Sierra Leone

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

## # A tibble: 18 x 3
##    aggr.age  `1963`   `1974`
## *     <dbl>   <dbl>    <dbl>
## 1         0 190018  223665.
## 2         5 135060  189314.
## 3        10 116405. 142745.
## 4        15 104452. 121475.
## 5        20 104845. 119120.
## 6        25 101898. 114809.
## 7        30  88015. 101087.
## 8        35  70258.  81896.
## 9        40  52918.  64715.
## 10       45  39610.  50686.
## 11       50  30574.  39039.
## 12       55  17602   30868.
## 13       60  25818   27100.
## 14       65  51340   21764.
## 15       70     NA   15843.
## 16       75     NA   12014.
## 17       80     NA   10006.
## 18       85     NA   13352.

## [1] "Census Males"

## # A tibble: 18 x 3
##    aggr.age  `1963`   `1974`
## *     <dbl>   <dbl>    <dbl>
## 1         0 187317  217093.
## 2         5 145589  193154.
## 3        10 108972. 147748.
## 4        15  88493. 112157.
## 5        20  82709. 101119.
## 6        25  82128.  99176.
## 7        30  79258.  91232.
## 8        35  72234.  79540.
## 9        40  61518.  68321.
## 10       45  50220.  57722.
## 11       50  40077.  46440.
## 12       55  24158   36722.
## 13       60  30136   31022.
## 14       65  59169   24342.
## 15       70     NA   17900.
## 16       75     NA   13296.
## 17       80     NA    9892.
## 18       85     NA   13611.
```

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
##    2.86    0.03    2.91
```
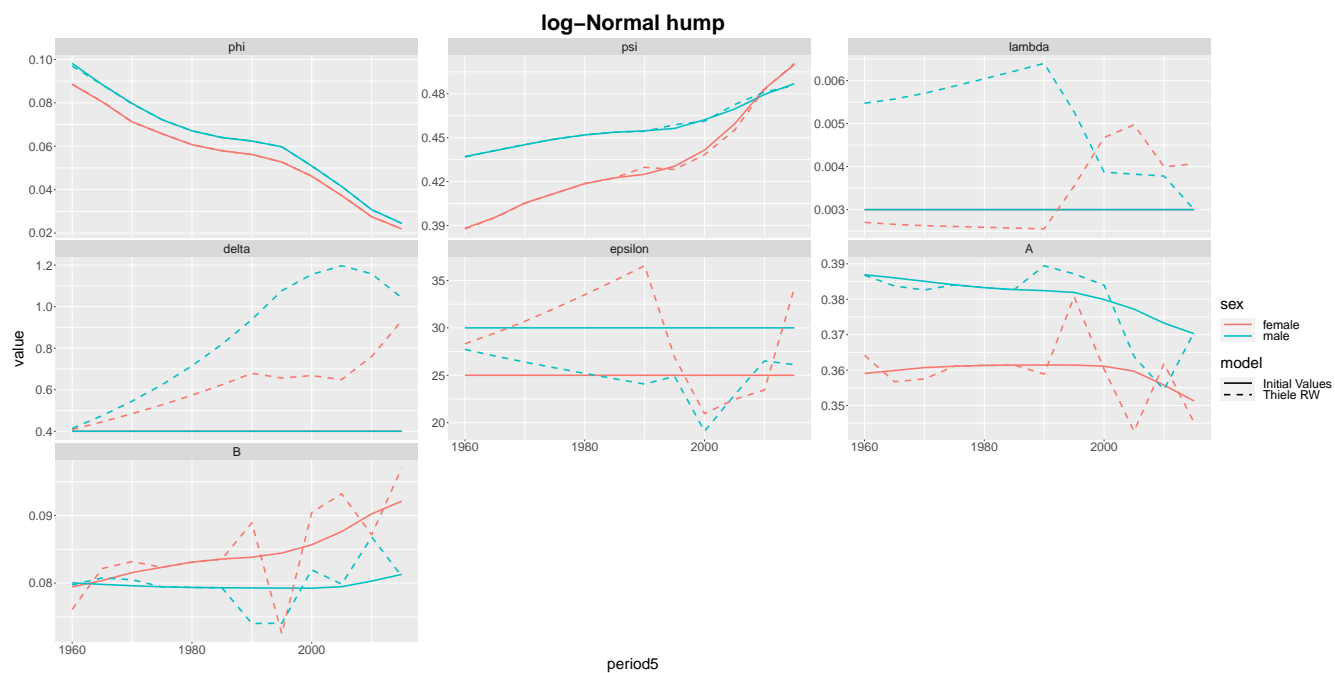
```
## [1] "false convergence (8)"
```
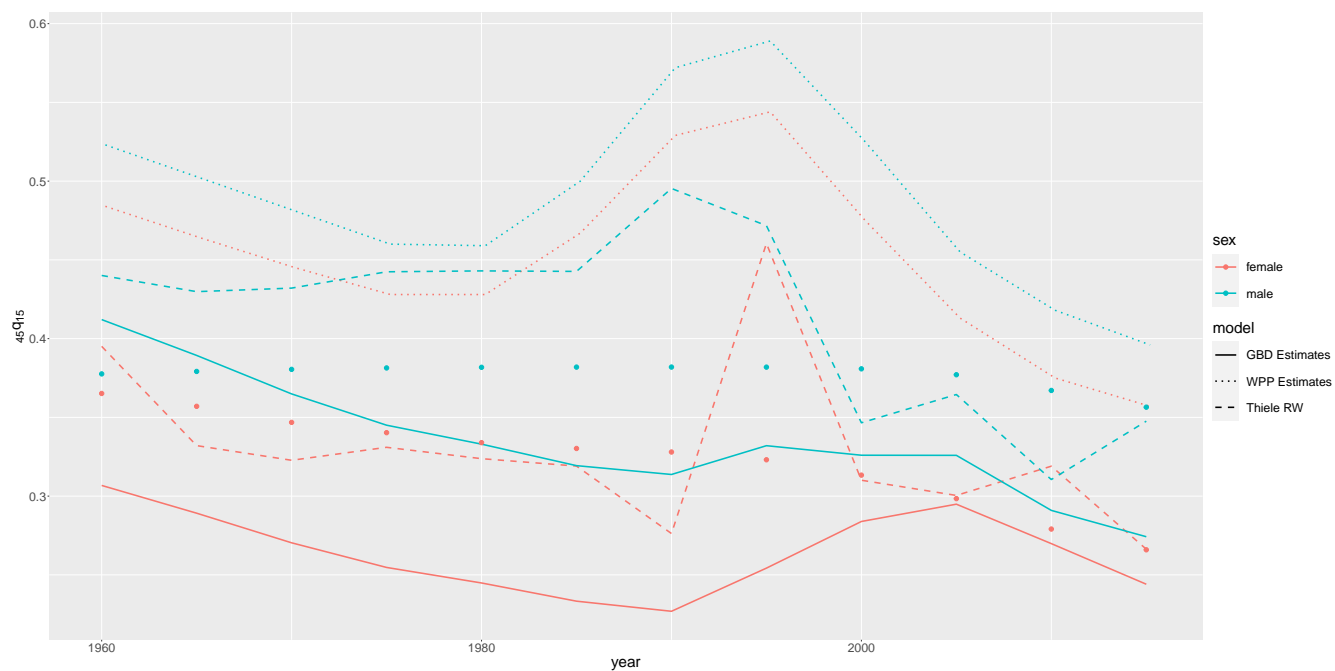
Figure 1: Estimated parameters

