Belanda

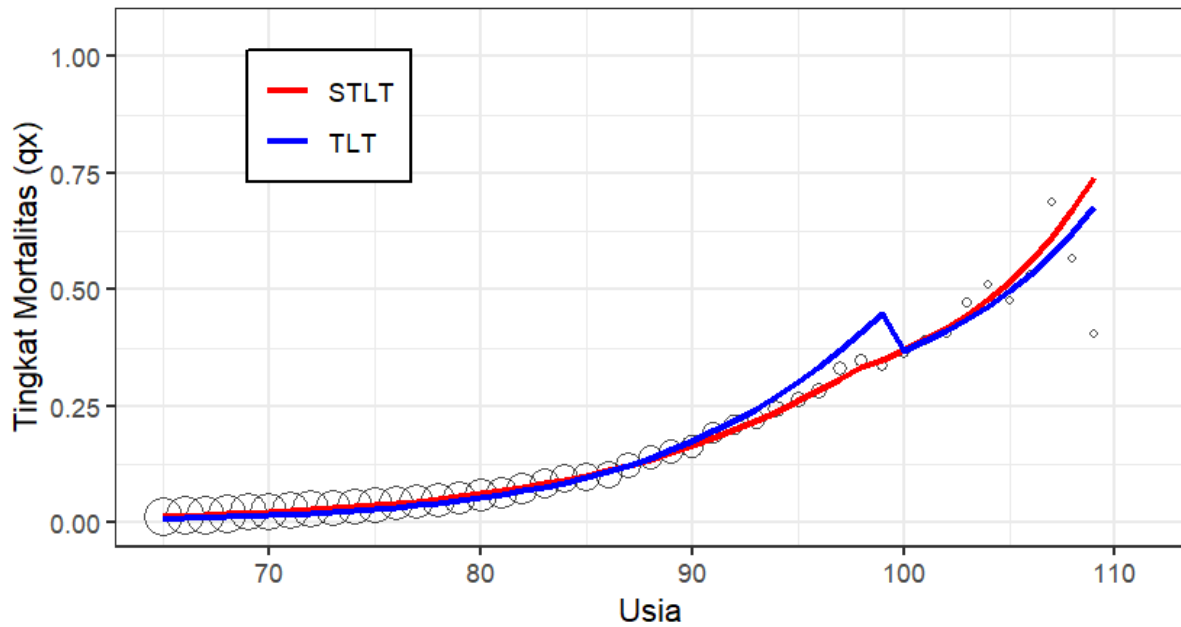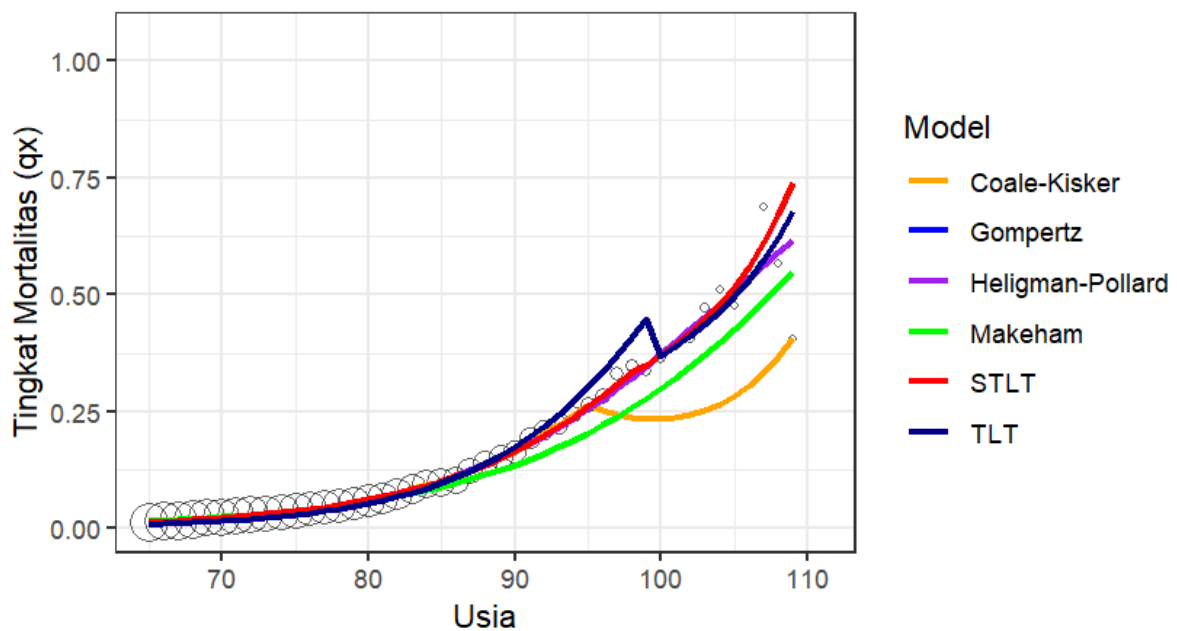## Perbandingan TLT dan STLT

