

# Malawi

## [1] "Census Females"

## # A tibble: 18 x 7

##	aggr.age	`1966`	`1977`	`1987`	`1998`	`2008`	`2018`
##	*	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>
## 1	0	382092	552376.	705831.	836765	1200064	1286435
## 2	5	301988	416036.	628805.	725975	1009091.	1310090.
## 3	10	250885.	313031.	507772.	629430.	833912.	1234316.
## 4	15	209466	273147.	414540.	570030.	707975.	1055605
## 5	20	183540.	255764.	363053.	511617.	648740.	856427
## 6	25	164044.	220751.	304369.	409797.	560306	689452.
## 7	30	142858	175355.	247344.	310164.	423114	582199.
## 8	35	121689.	140220.	206141.	242568.	308002.	488692.
## 9	40	102922	119257.	165333.	193342.	230240.	371947.
## 10	45	83121.	104342.	132676.	158048.	179338.	271520.
## 11	50	66045	85701.	109865.	122280.	149304.	205954.
## 12	55	49106	67465.	91077.	92530	127931.	163065
## 13	60	33155	54358.	78096.	80162	103183.	137428.
## 14	65	79545	40983.	63269.	70226.	80198	118340.
## 15	70	NA	28902.	43679.	53119.	65409.	91932.
## 16	75	NA	20259.	27237.	36136	53774	66692
## 17	80	NA	13773.	17827.	24320.	38230	46553.
## 18	85	NA	24390.	23505.	25681	47351.	47742

## [1] "Census Males"

## # A tibble: 18 x 7

##	aggr.age	`1966`	`1977`	`1987`	`1998`	`2008`	`2018`
##	*	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>
## 1	0	366133	529521.	688936.	823625	1169947	1265971
## 2	5	295618	410674.	619764.	717432.	985159.	1277777.
## 3	10	238983.	314866.	501357.	618896.	812531.	1199542.
## 4	15	189232	253035.	383120.	526828.	658051.	1008587.
## 5	20	153666.	213954.	313076.	448014.	566341.	785700
## 6	25	128427.	187227.	268166.	381511	508151	614954.
## 7	30	109493.	156681.	225210.	309779	422236	521016
## 8	35	95656.	125964.	189002.	240333.	320858.	455013
## 9	40	84395	106763.	154703.	191409.	232005	369070.
## 10	45	71344.	92944.	124405.	158219	169974.	275767.
## 11	50	59436.	75529.	100319.	124138.	135864.	198649.
## 12	55	47722	61111.	81417.	93066.	114754.	146078
## 13	60	33228	50887.	68001.	75016.	92168.	116899.
## 14	65	81935	39100.	55630.	62218.	69391.	96862.
## 15	70	NA	28168.	40343.	47106.	52751.	71780.
## 16	75	NA	19497.	25655.	32527.	40108	47783.
## 17	80	NA	11498.	16190.	21170.	26643.	30152.
## 18	85	NA	23975.	20595.	21884.	28983	27737.