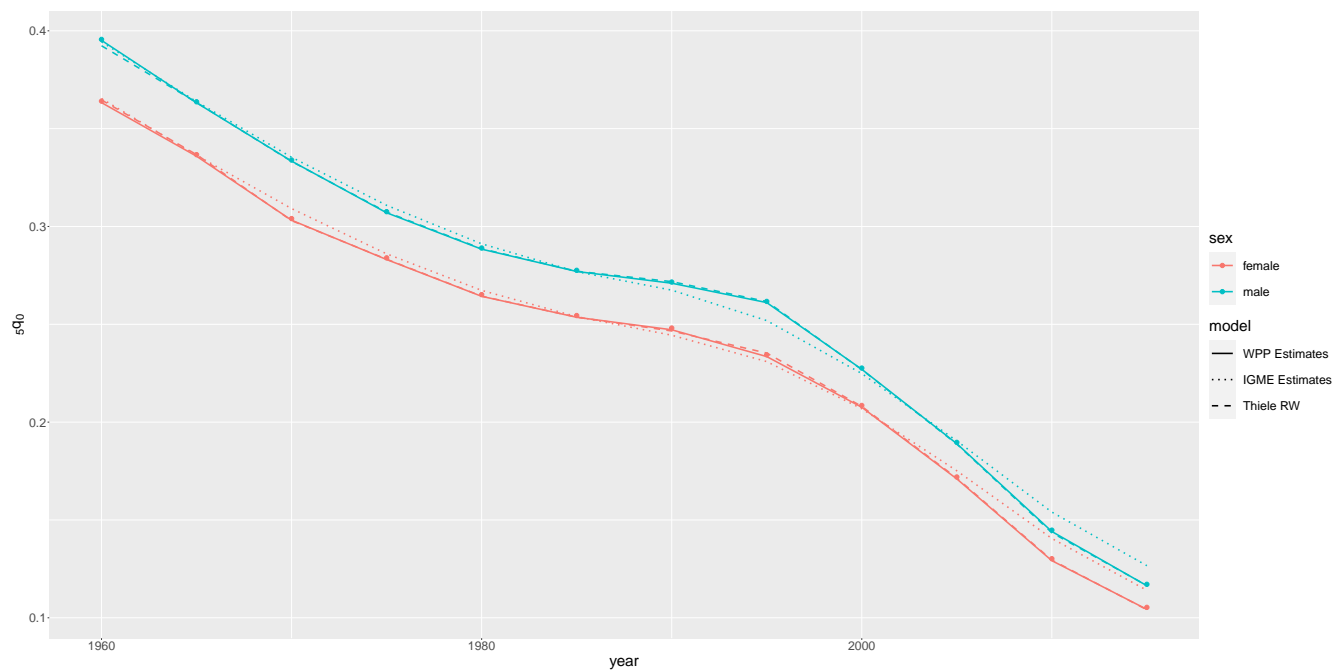Figure 2: Estimated $_{45}q_{15}$

Figure 3: Estimated $_{5}q_{0}$
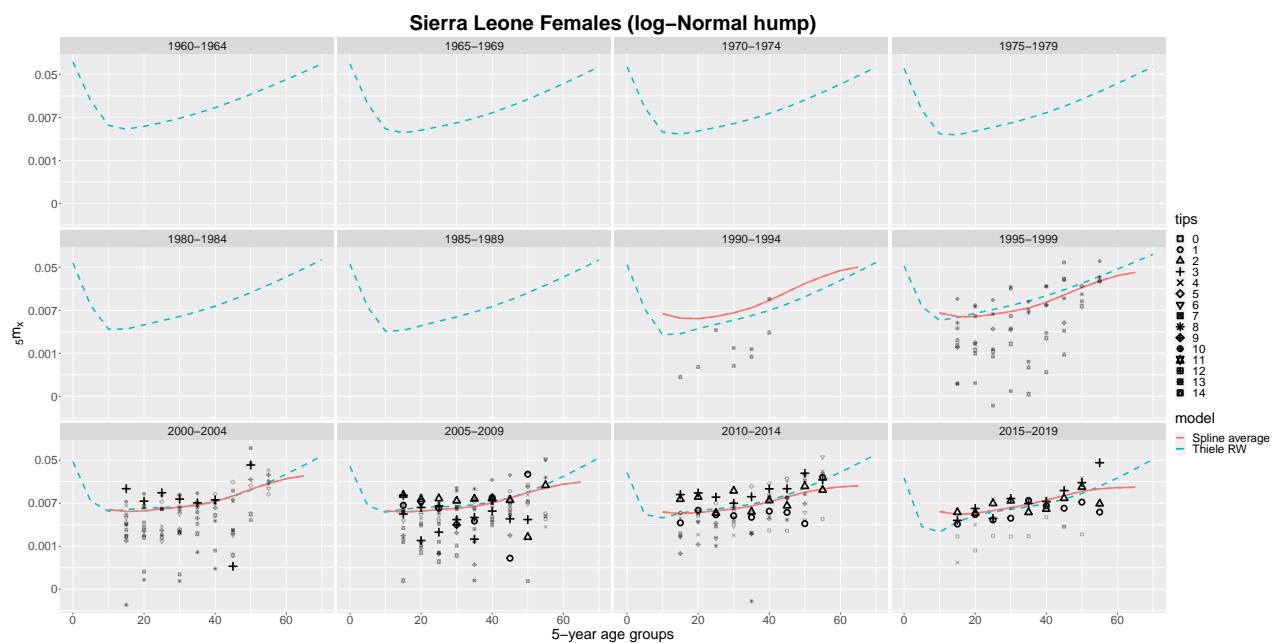
