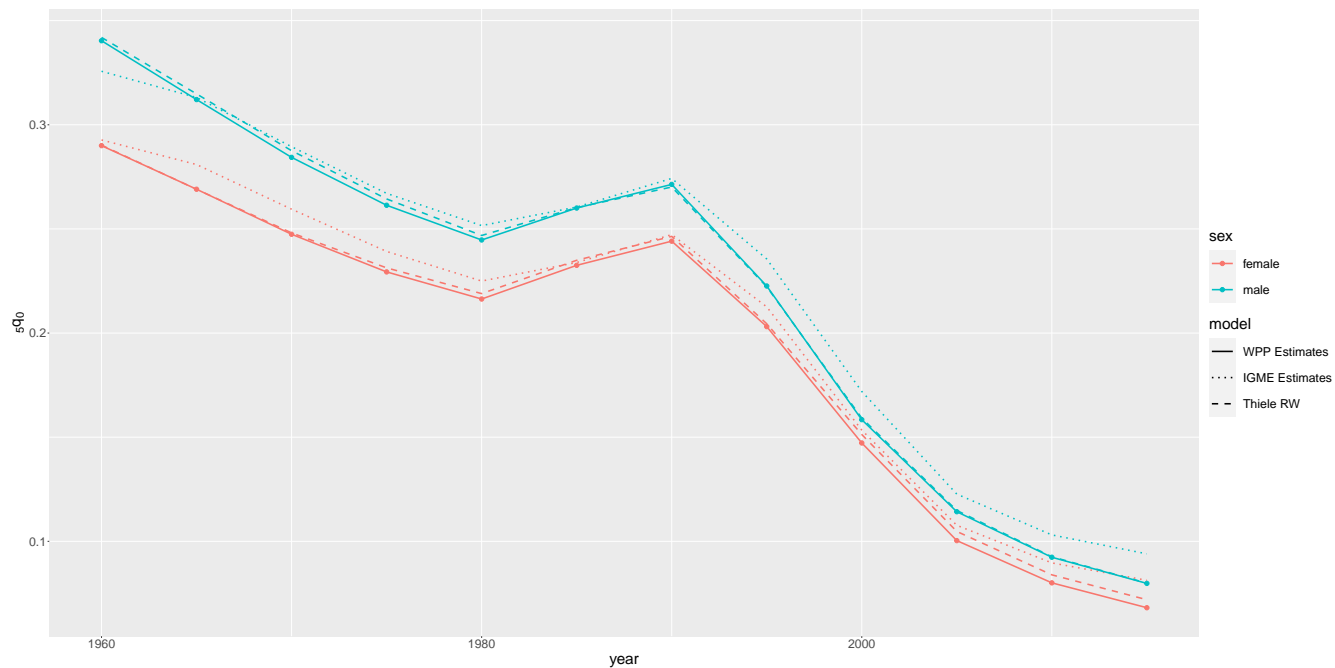


Figure 3: Estimated $_{5}q_0$

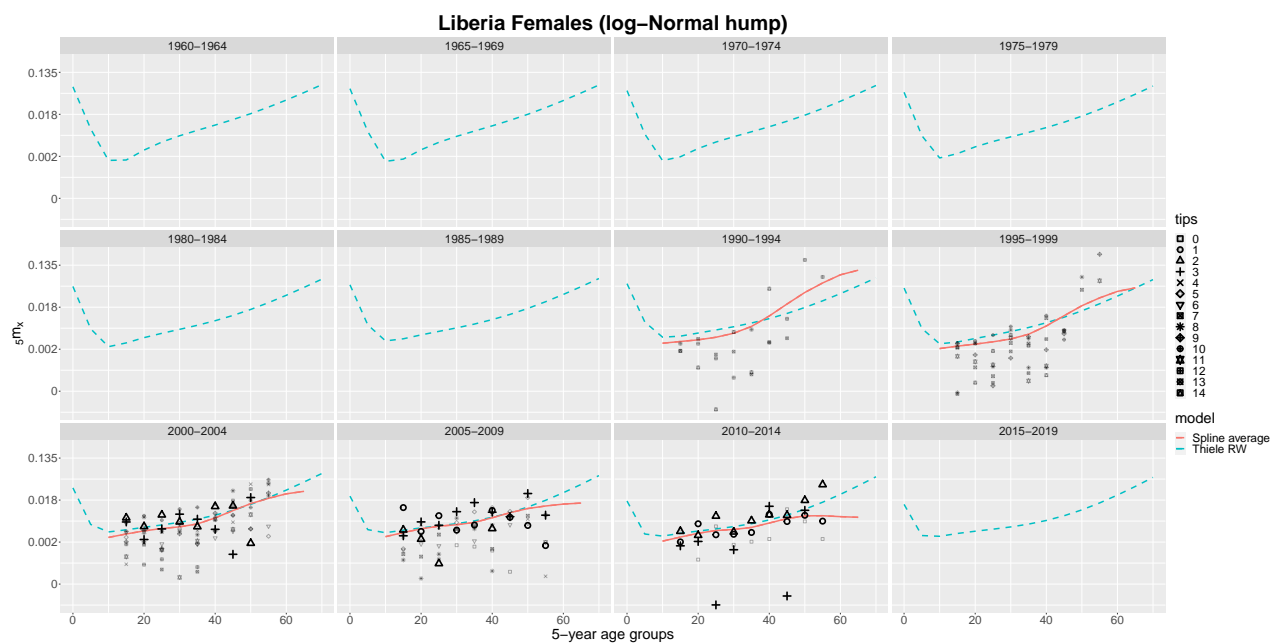


Figure 4: Mortality Schedules