*Thiele log-Normal Hump RW*

##	user	system	elapsed
##	32.64	1.01	33.82

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

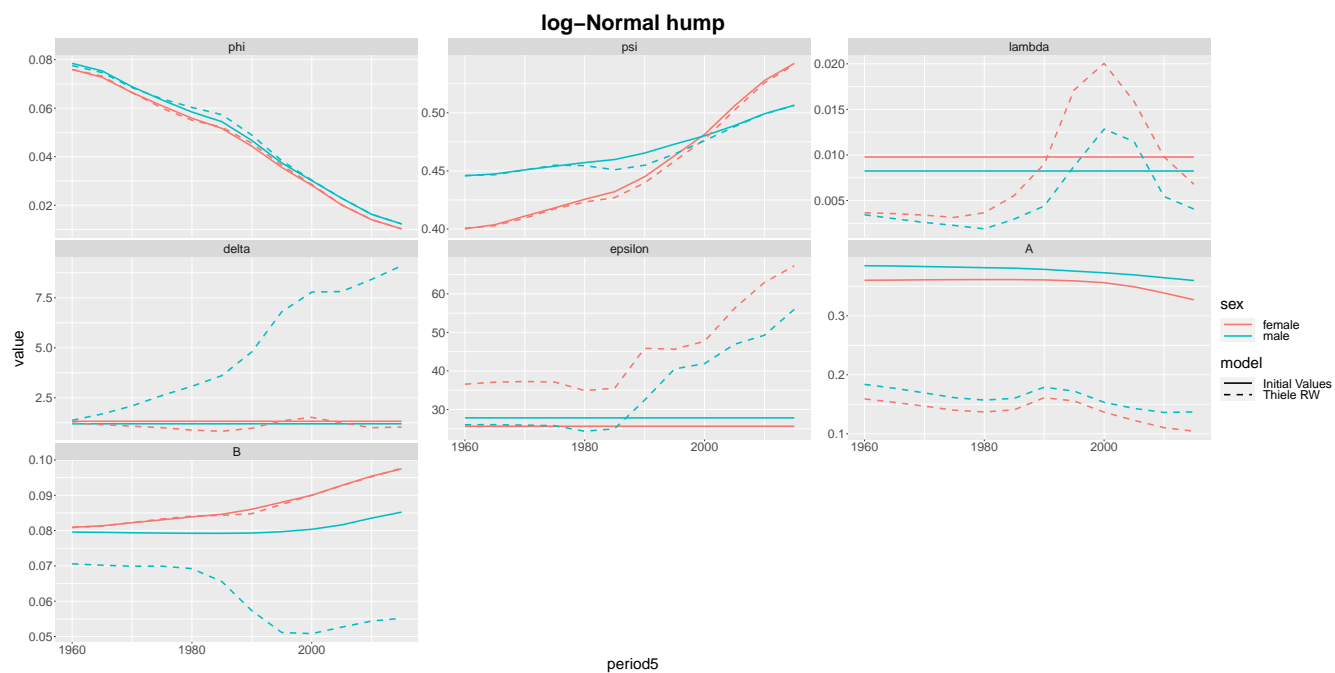