Figure 4: Mortality Schedules
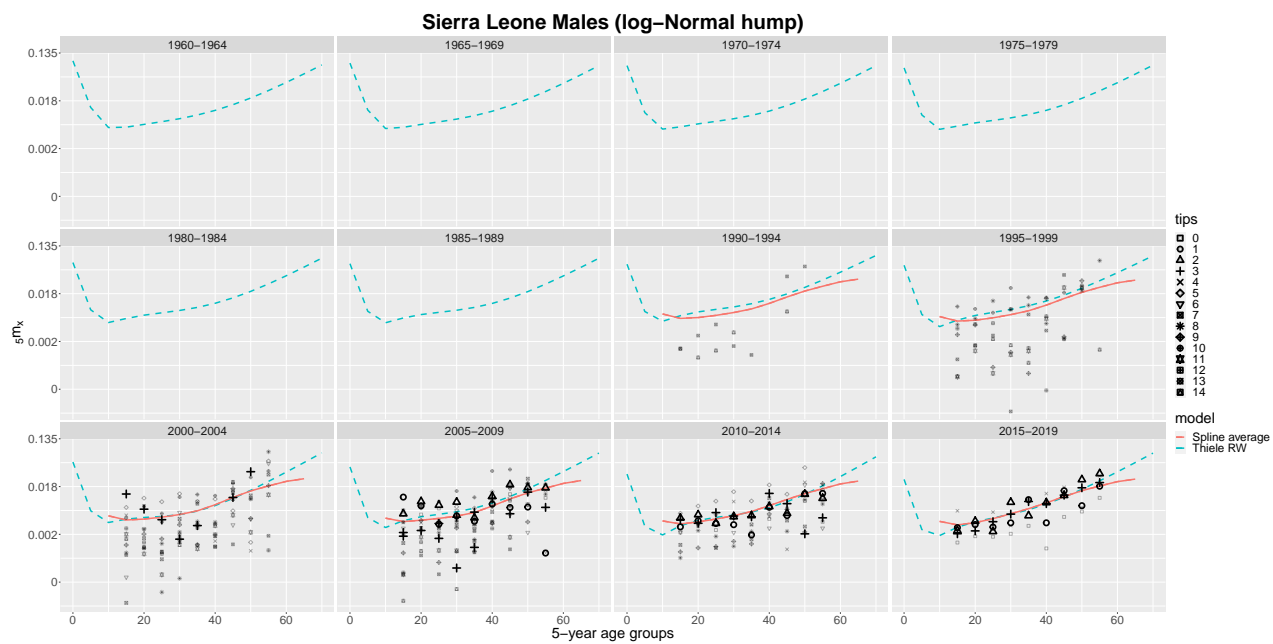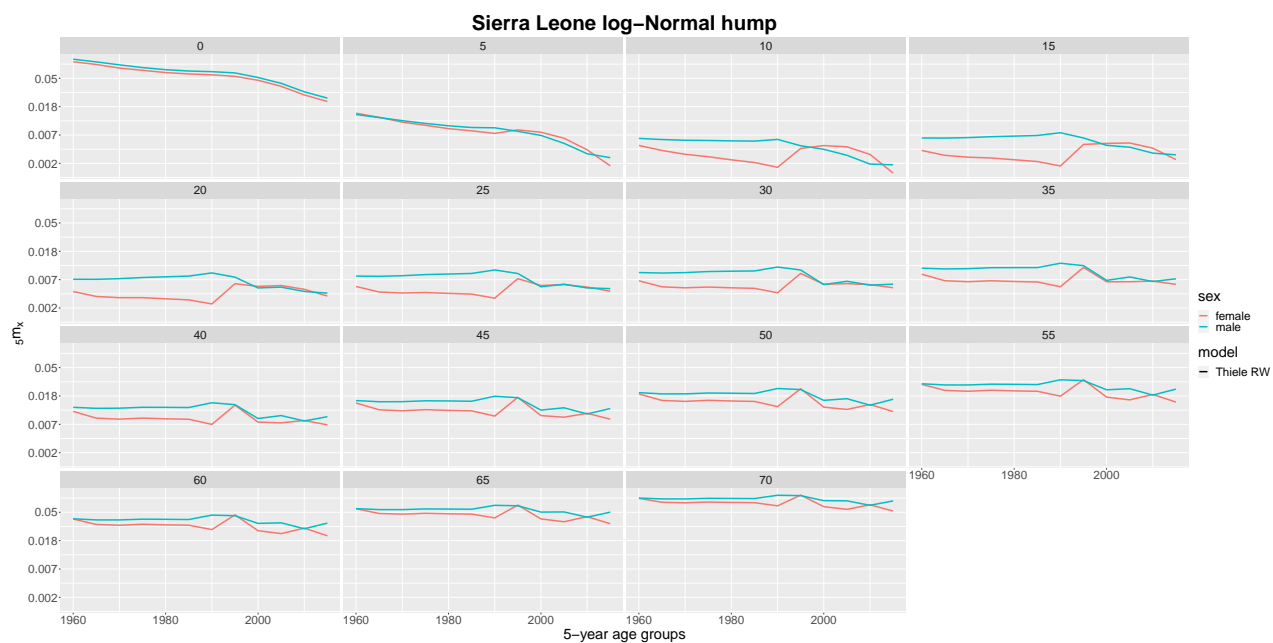

