

Namibia

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

## # A tibble: 18 x 4
##   aggr.age `1991` `2001` `2011`
## *   <dbl>   <dbl>   <dbl>   <dbl>
## 1     0 109797. 122923. 142821
## 2     5  98111. 123939. 126935.
## 3    10  89789. 117304. 122470.
## 4    15  81191. 104297. 119051.
## 5    20  69151.  90193. 107680.
## 6    25  57152.  76700.  91594
## 7    30  45905.  63553.  76564.
## 8    35  35675.  51719.  63741
## 9    40  28235.  41055.  52340
## 10   45  23061.  32275.  42860
## 11   50  18862.  25606.  34420.
## 12   55  15878.  20745.  27309.
## 13   60  14729.  17774.  22291.
## 14   65  13514.  15031.  18052.
## 15   70  10764.  12417.  13971.
## 16   75   6942.  10257.  10840.
## 17   80   3856.   7586.   8633
## 18   85   3960.   7761.  14743.
```

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

## # A tibble: 18 x 4
##   aggr.age `1991` `2001` `2011`
## *   <dbl>   <dbl>   <dbl>   <dbl>
## 1     0 109160. 122675. 141877
## 2     5  97223. 121785. 125463.
## 3    10  88280. 114264. 120105
## 4    15  78562. 101700. 115774.
## 5    20  65210.  88491. 104135.
## 6    25  52213.  74629.  88193.
## 7    30  41391.  59689.  73515.
## 8    35  32862.  46359.  60487.
## 9    40  26774.  35860.  48039.
## 10   45  22106.  28116.  37303
## 11   50  18181.  22365.  28438.
## 12   55  14816.  18080.  22206.
## 13   60  12414.  15108.  17858
## 14   65  10701.  12181.  13721.
## 15   70   8612.   9301.  10158.
## 16   75   5570.   7009.   7388.
## 17   80   2930.   4888.   5172.
## 18   85   2432.   4509.   7617
```

Thiele log-Normal Hump RW

```
##   user  system elapsed
## 23.74   0.51   24.32
```