Figure 1: Estimated parameters



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

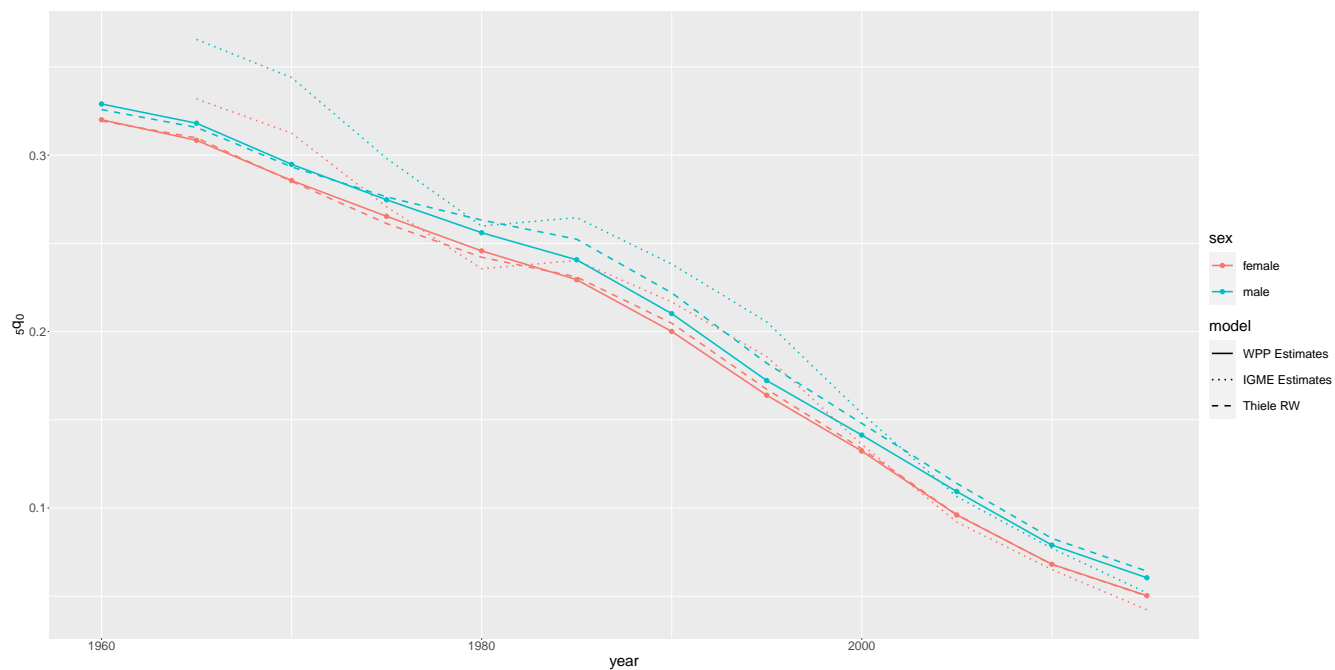


Figure 3: Estimated  $_{5}q_0$