Figure 5: Mortality Schedules
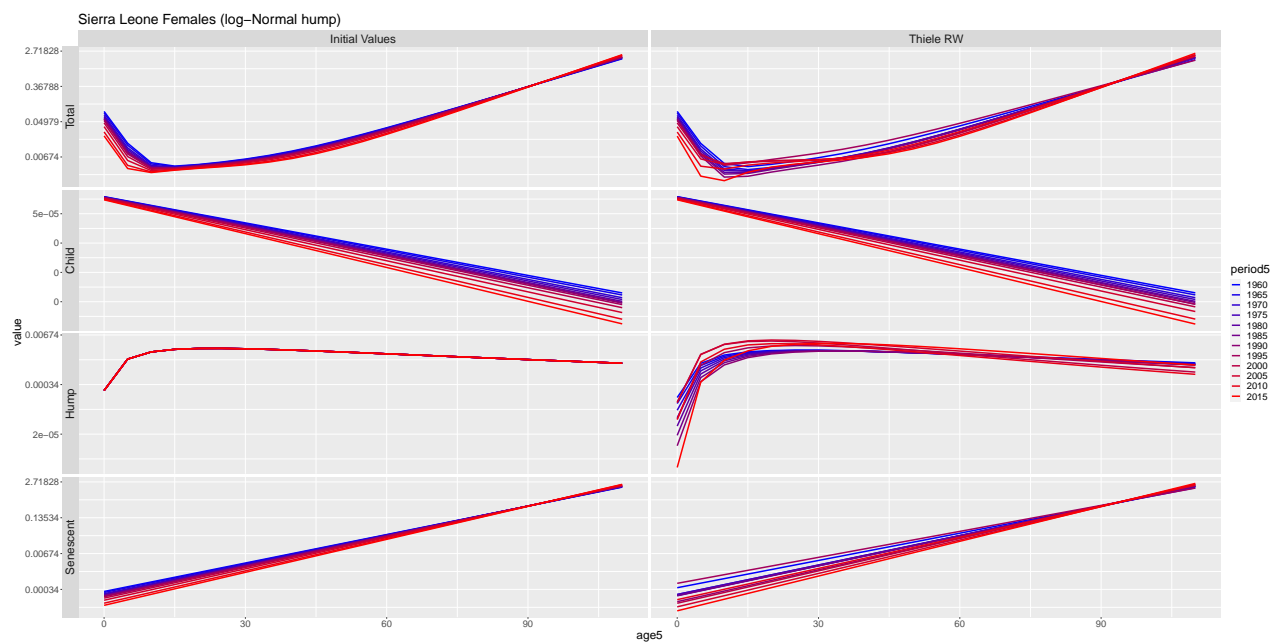
Figure 6: Mortality Schedules
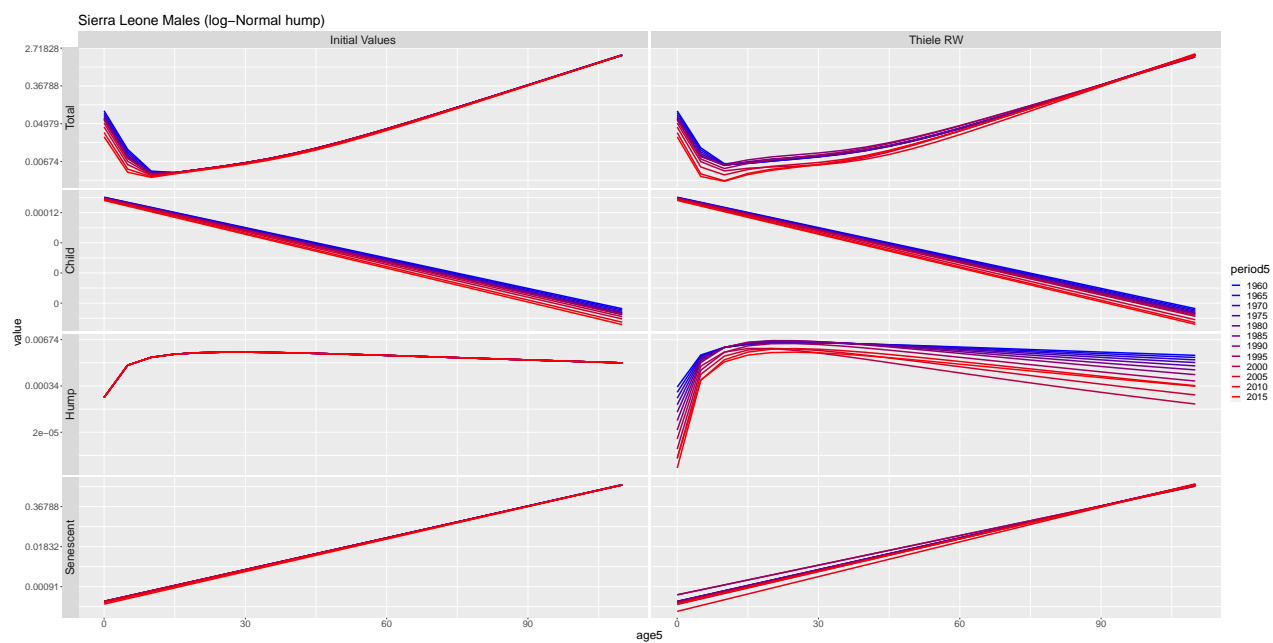