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

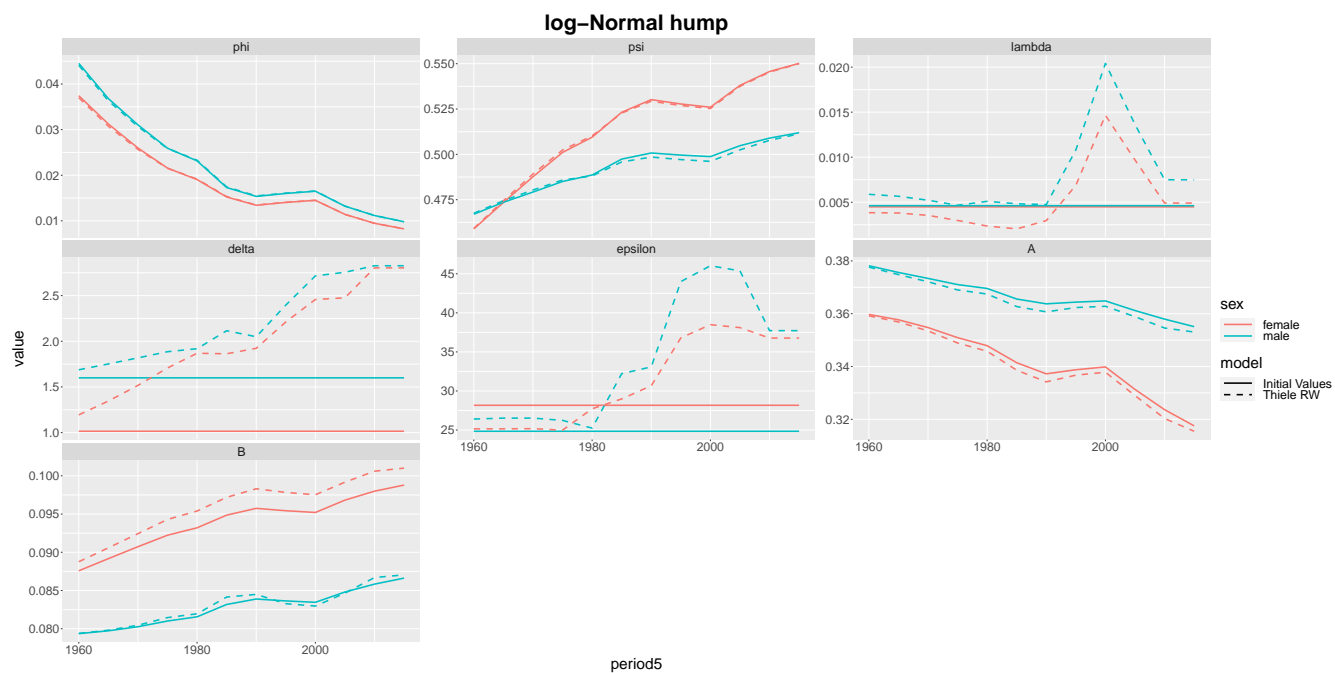


Figure 1: Estimated parameters



Figure 2: Estimated $45q_{15}$