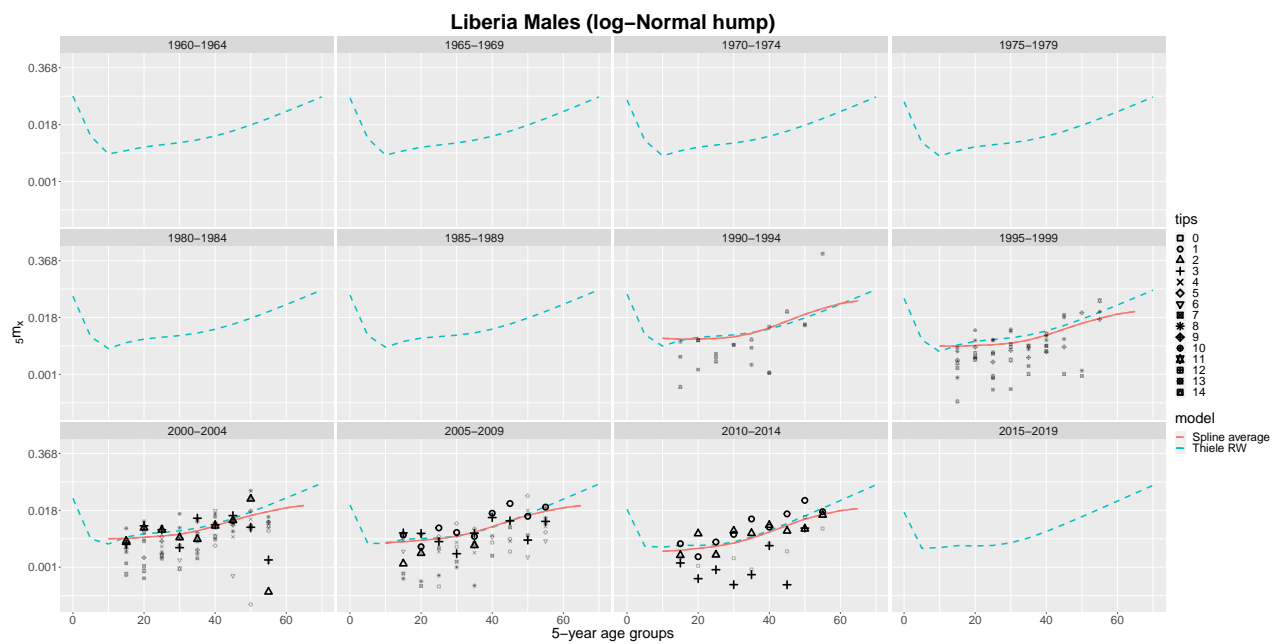


Figure 5: Mortality Schedules

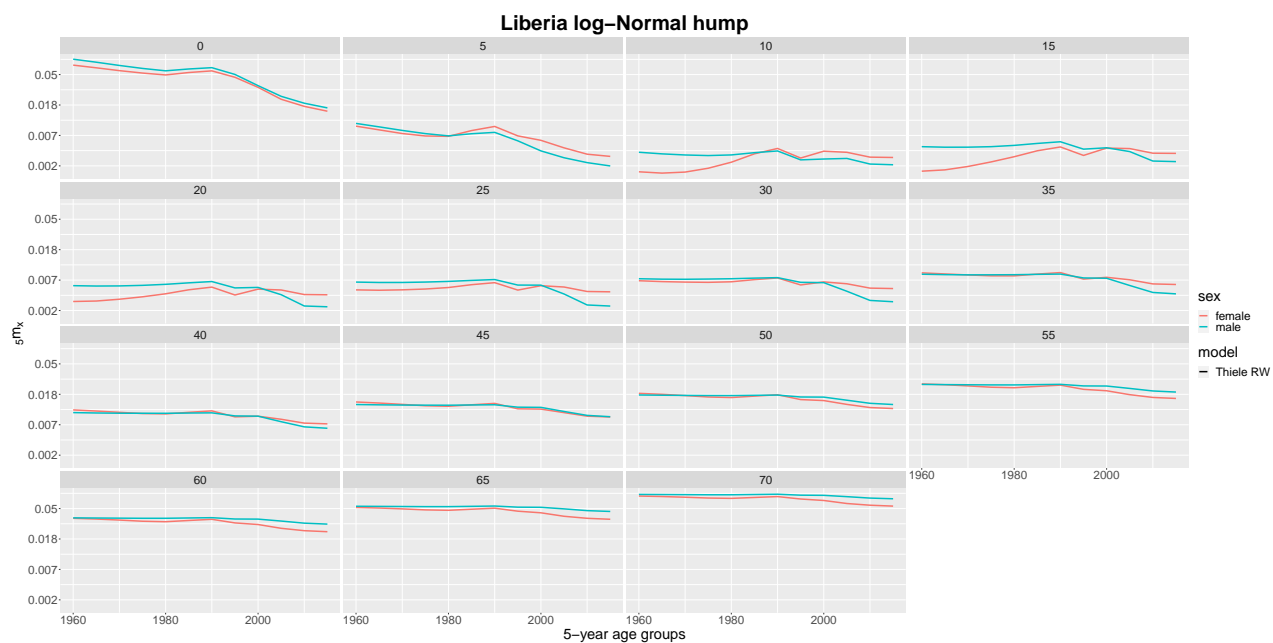