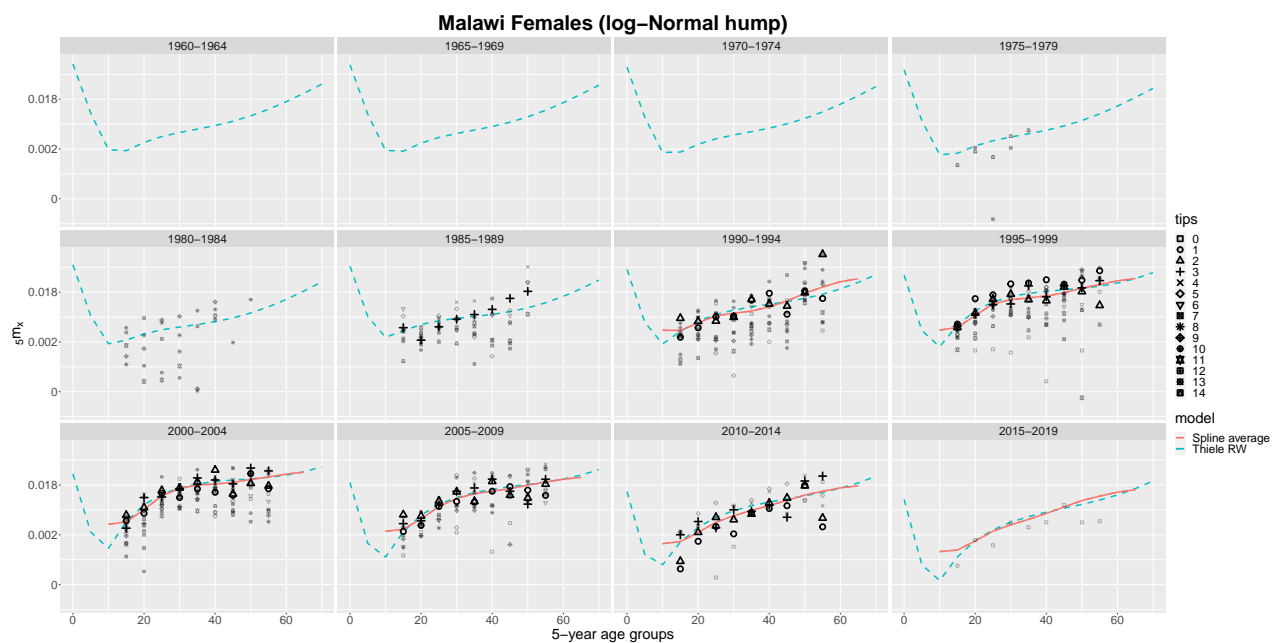


Figure 4: Mortality Schedules

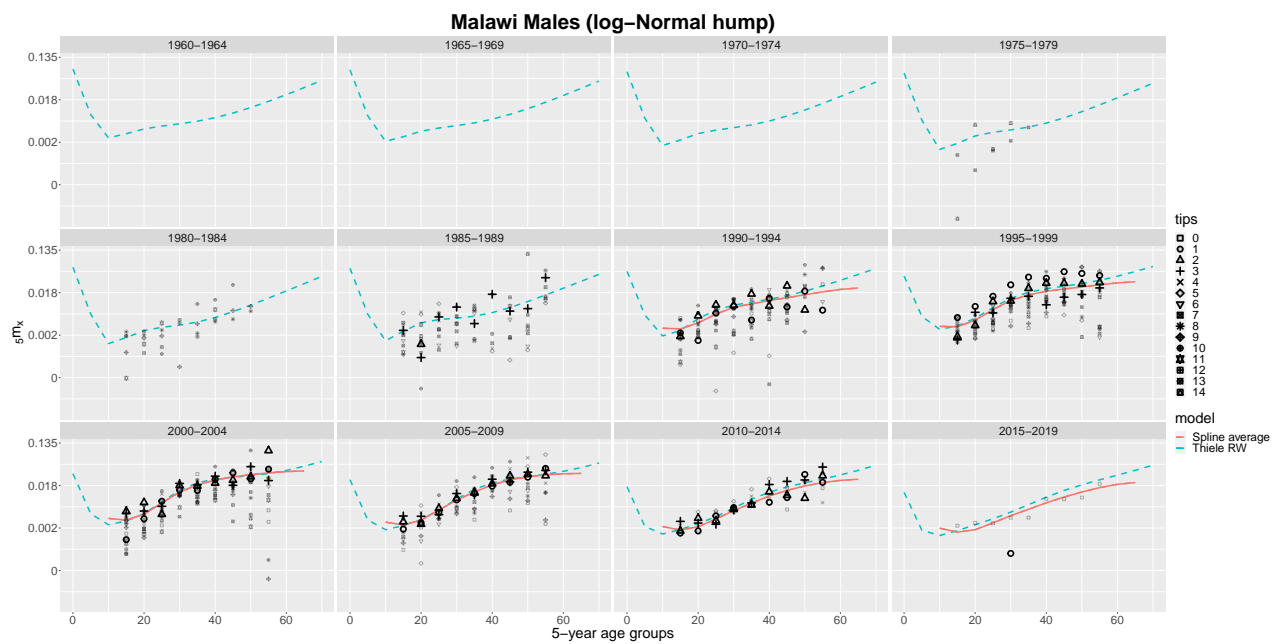


Figure 5: Mortality Schedules

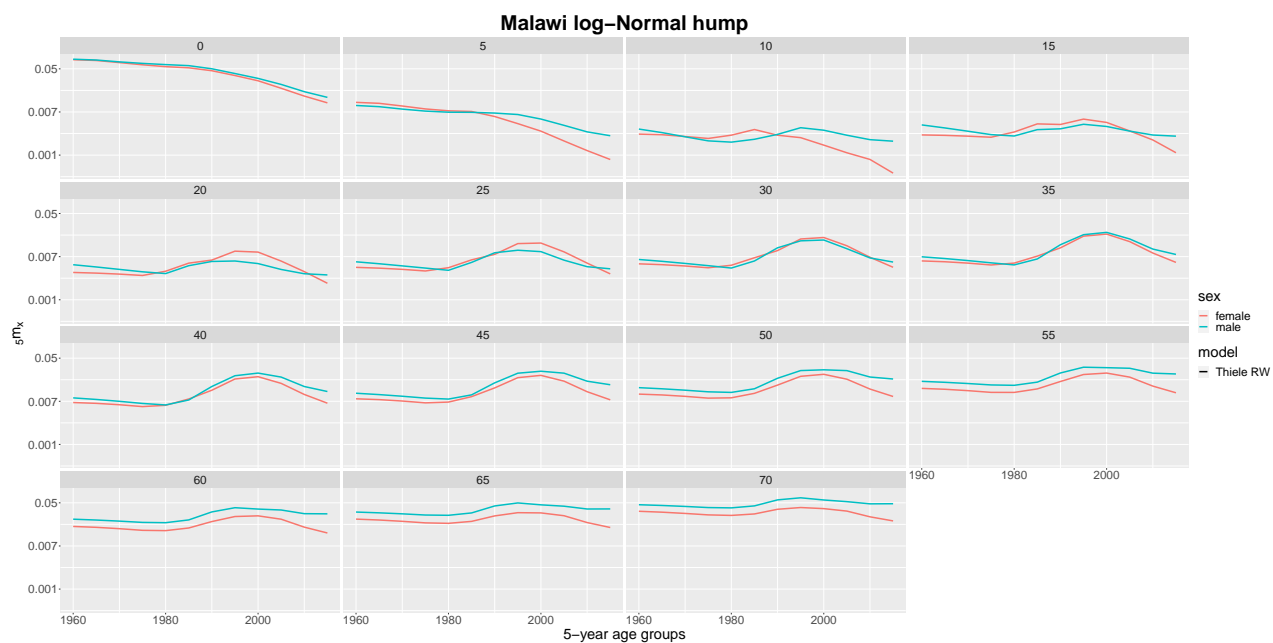