Figure 3: Estimated $5q_0$

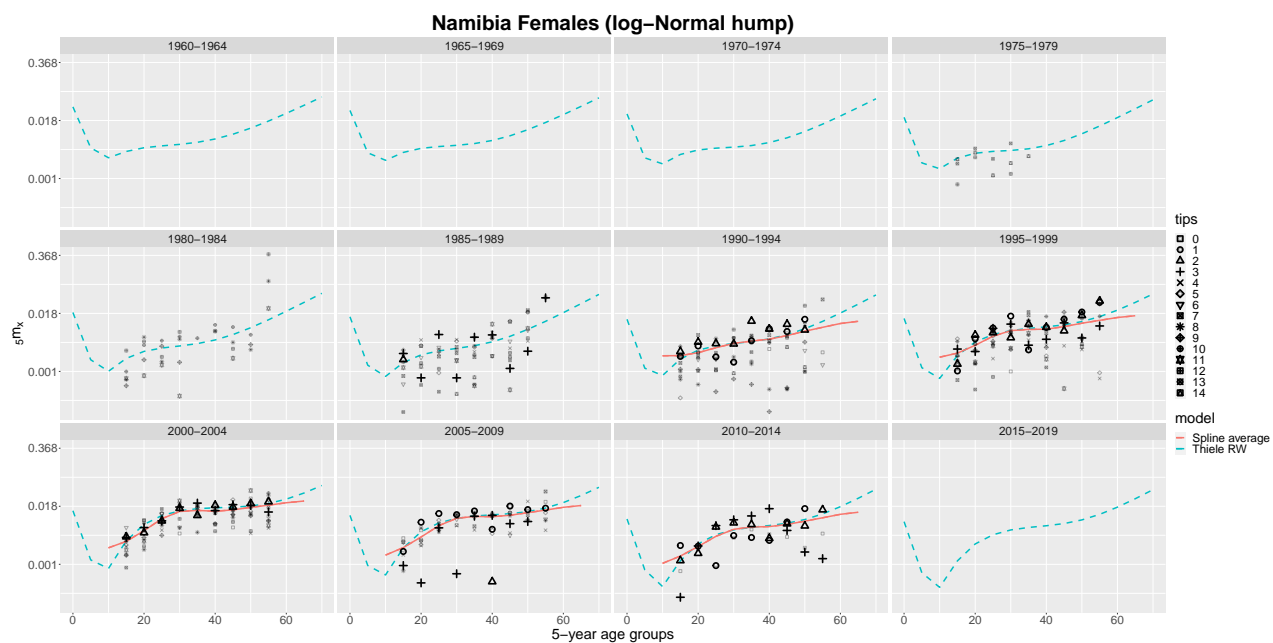


Figure 4: Mortality Schedules

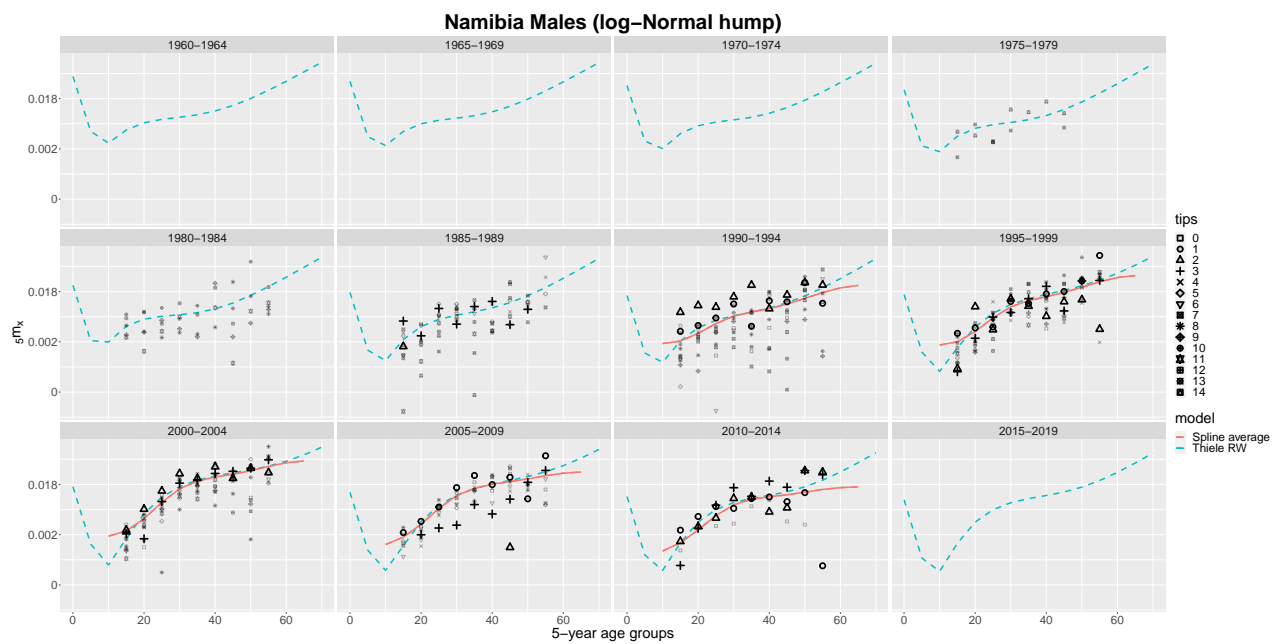


Figure 5: Mortality Schedules

