Cameroon

```
## [1] "Census Females"
## # A tibble: 86 x 2
       age `2005`
##
            <dbl>
      <dbl>
##
##
   1
         0 337748
##
   2
         1 306850.
##
   3
          2 289908.
##
          3 282849.
##
   5
        4 274259.
##
   6
          5 265117.
##
   7
          6 254493.
##
         7 245594.
## 9
          8 239763.
## 10
          9 232630.
## # ... with 76 more rows
## [1] "Census Females 5-year"
## # A tibble: 18 x 2
##
        age `1976`
##
      <dbl>
             <dbl>
##
   1
        0 605118.
##
   2
         5 512635.
##
   3
        10 411125.
##
   4
        15 345677.
##
   5
         20 305370.
         25 269228.
##
   6
##
   7
         30 240773.
##
  8
         35 215240.
## 9
         40 183224.
## 10
         45 149331.
## 11
         50 118695.
## 12
         55 92248.
## 13
         60 69672.
## 14
         65 48846.
## 15
         70 34361.
## 16
         75 23450.
## 17
         80 15762.
## 18
         85 16650.
## [1] "Census Males"
## # A tibble: 86 x 2
##
        age `2005`
##
      <dbl>
              <dbl>
##
   1
          0 343296
   2
##
          1 315010.
##
   3
          2 296499.
##
   4
          3 290401
##
   5
          4 281627.
```

5 272737.

##

6

```
##
   7
         6 262914.
## 8
         7 254492.
## 9
         8 249144.
## 10
        9 241906.
## # ... with 76 more rows
## [1] "Census Males 5-year"
## # A tibble: 18 x 2
##
        age `1976`
##
      <dbl>
              <dbl>
##
   1
          0 611324.
   2
         5 530589.
##
##
   3
        10 431534.
##
        15 336850.
##
   5
        20 266002.
##
   6
        25 221801.
##
   7
        30 198387.
##
   8
        35 184225.
## 9
        40 165759.
## 10
        45 142701.
## 11
         50 117673.
## 12
         55 93580.
         60 71082.
## 13
## 14
         65 48797.
## 15
         70 32937.
         75 22064.
## 16
## 17
         80 14288.
## 18
         85 17413.
```

$Thiele\ log\text{-}Normal\ Hump\ Spline$

[1] "relative convergence (4)"

log_tau2_	log_tau2_logpop_m	log_tau2_logpop_f	log_tau2_logpop_f	##
4	5.4860728	4.6985430	5.4764716	##
log_lambda_g 7	$log_lambda_gx_age_m$	$log_lambda_gx_age_f$	$log_tau2_gx_m$	##
	8.3123325	8.1199998	3.6755109	##
log_disp 0	<pre>log_lambda_tp_0_inflated_sd</pre>	log_lambda_tp	$log_lambda_gx_agetime_m$	##
	-2.1668575	1.8524182	6.9077527	##
log_marginal_pr 6	<pre>log_marginal_prec_B_f</pre>	<pre>log_marginal_prec_A_f</pre>	<pre>log_marginal_prec_psi_f</pre>	##
	6.7093098	6.7868886	6.8088453	##
log_lambda_	log_lambda_psi_f	log_lambda_phi_f	<pre>log_marginal_prec_B_m</pre>	##
3	4.3075601	4.3083833	4.8178990	##
log_lamb	log_lambda_phi_m	log_lambda_B_f	log_lambda_A_f	##
4	4.3088627	4.3200327	4.3081631	##
logit_lambda_slo	log_lambda_B_m	log_lambda_A_m	log_lambda_epsilon_m	##
0	4.0378113	4.3048713	4.2459193	##
	logit_epsilon_slope_rho_m	logit_delta_slope_rho_m	logit_lambda_slope_rho_m	##
	1.3622847	-1.3643246	-1.8787993	##