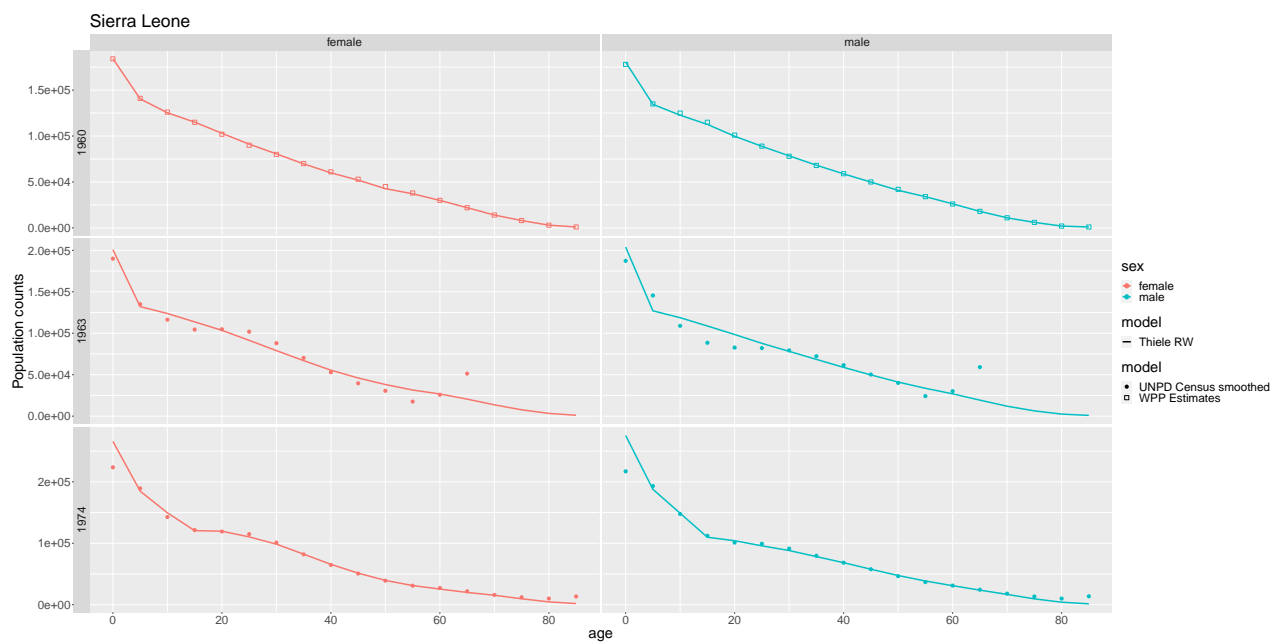Figure 7: Thiele Decomposed

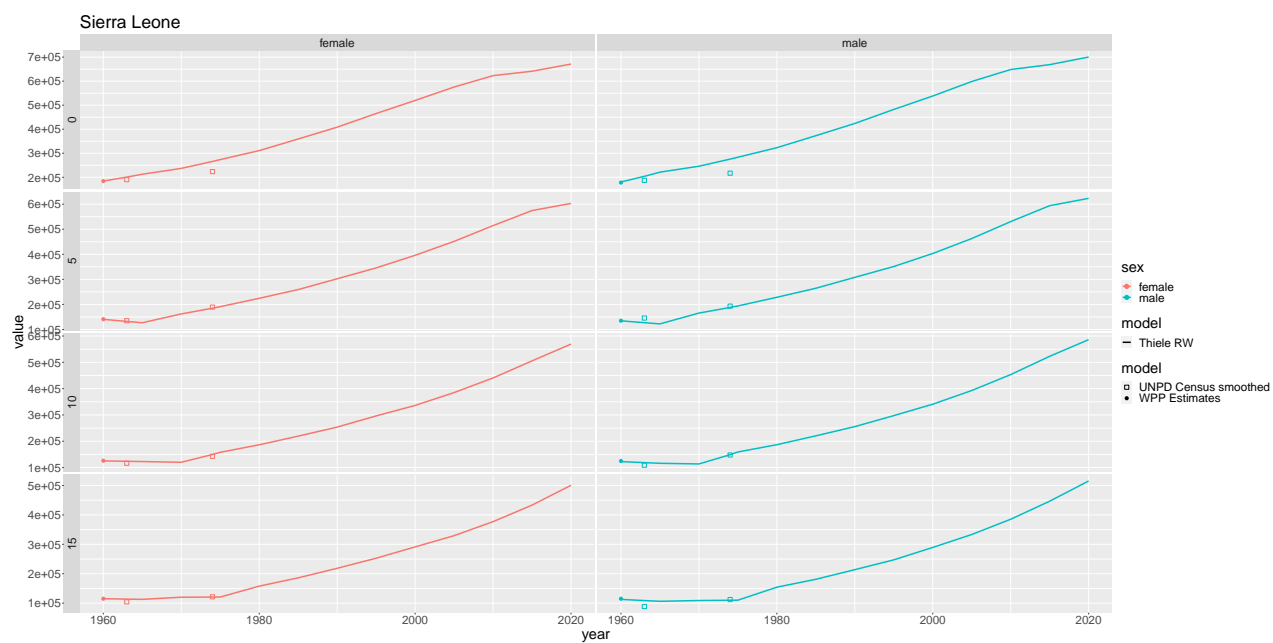Figure 8: Thiele Decomposed

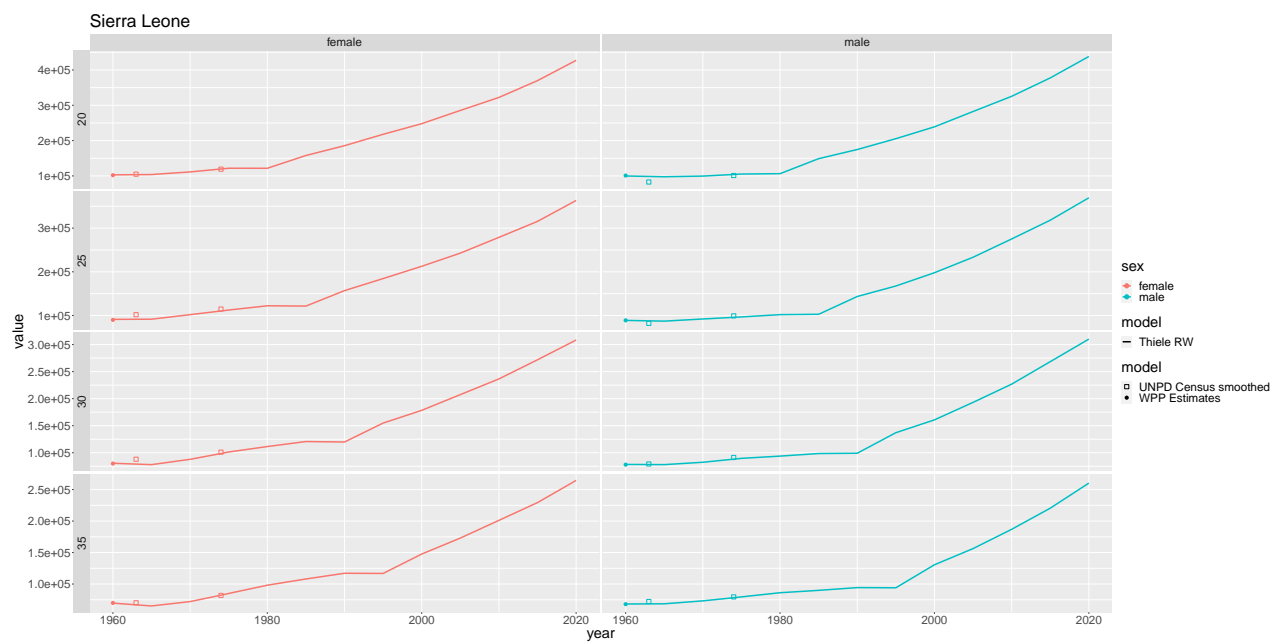