Figure 6: Mortality Schedules

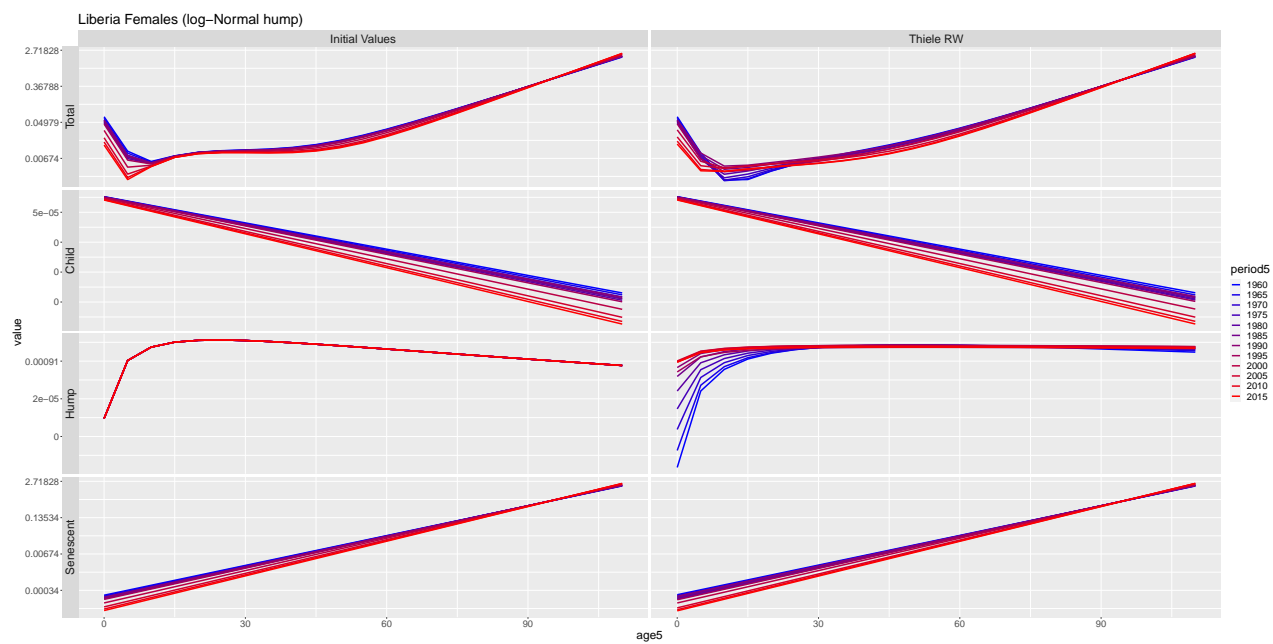


Figure 7: Thiele Decomposed

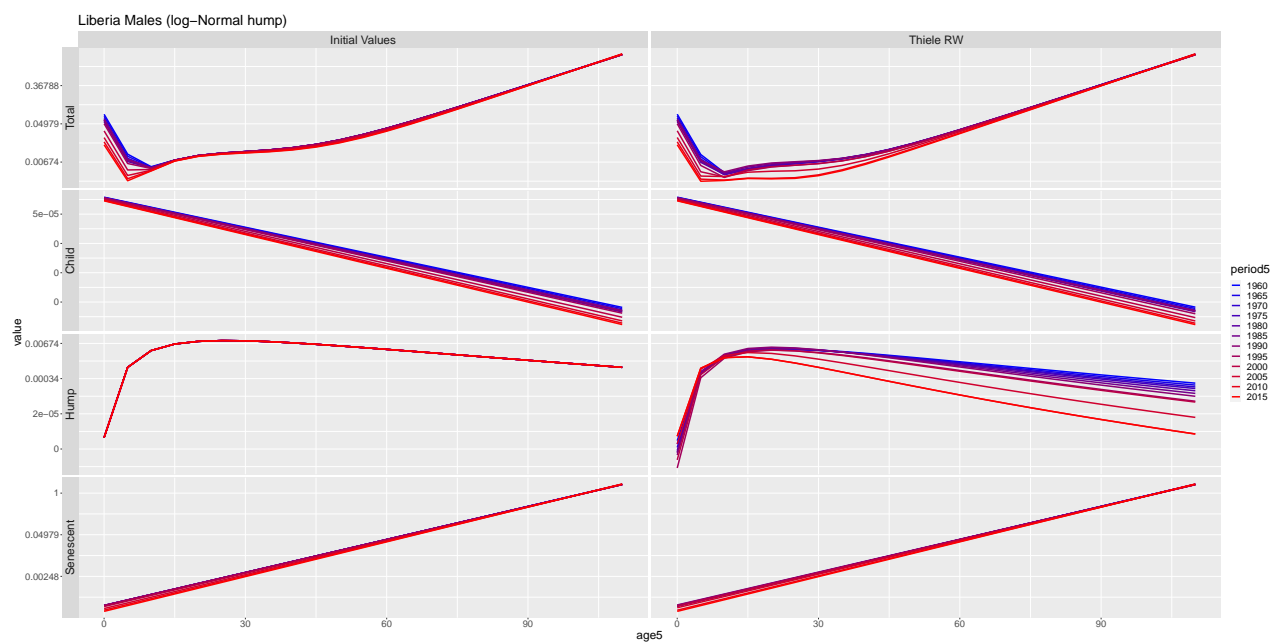