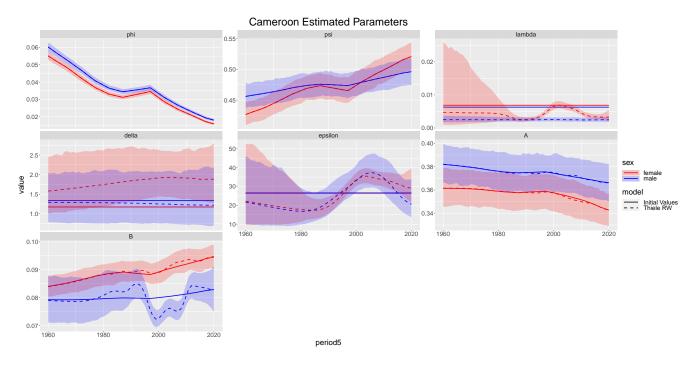


Figure 1: Estimated parameters

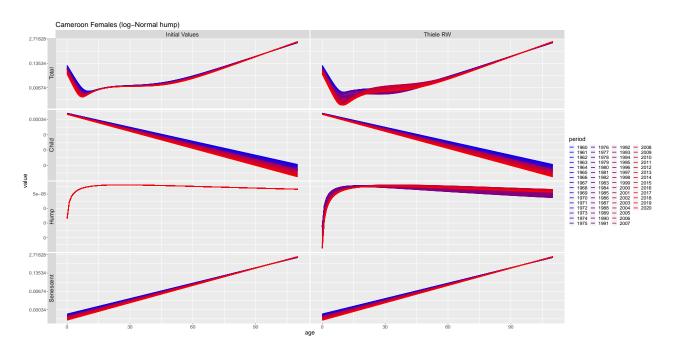


Figure 2: Thiele Decomposed

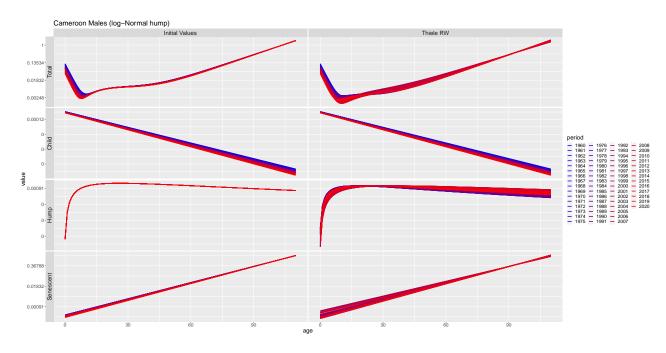


Figure 3: Thiele Decomposed

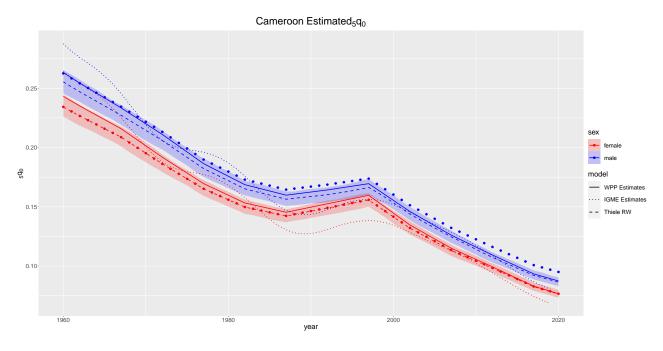


Figure 4: Estimated $_5q_0$