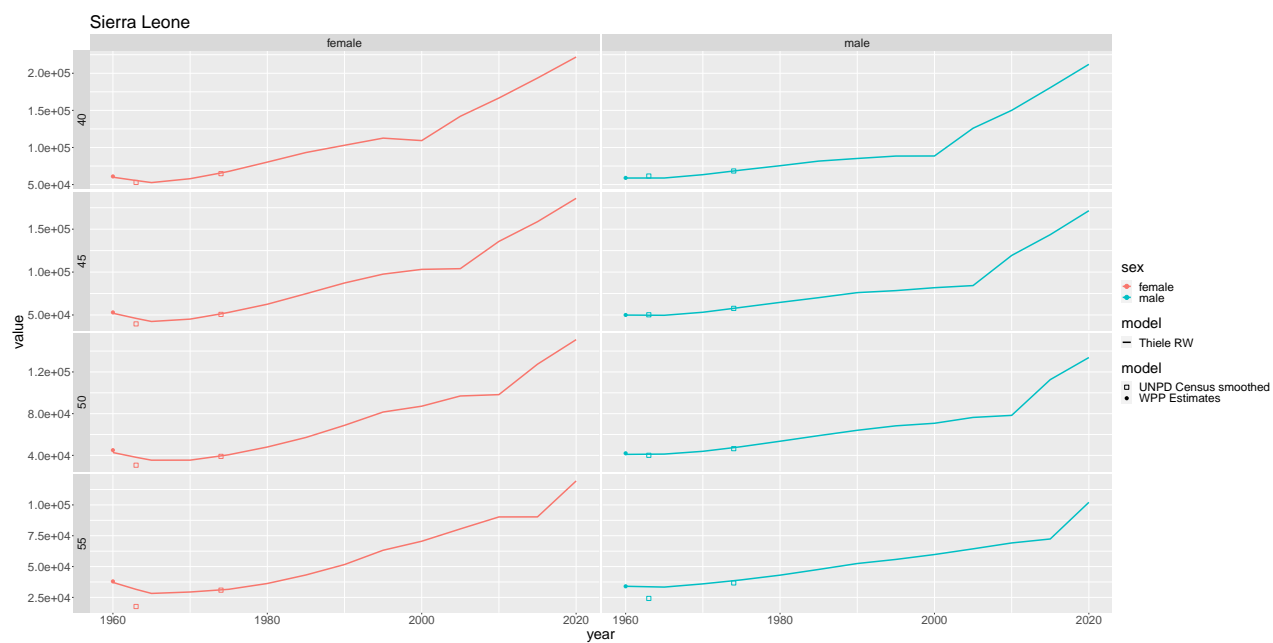Figure 9: Population

Figure 10: Population

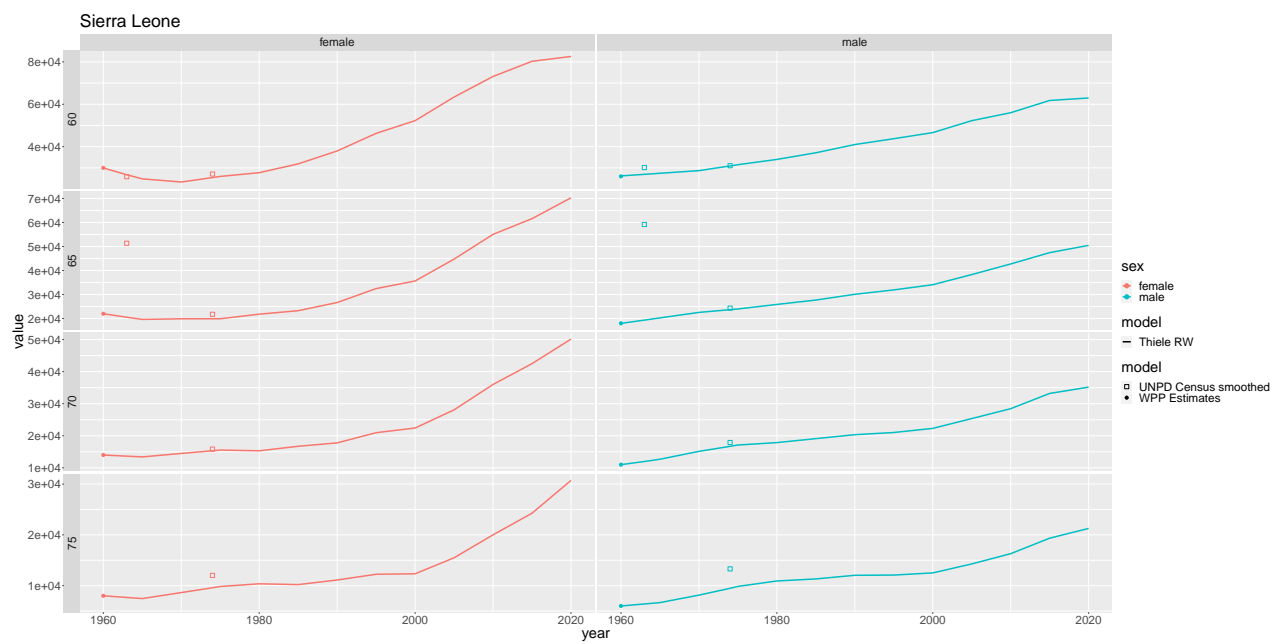Figure 11: Population
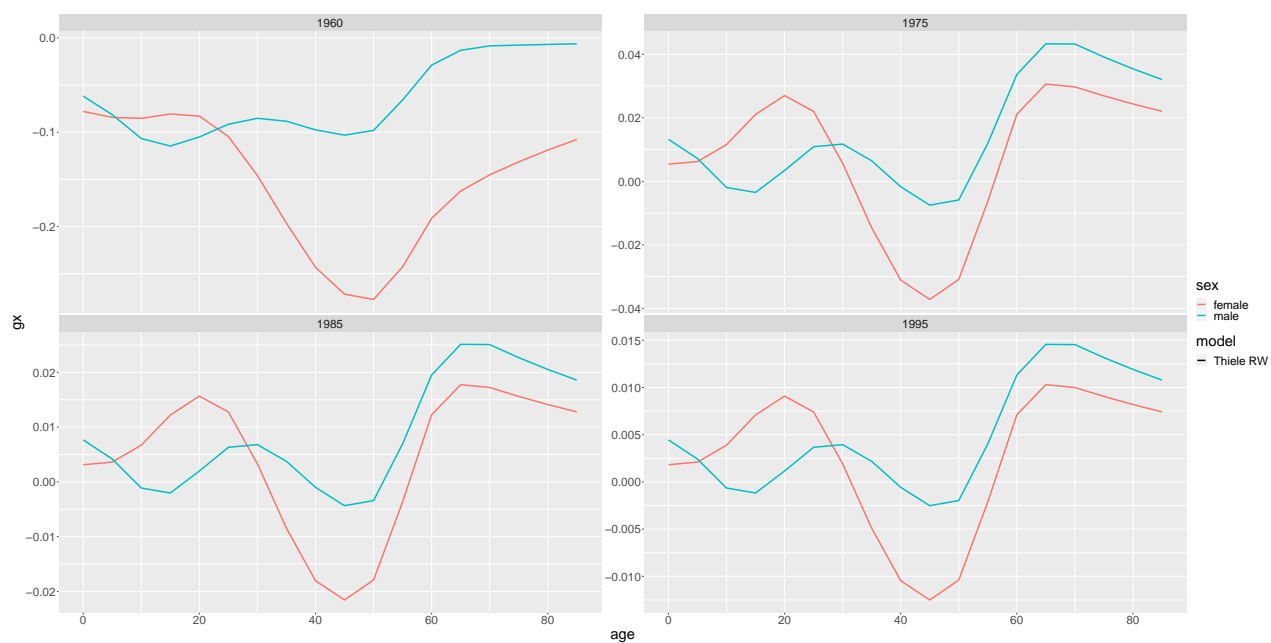
Figure 12: Population