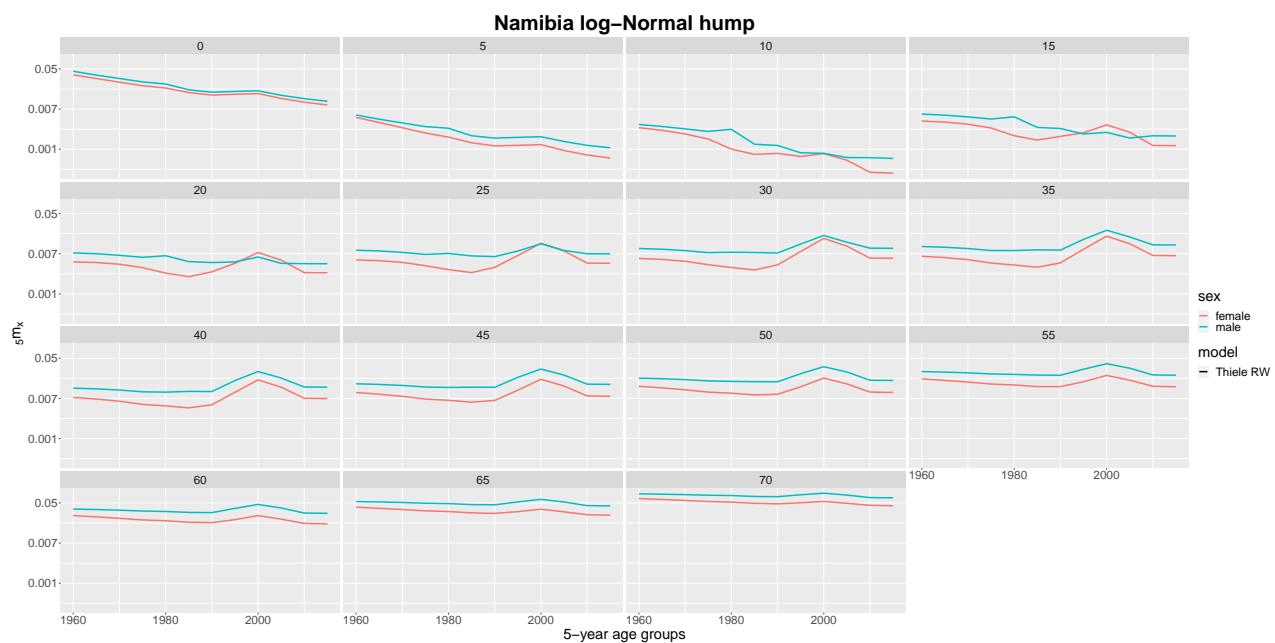


Figure 6: Mortality Schedules

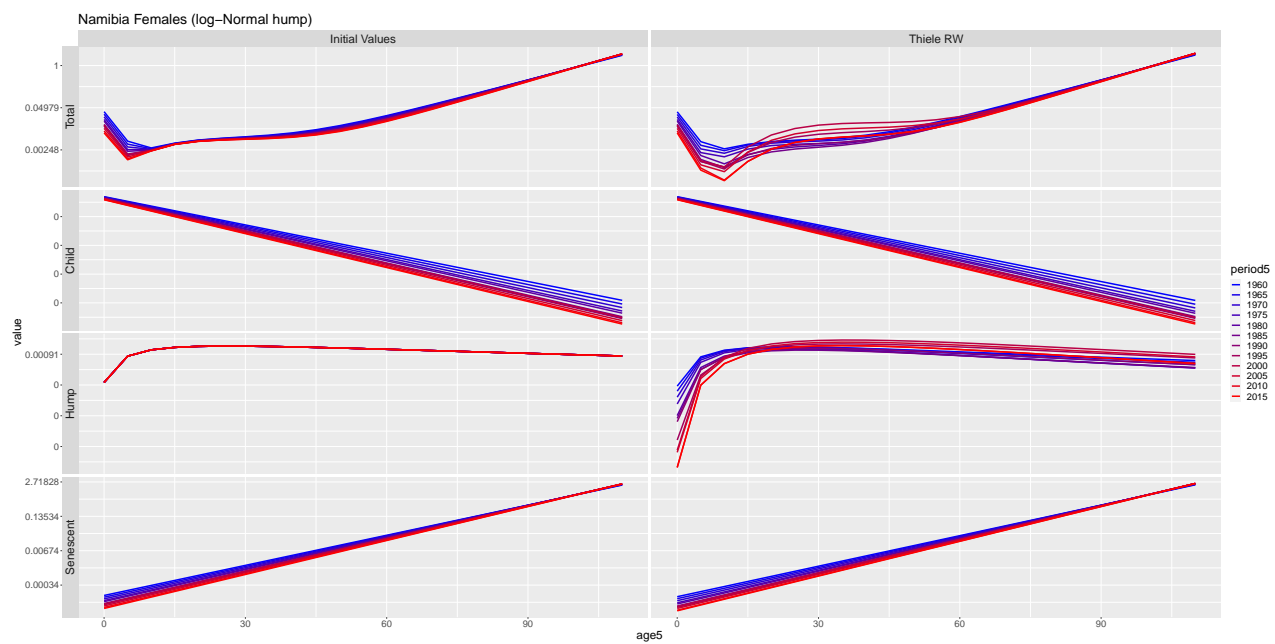


Figure 7: Thiele Decomposed

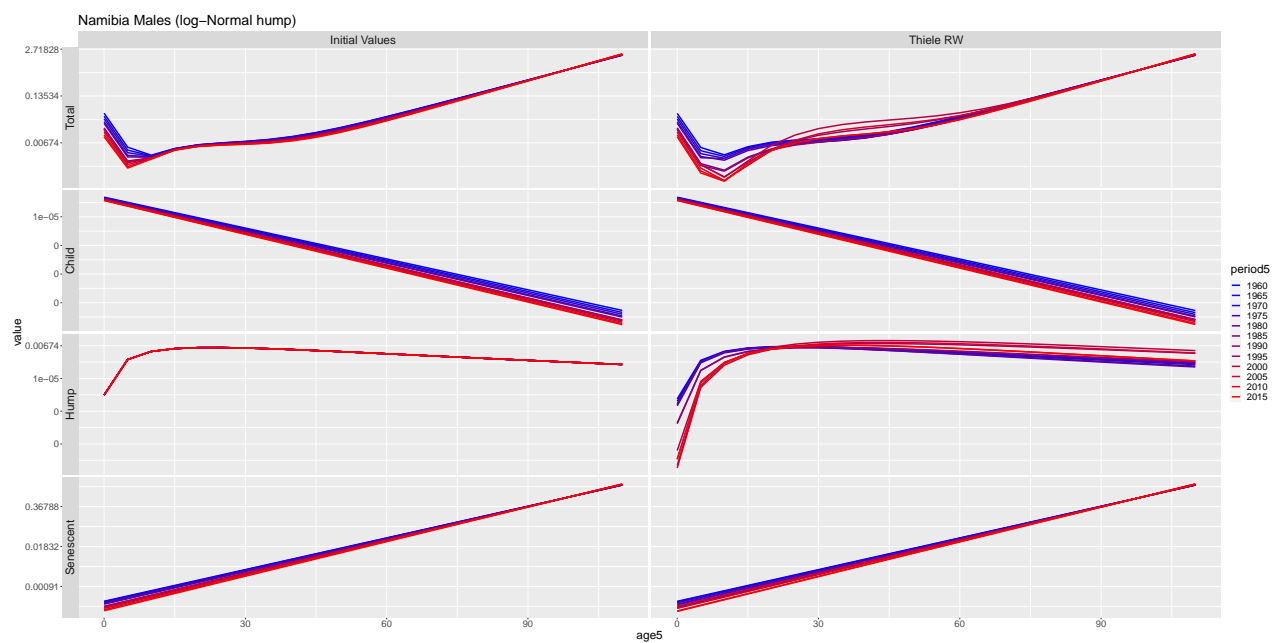