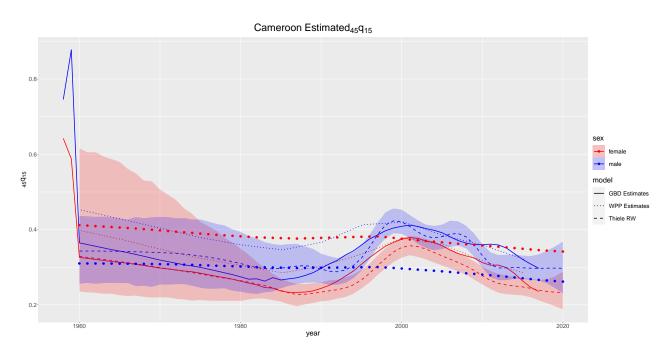


Figure 5: Estimated $_{45}q_{15}$

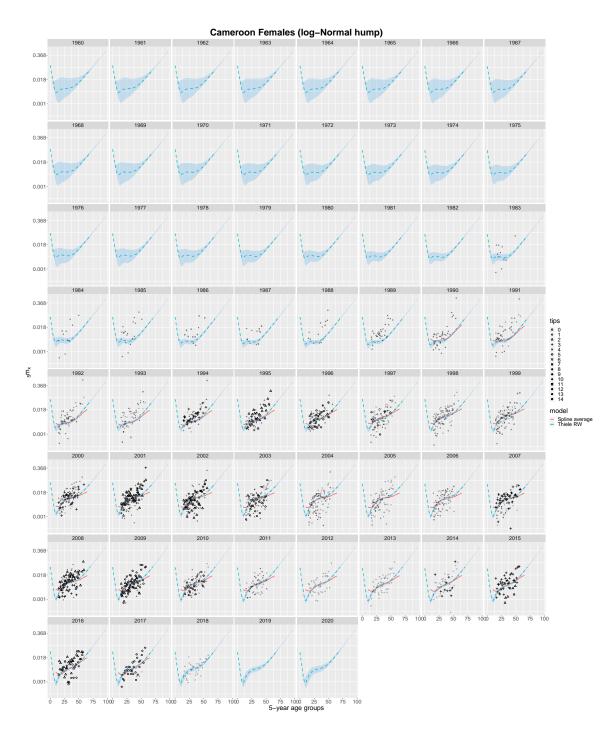


Figure 6: Mortality Schedules

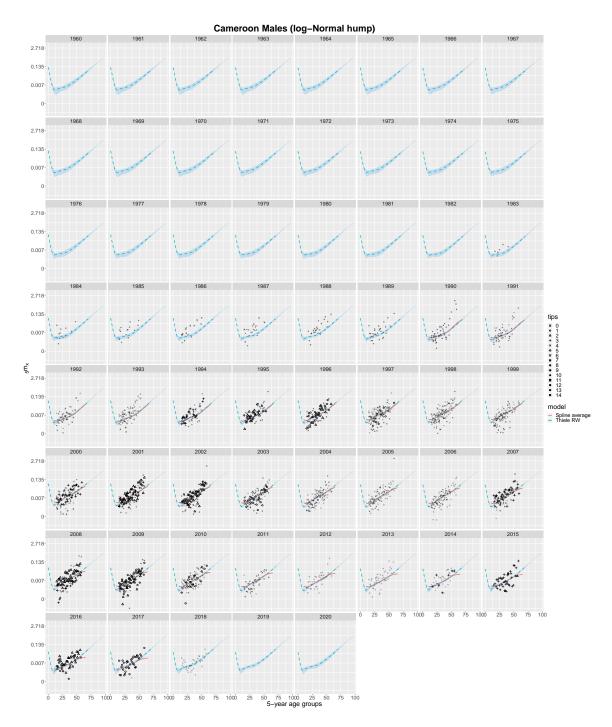


Figure 7: Mortality Schedules

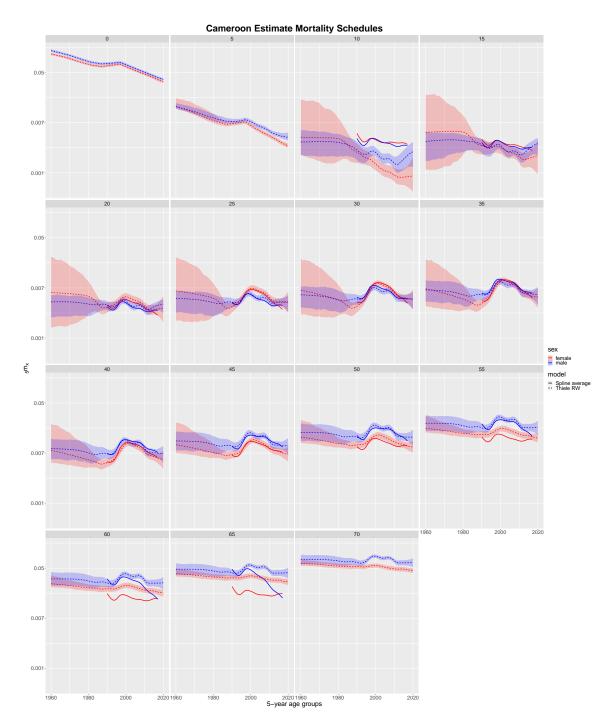


Figure 8: Mortality Schedules