Figure 8: Thiele Decomposed

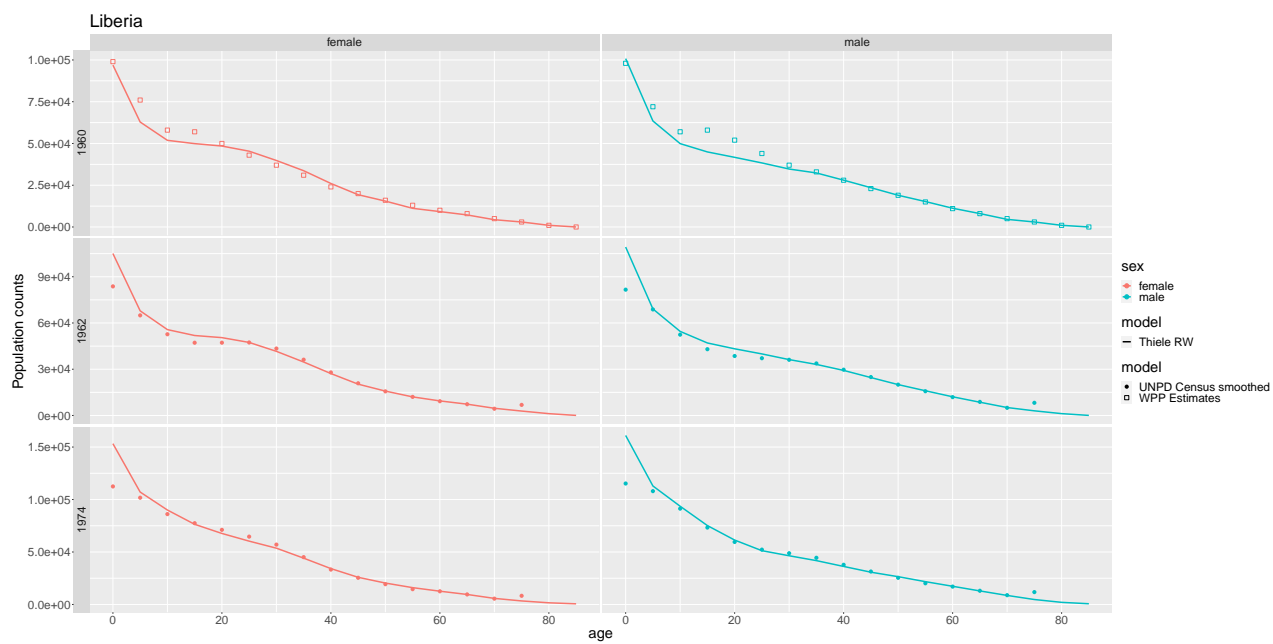


Figure 9: Population

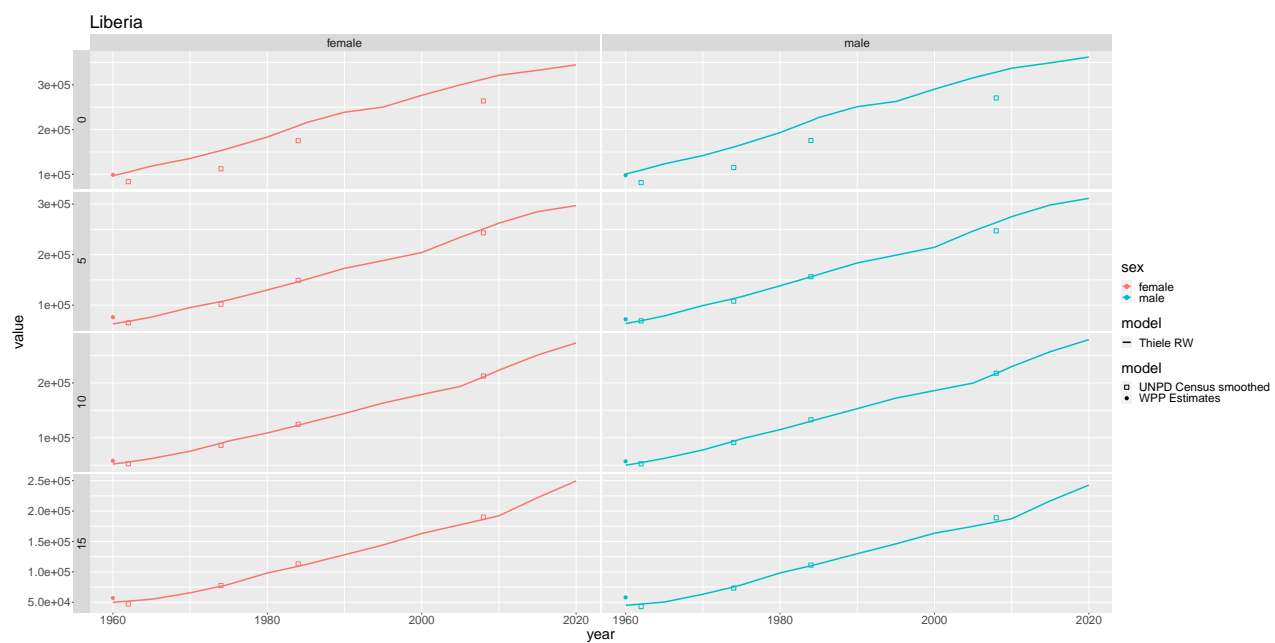