Figure 8: Thiele Decomposed

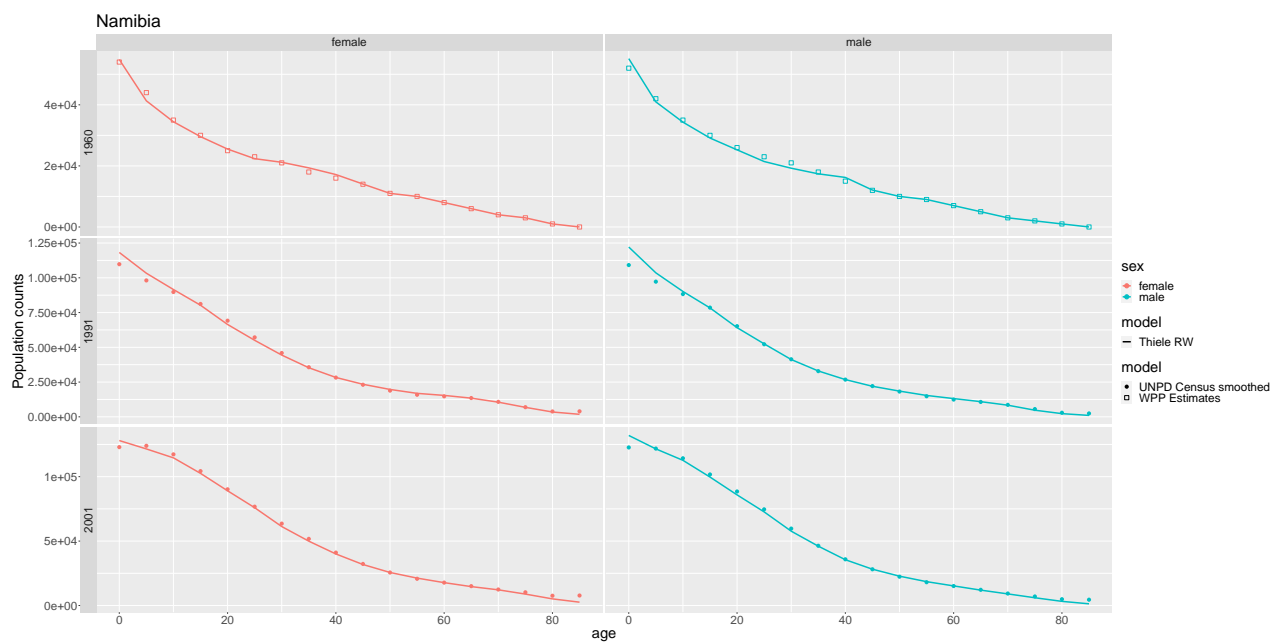


Figure 9: Population

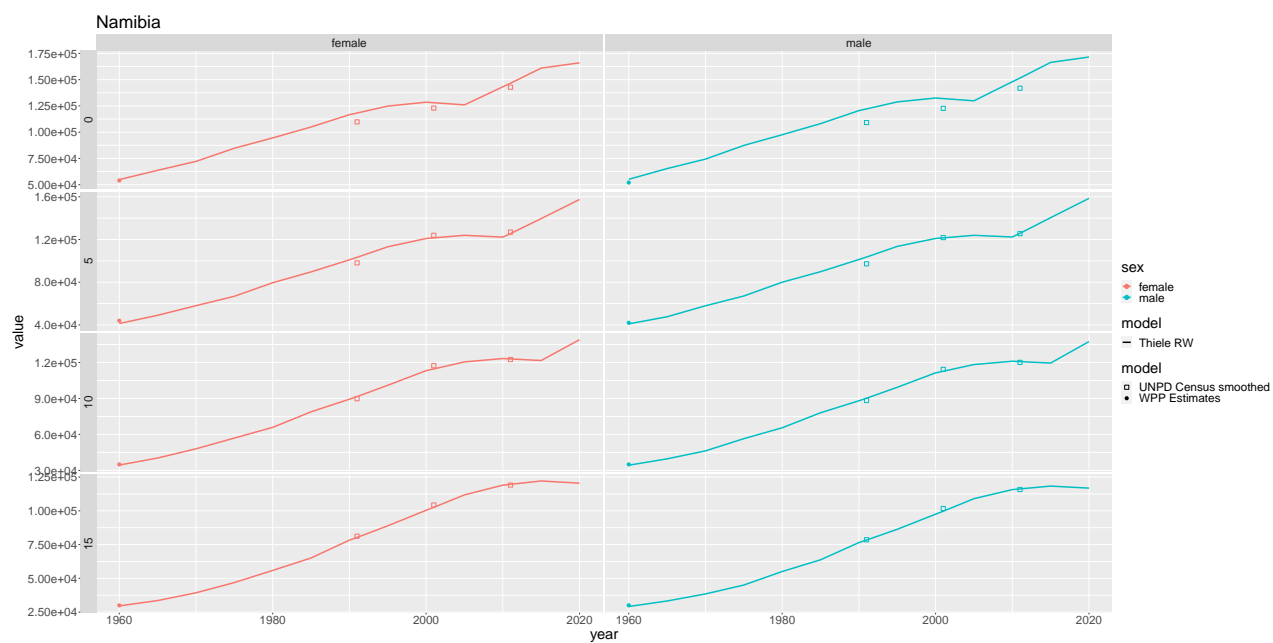


Figure 10: Population