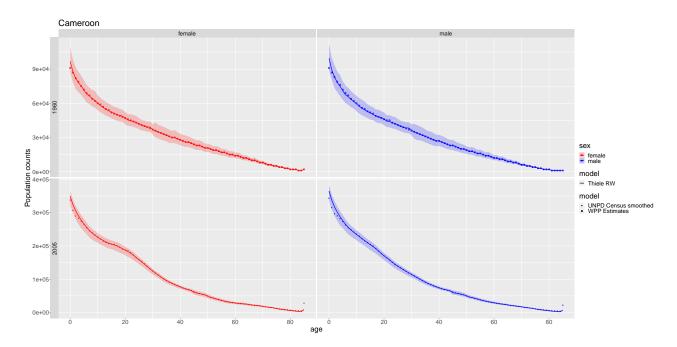


Figure 9: Population

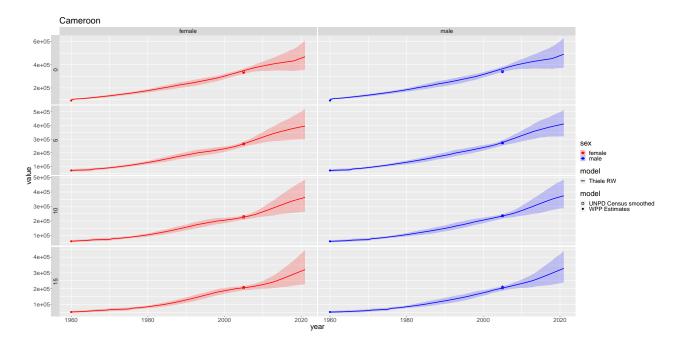


Figure 10: Population

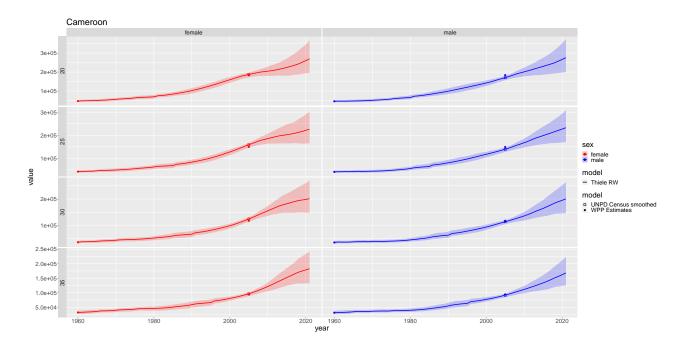


Figure 11: Population

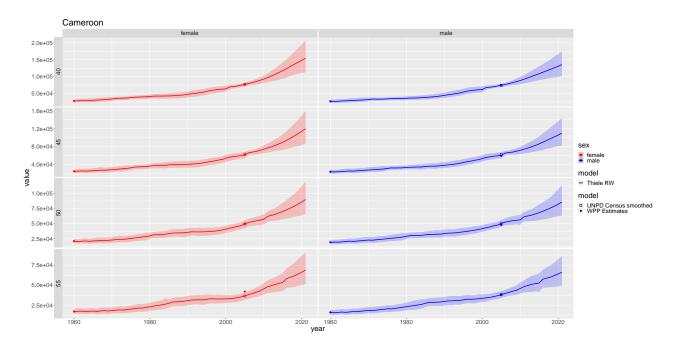
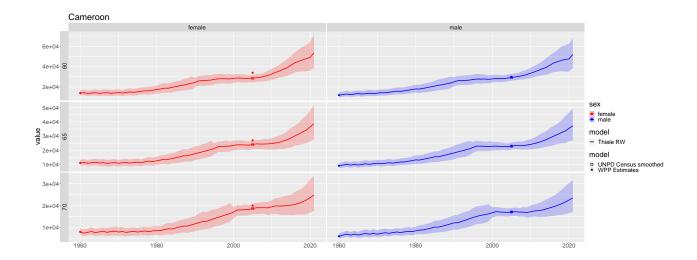