Kohor Wanita Belanda 1901
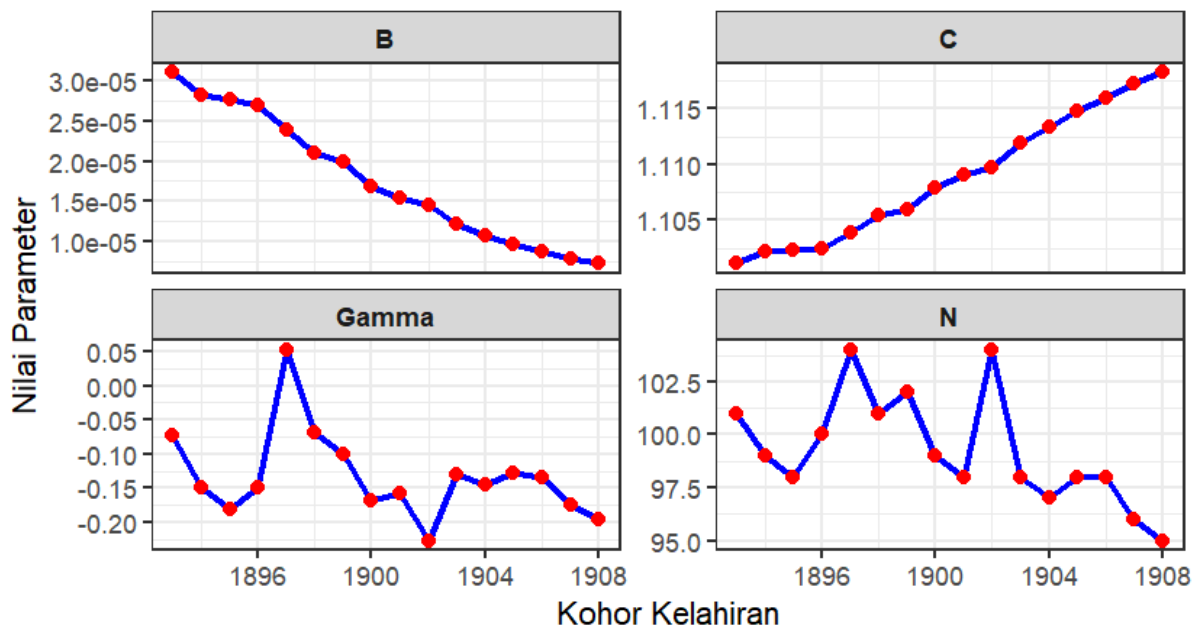

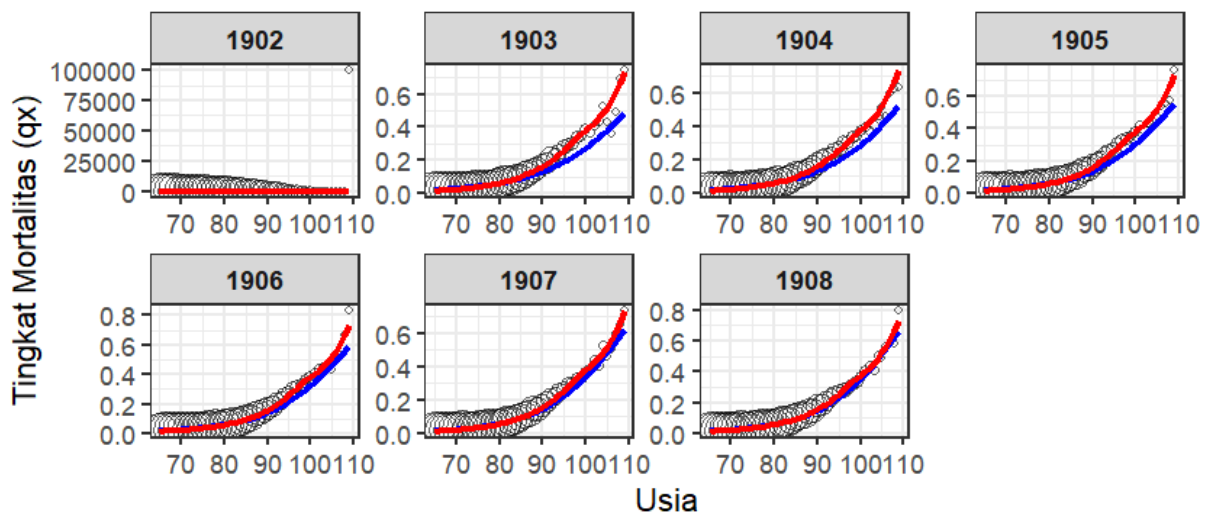
Perbandingan Berbagai Model

Kohor Wanita Belanda 1901

Tren Parameter STLT Antar Kohor
Kohor Female Belanda

Perbandingan Prediksi DSTLT vs CBD
Kohor Test Wanita Belanda 1902 - 1908


```
> # CETAK SEMUA TABEL
> cat("\n=== TABEL UNTUK SKRIPSI ===\n")

=== TABEL UNTUK SKRIPSI ===
>
> cat("\nTabel 1 - Estimasi Parameter:\n")
```