Figure 10: Population

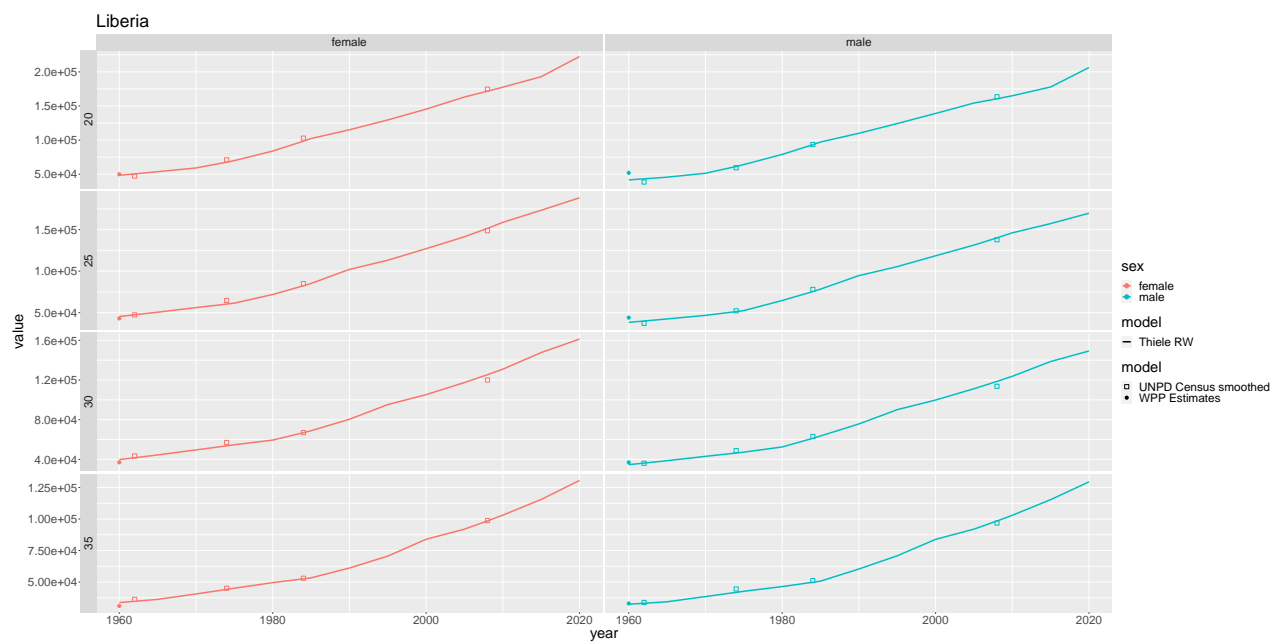


Figure 11: Population

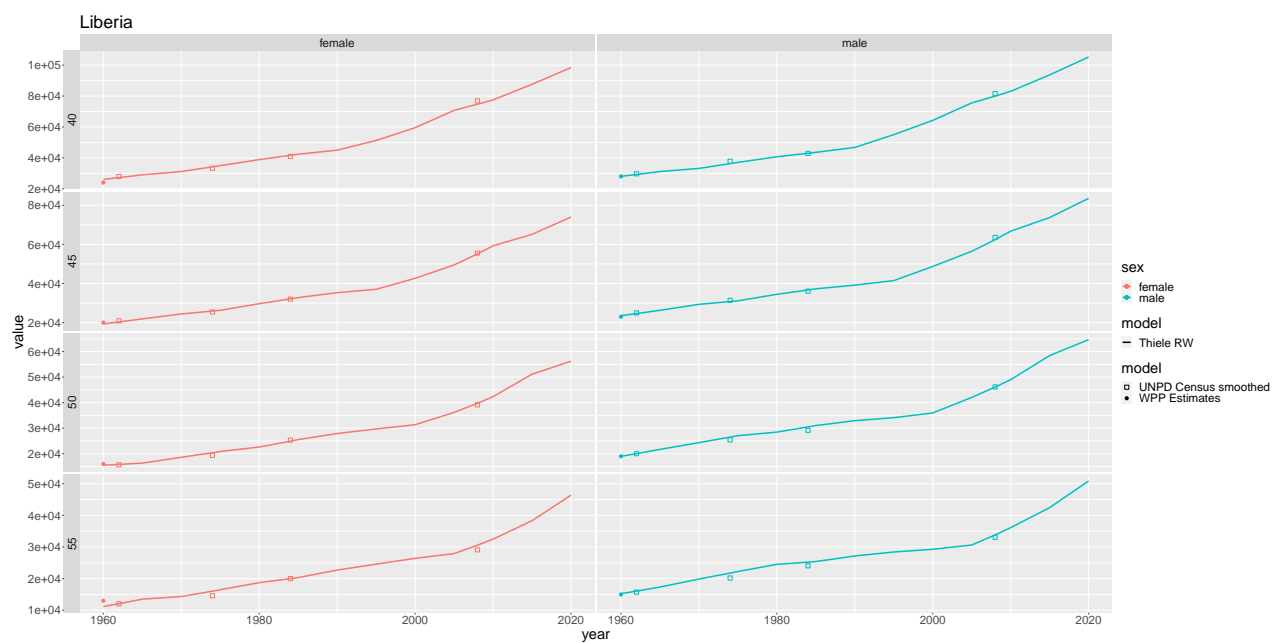