Figure 12: Population



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Figure 13: Population

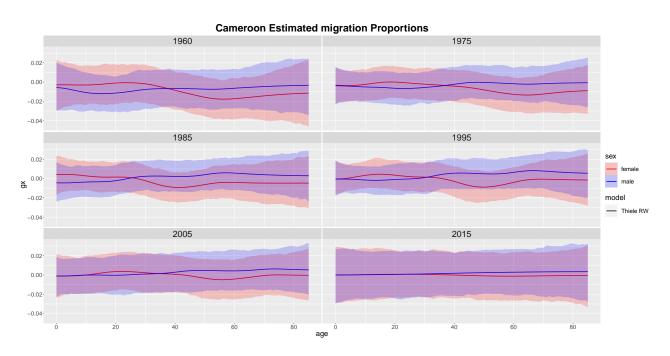


Figure 14: Migration

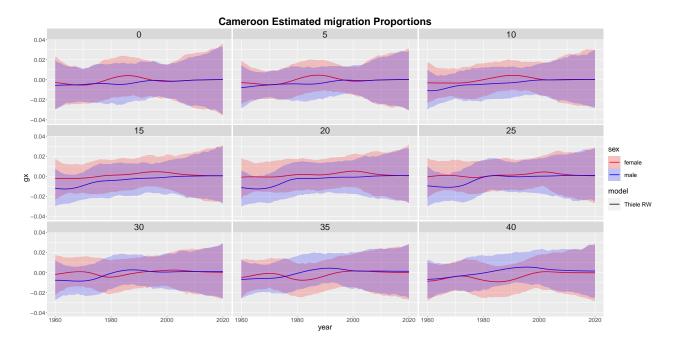


Figure 15: Migration

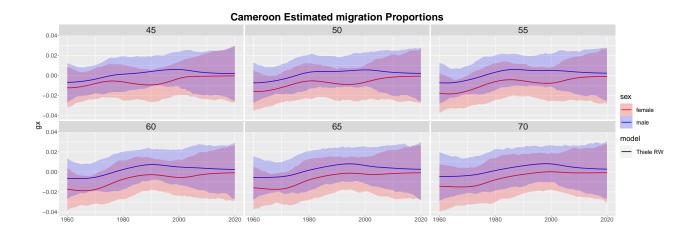


Figure 16: Migration

year