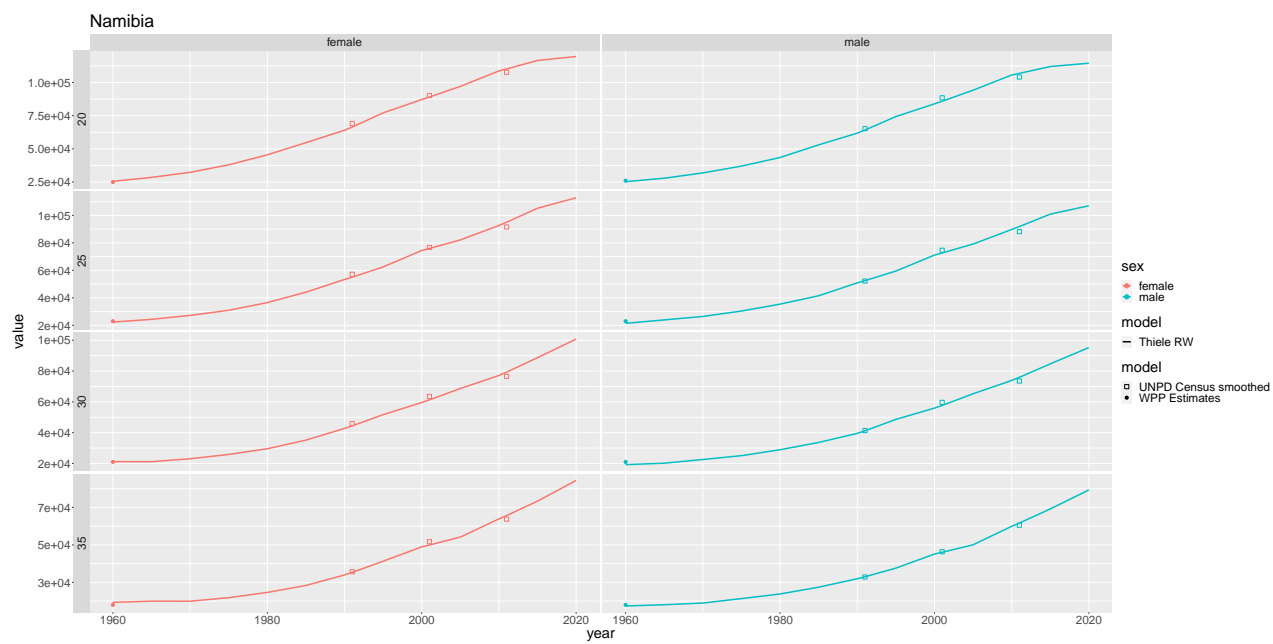


Figure 11: Population

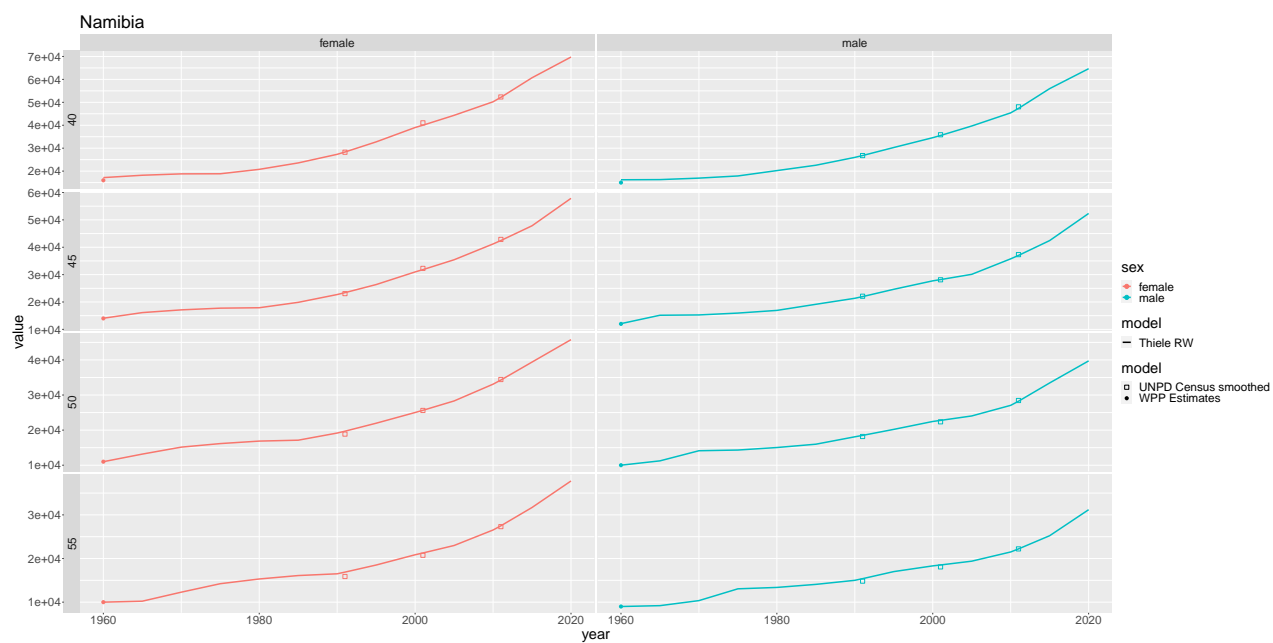


Figure 12: Population

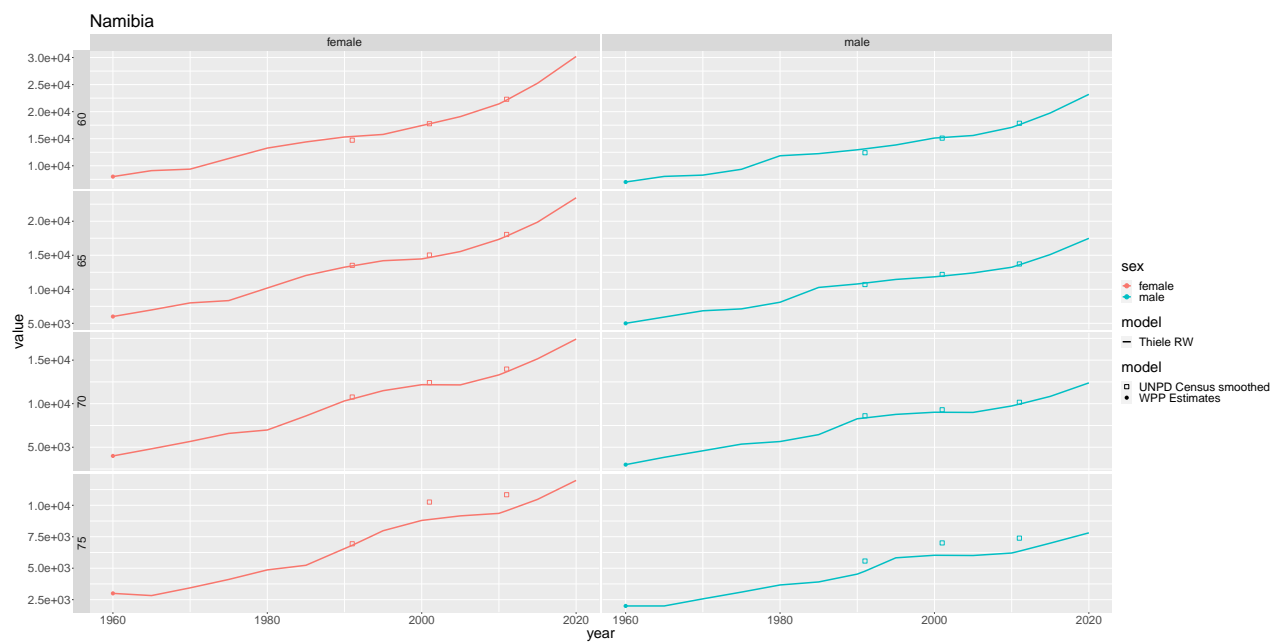