Figure 13: Population
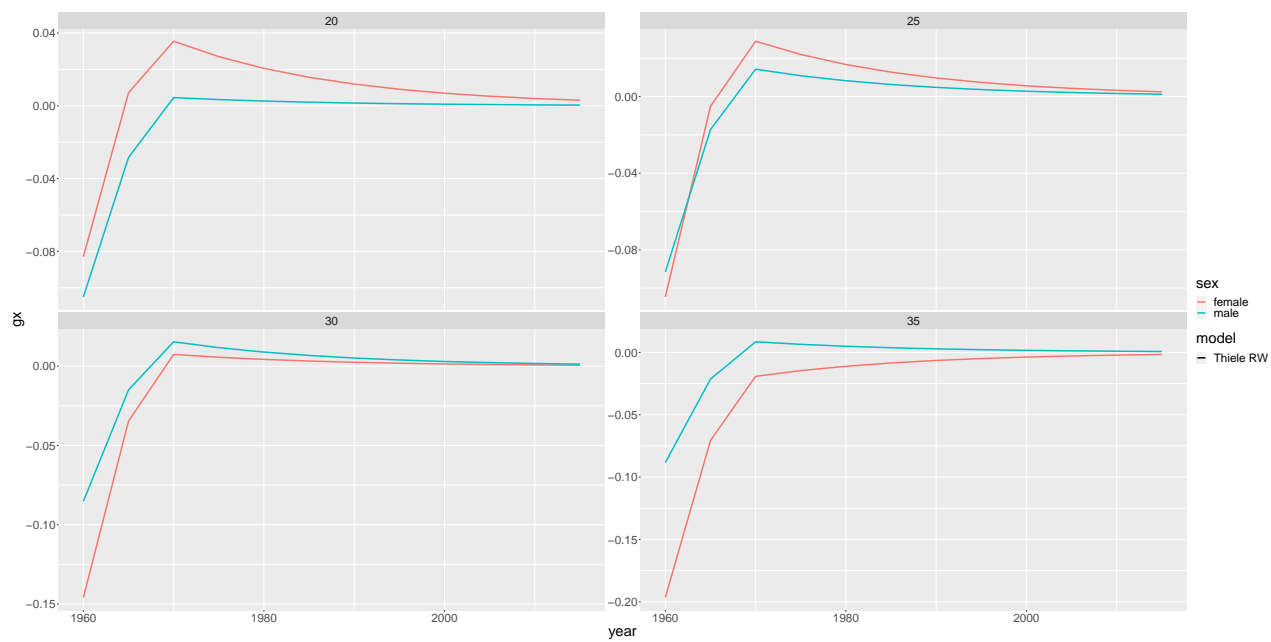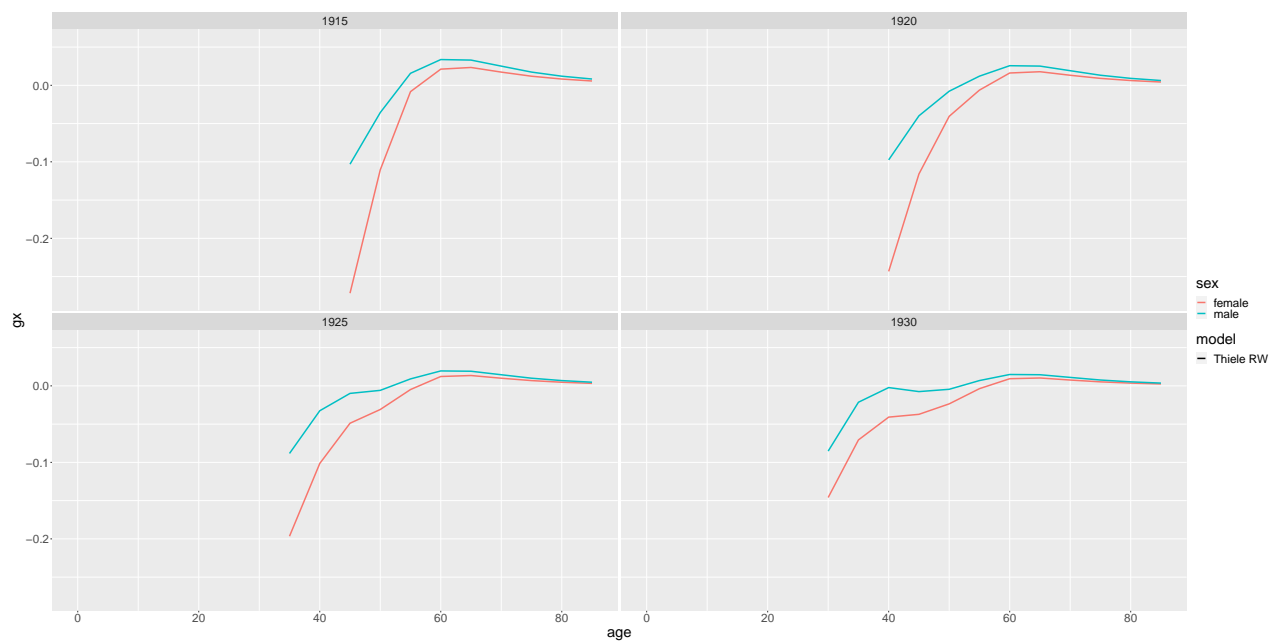
9