Figure 12: Population

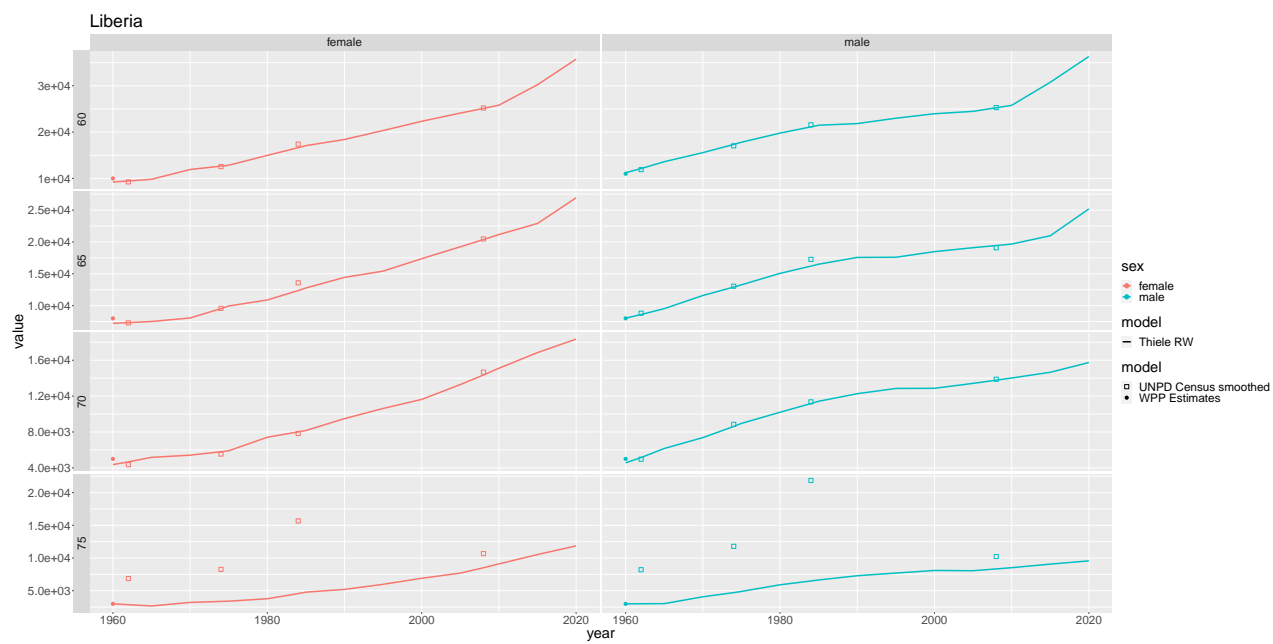


Figure 13: Population

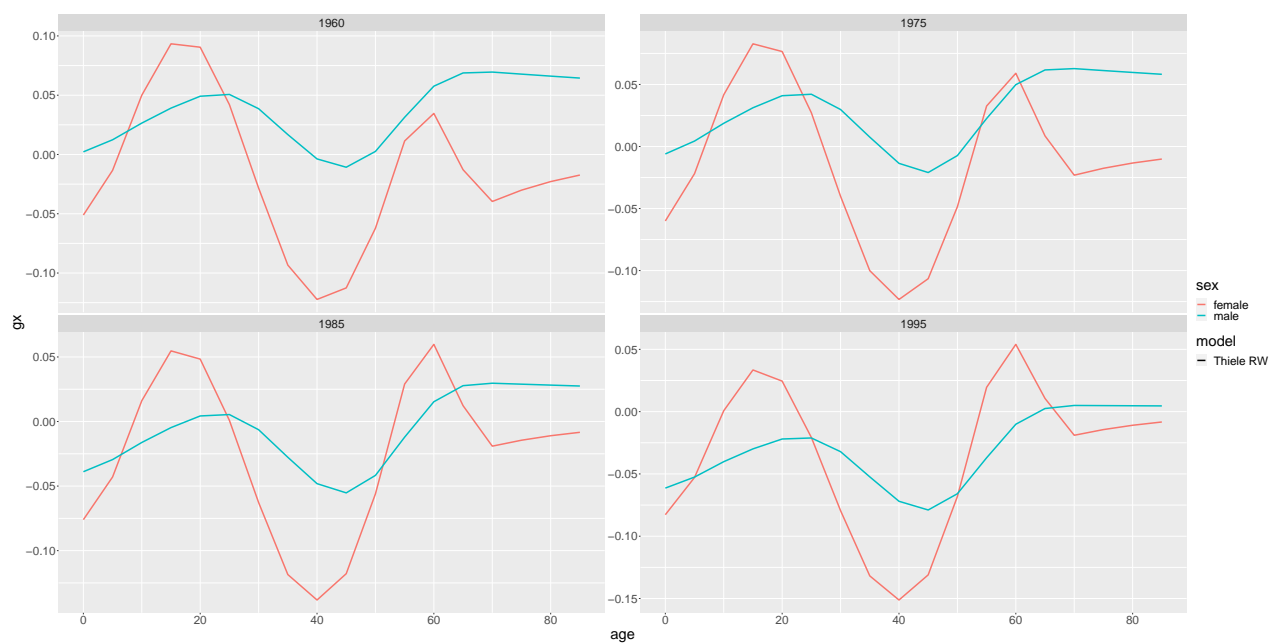