Tabel 1 - Estimasi Parameter:
```
> param_table <- create_parameter_table(models_1901, "1901")
> print(param_table)
  Parameter        STLT         TLT
1        B  1.541952e-05  2.200362e-06
2        C  1.109008e+00  1.133930e+00
3    Gamma -1.579456e-01 -1.438091e-01
4        N  9.800000e+01  1.000000e+02
5    Omega  1.142118e+02  1.156288e+02
>
> cat("\nTabel 2 - Perbandingan Model Statis:\n")
```

Tabel 2 - Perbandingan Model Statis:
```
> comparison_raw <- generate_comparison_table_fixed(kohor_target, models_1901,
output_format = "raw")
> if(!is.null(comparison_raw)) print(comparison_raw)
       Method          MAE          RMSE Weighted_MAE Weighted_RMSE
1        STLT 1.776151e-02 5.466354e-02 1.951231e-03  3.307049e-03
2         TLT 2.414706e-02 5.134925e-02 7.487688e-03  9.464262e-03
3    GOMPERTZ 3.641415e-02 5.724220e-02 5.347678e-03  1.342431e-02
4    MAKEHAM 3.648057e-02 5.732373e-02 5.357388e-03  1.344621e-02
5         HP2 1.459962e-02 3.826503e-02 1.997568e-03  3.760812e-03
6 COALE-KISKER 5.782412e-18 1.541639e-17 2.584591e-18  5.377594e-18
>
> if(exists("param_trends_data")) {
+   cat("\nTabel 3 - Tren Parameter:\n")
+   print(param_trends_data)
+ }
```

Tabel 3 - Tren Parameter:
```
   Cohort           B        C       Gamma   N      Omega
1    1893 3.093312e-05 1.101140 -0.07379796 101 127.02872
2    1894 2.821092e-05 1.102159 -0.14955596  99 114.58067
3    1895 2.763733e-05 1.102304 -0.18124857  98 112.27876
4    1896 2.693020e-05 1.102470 -0.14989260 100 114.36522
5    1897 2.378245e-05 1.103948  0.05236362 104  76.58037
6    1898 2.098507e-05 1.105398 -0.06959585 101 128.54906
7    1899 1.994779e-05 1.105955 -0.10049939 102 119.24687
8    1900 1.694729e-05 1.107961 -0.16811761  99 112.72022
9    1901 1.541952e-05 1.109008 -0.15794559  98 114.21177
10   1902 1.435048e-05 1.109895 -0.44818272 108 110.00096
11   1903 1.222377e-05 1.111935 -0.13010861  98 117.17300
12   1904 1.085531e-05 1.113392 -0.14613482  97 115.82499
13   1905 9.676052e-06 1.114776 -0.12735070  98 117.27082
14   1906 8.815331e-06 1.115904 -0.13406036  98 116.19769
15   1907 7.945168e-06 1.117175 -0.17547175  96 113.22104
16   1908 7.338869e-06 1.118202 -0.19581175  95 112.10403
>
```

```
> if(!is.null(dstlt_fit_female)) {
+   cat("\nTabel 5 - Parameter DSTLT:\n")
+   dstlt_param_table <- data.frame(
+     Parameter = c("a", "b", "theta", "gamma", "N", "Omega"),
+     Estimate = c(dstlt_fit_female$coefficients$a, dstlt_fit_female$coefficients$b,
+              dstlt_fit_female$coefficients$theta, dstlt_fit_female$coefficients$gamma,
+              dstlt_fit_female$coefficients$N, dstlt_fit_female$Omega)
+   )
+   print(dstlt_param_table)
+ }

Tabel 5 - Parameter DSTLT:
  Parameter    Estimate
1       a -10.28038404
2       b  -0.08163626
3   theta   2.33679721
4   gamma  -0.15028489
5       N  99.00000000
6   Omega 114.54911609
>
> if(exists("error_summary")) {
+   cat("\nTabel 8 - Error Prediksi:\n")
+   print(error_summary)
+ }

Tabel 8 - Error Prediksi:
# A tibble: 7 × 5
  Cohort DSTLT_MAE DSTLT_RMSE CBD_MAE CBD_RMSE
   <int>     <dbl>      <dbl>   <dbl>    <dbl>
1   1902    2.22      14.8     2.26    14.8
2   1903    0.0161     0.0392  0.0477   0.0763
3   1904    0.0128     0.0259  0.0372   0.0545
4   1905    0.0125     0.0236  0.0326   0.0513
5   1906    0.0126     0.0262  0.0293   0.0508
6   1907    0.0111     0.0186  0.0207   0.0310
7   1908    0.0114     0.0203  0.0149   0.0262
```