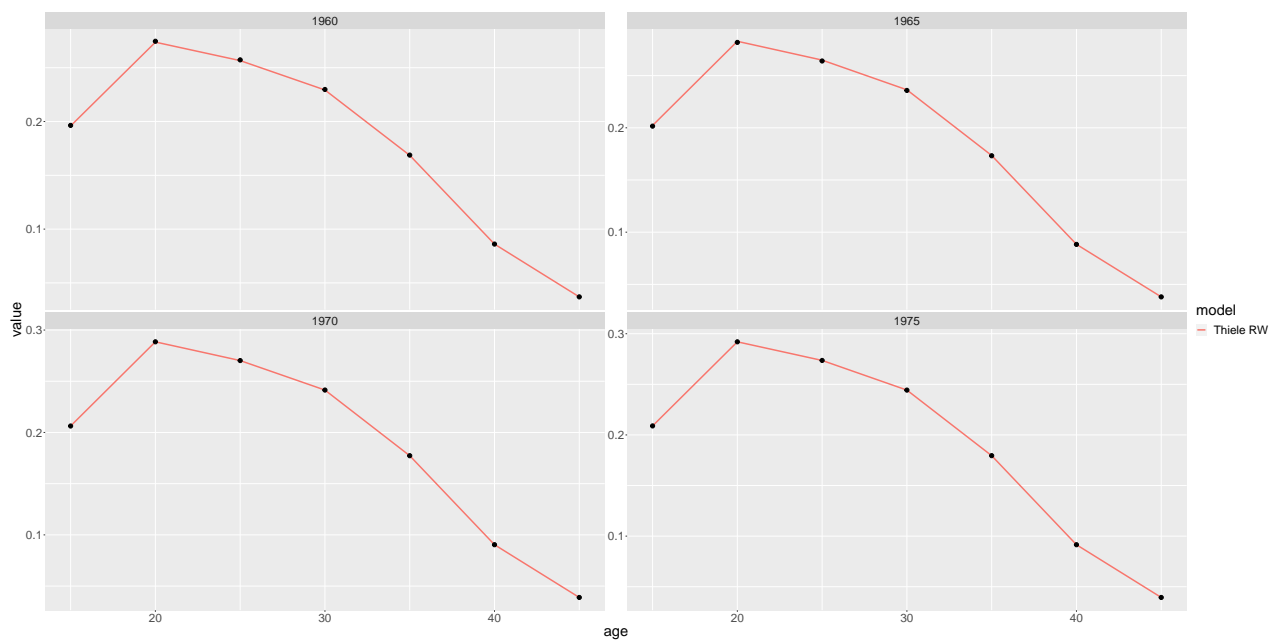Figure 14: Migration

Figure 15: Migration
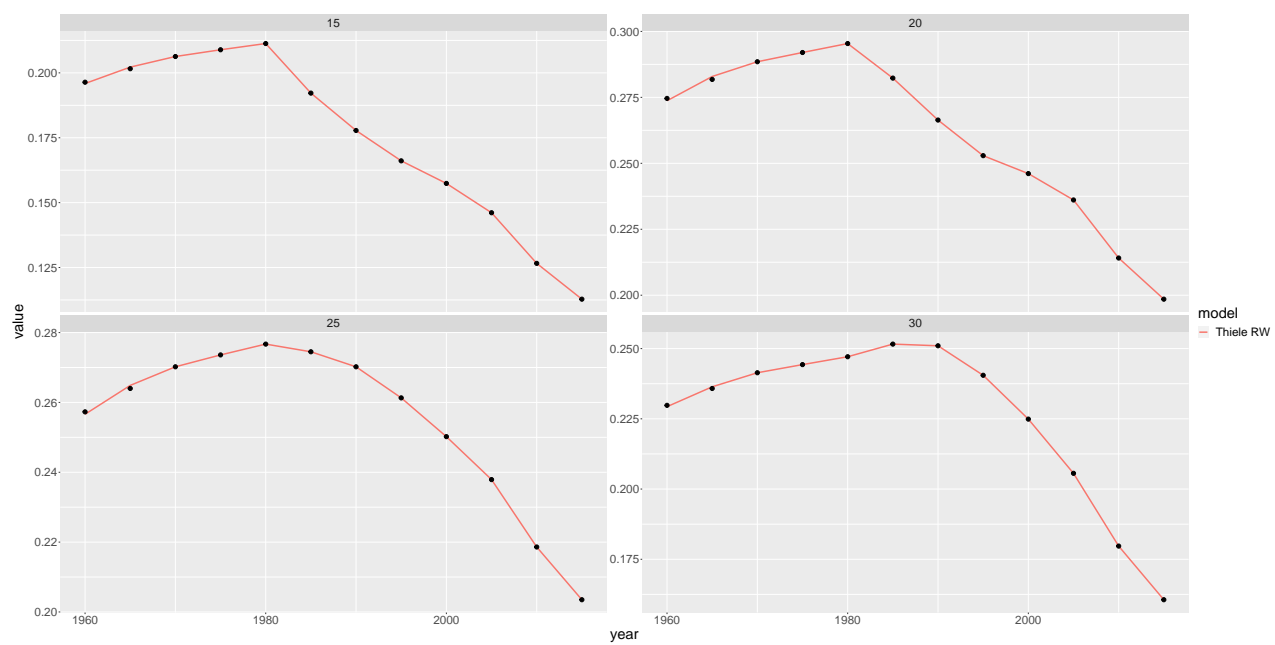
Figure 16: Migration

Figure 17: Fertility

Figure 18: Fertility