Figure 14: Migration

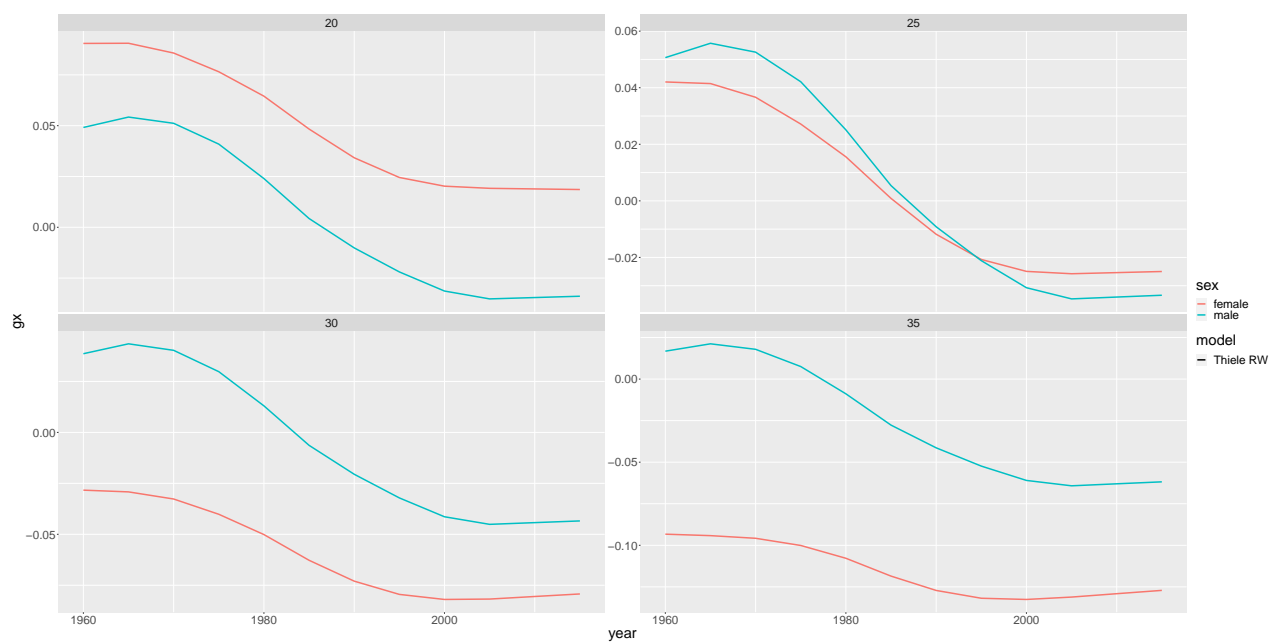


Figure 15: Migration

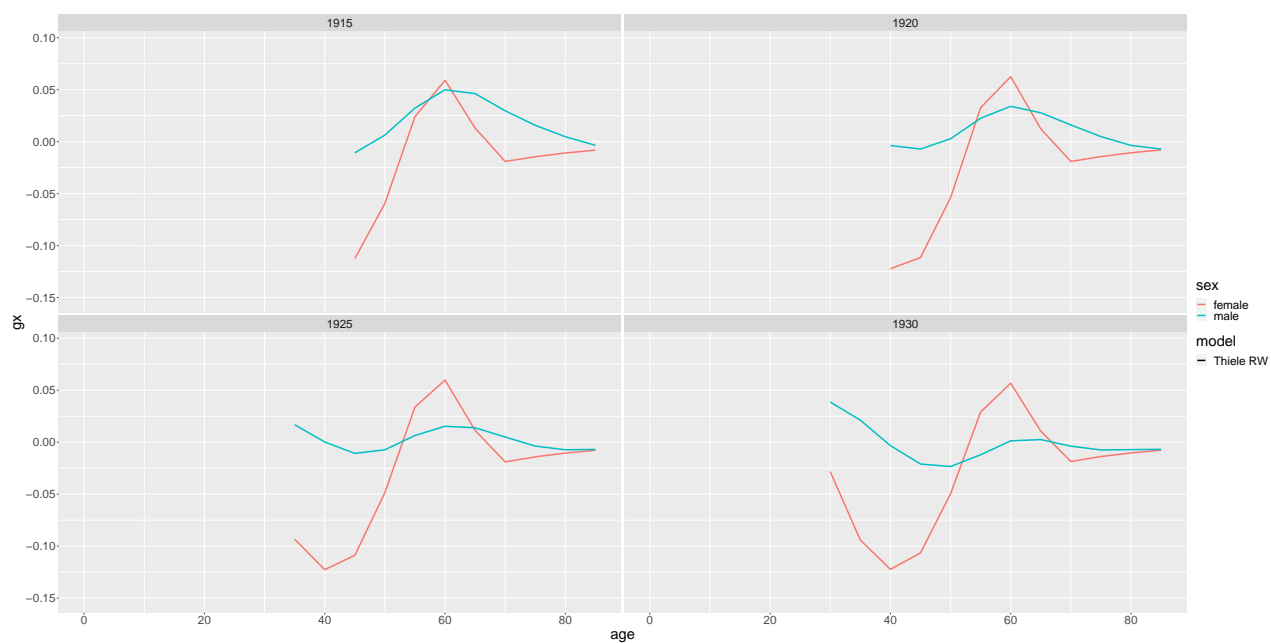


Figure 16: Migration