Figure 13: Population

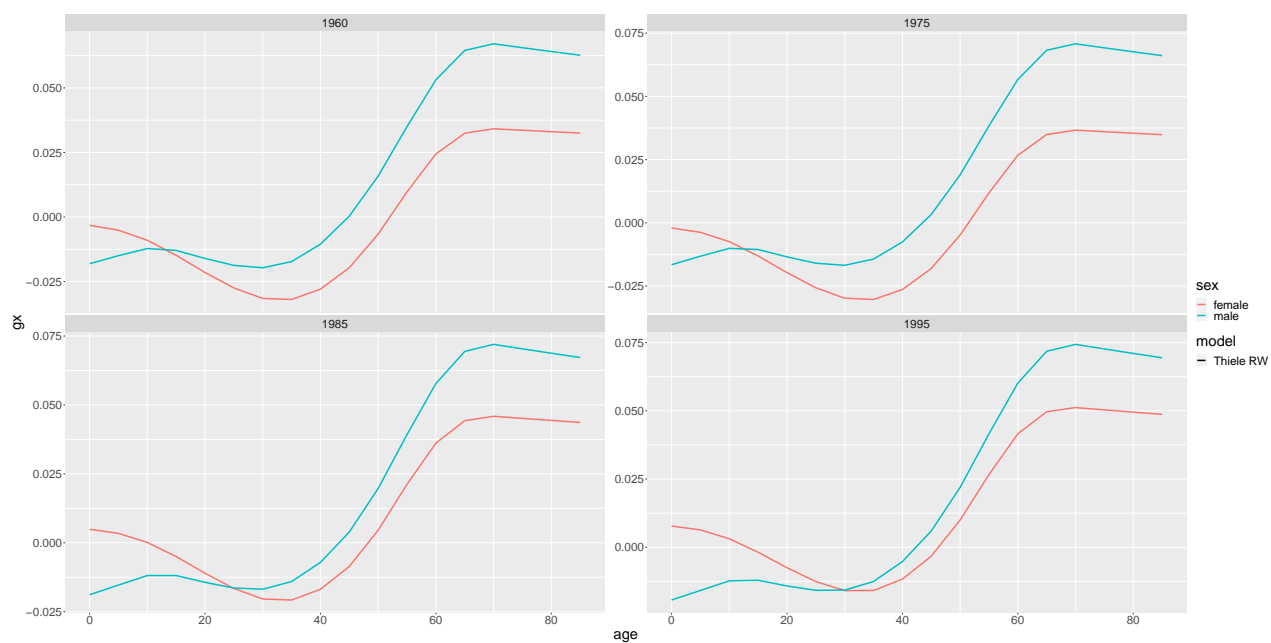


Figure 14: Migration

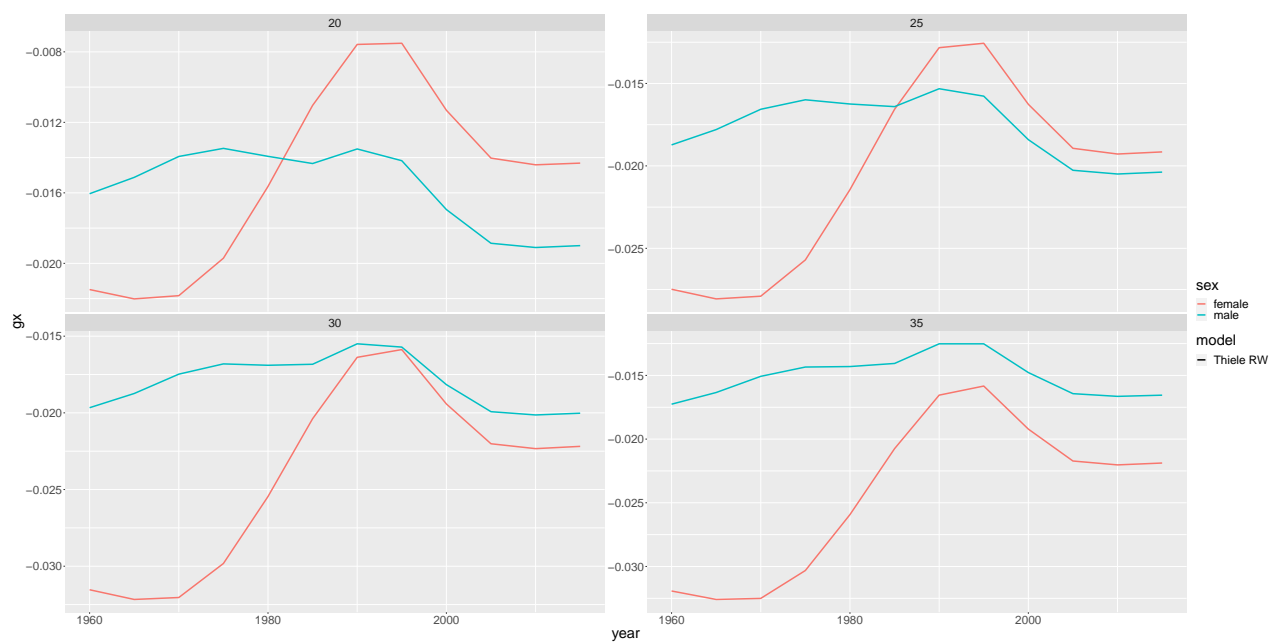


Figure 15: Migration