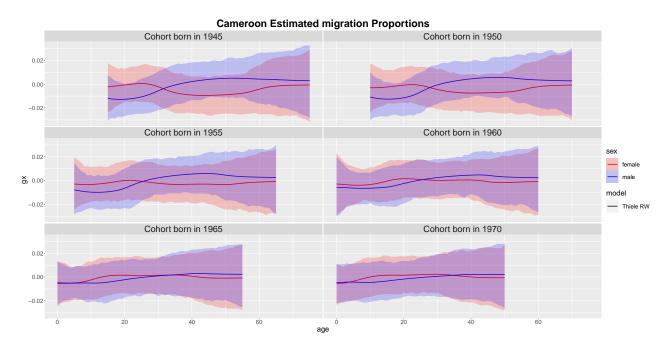


Figure 17: Migration

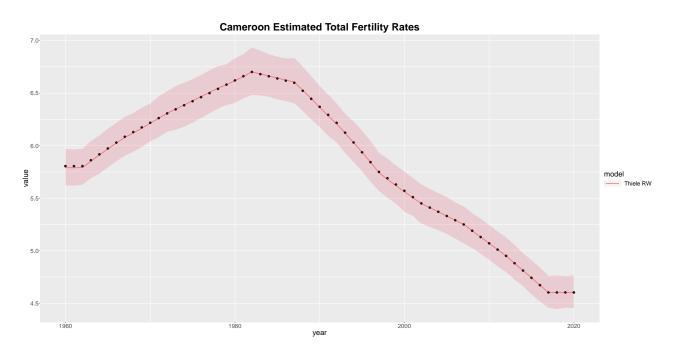


Figure 18: Total Fertility

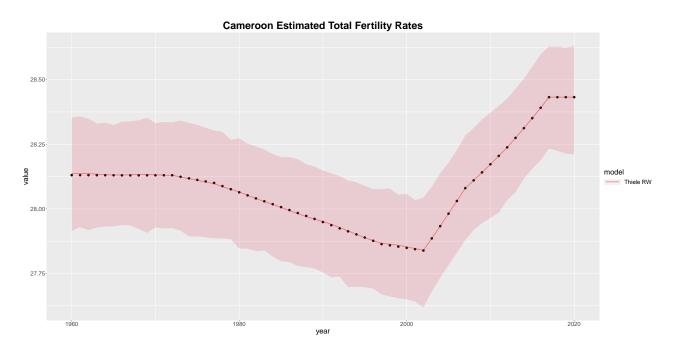


Figure 19: Mean age at births

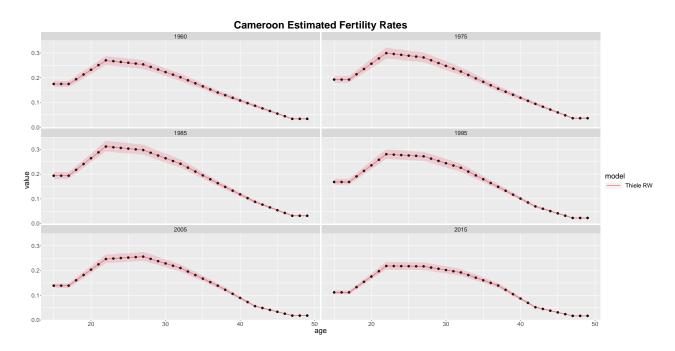


Figure 20: Fertility

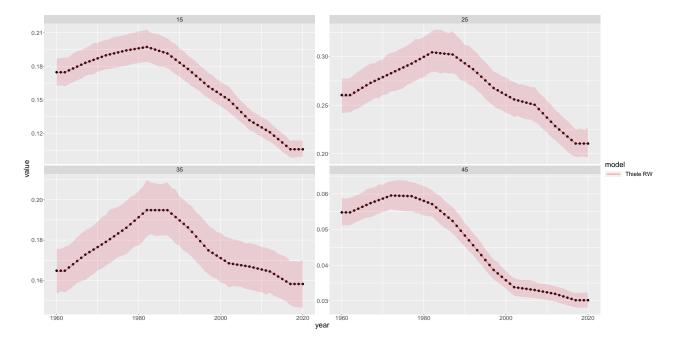


Figure 21: Fertility