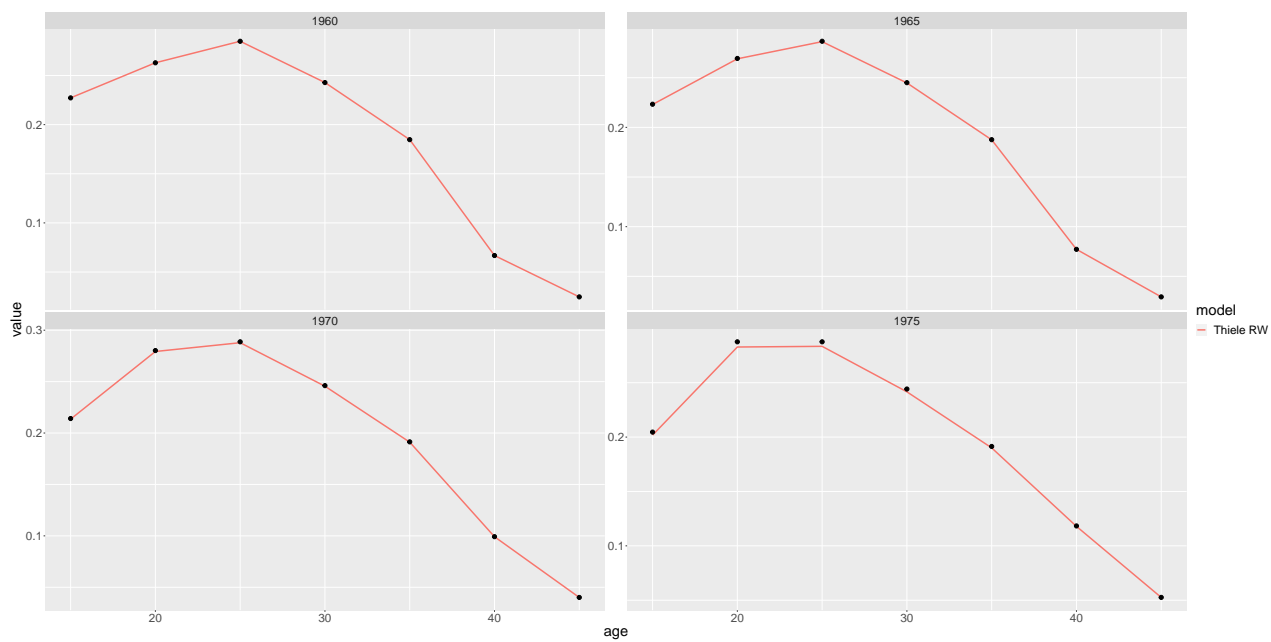


Figure 17: Fertility

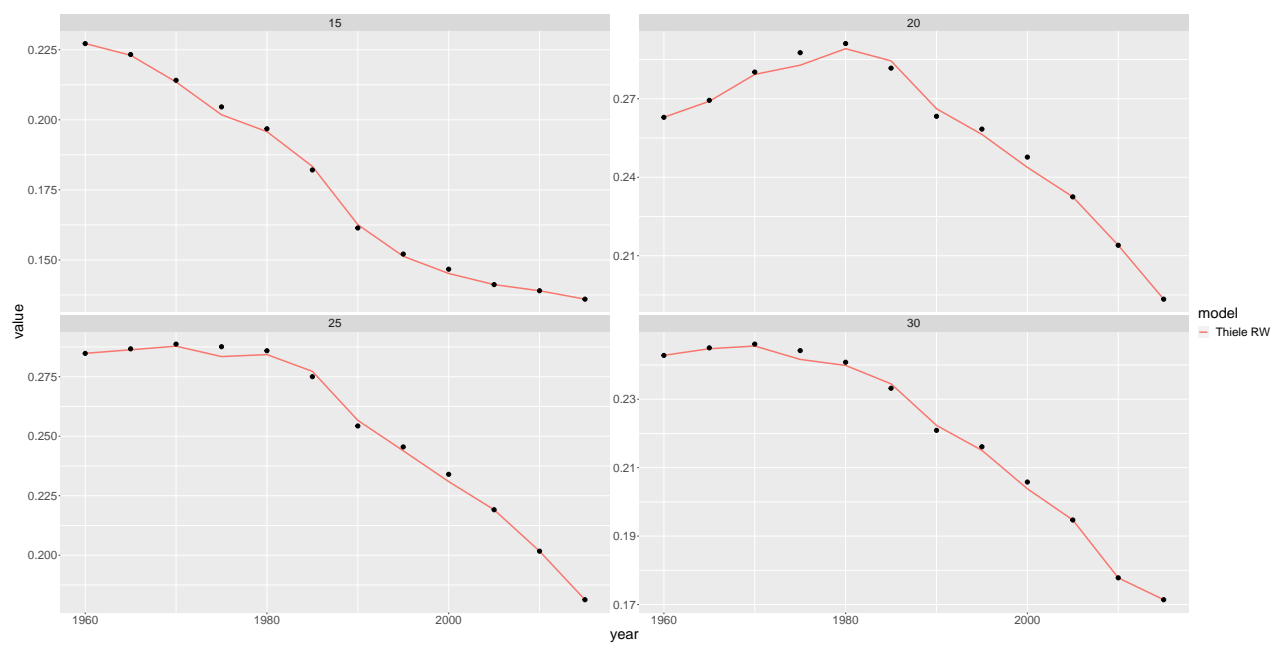


Figure 18: Fertility