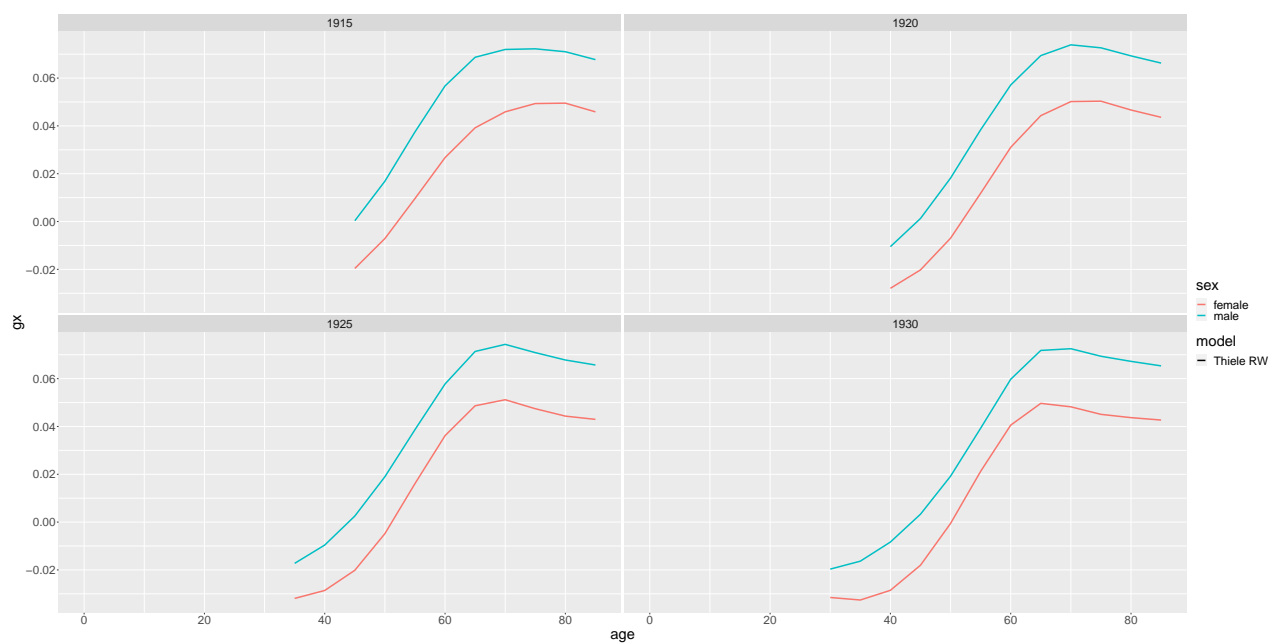


Figure 16: Migration

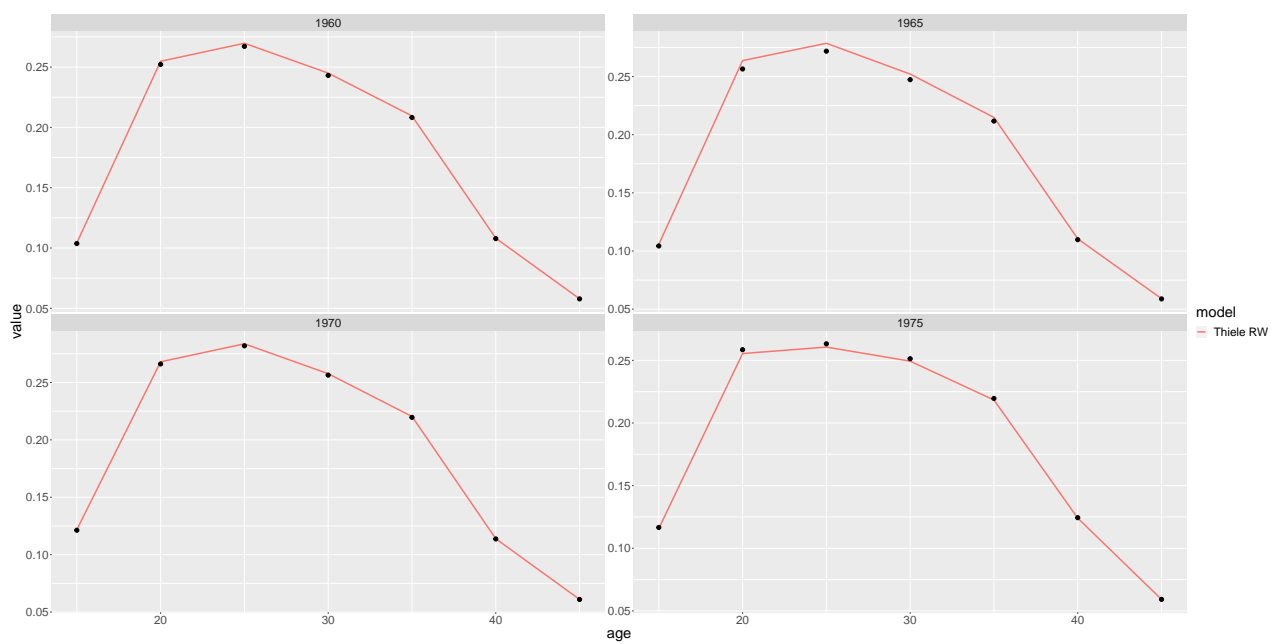


Figure 17: Fertility

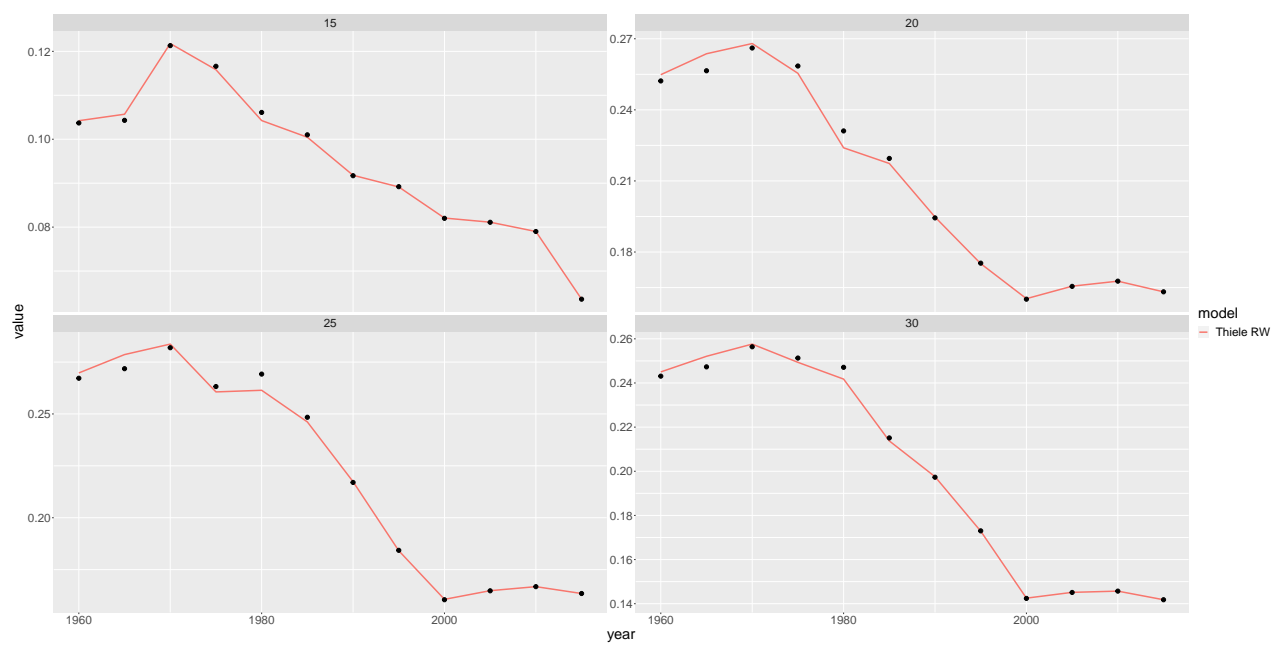


Figure 18: Fertility