Figure 6: Mortality Schedules

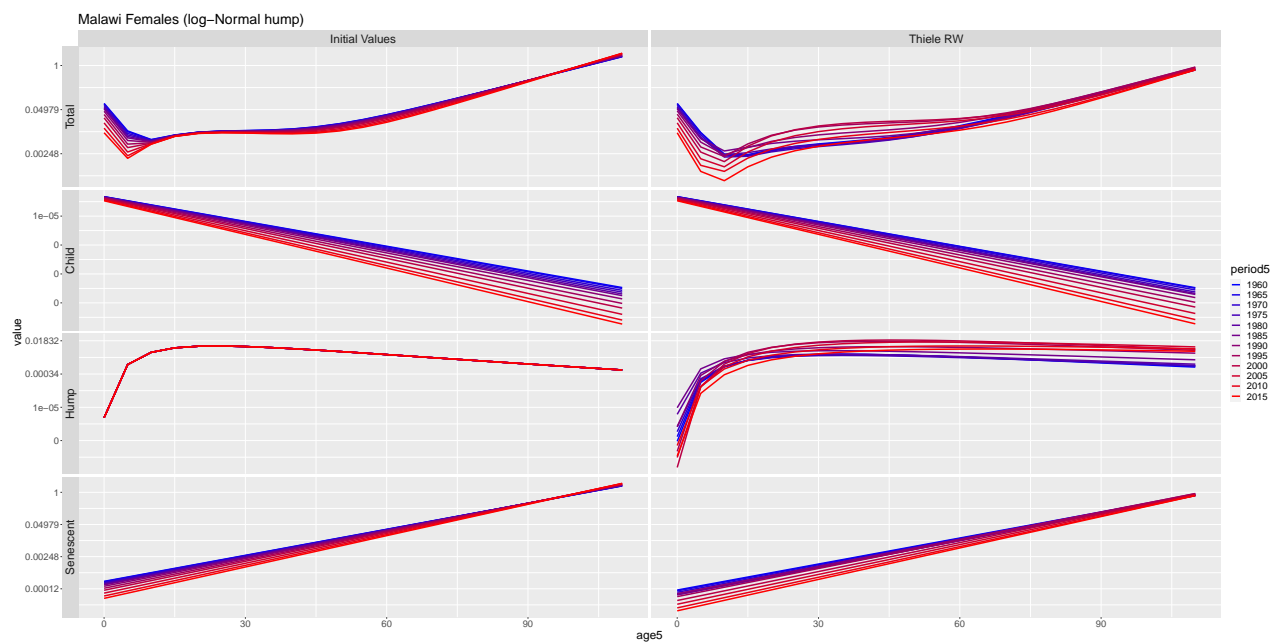


Figure 7: Thiele Decomposed

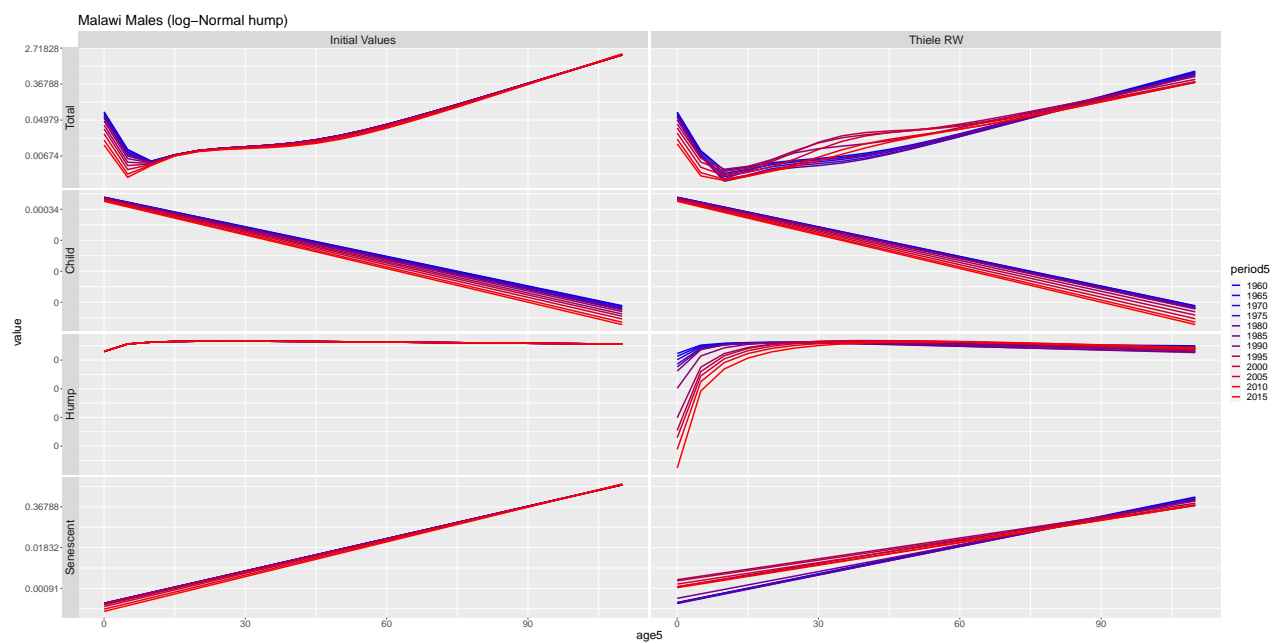


Figure 8: Thiele Decomposed

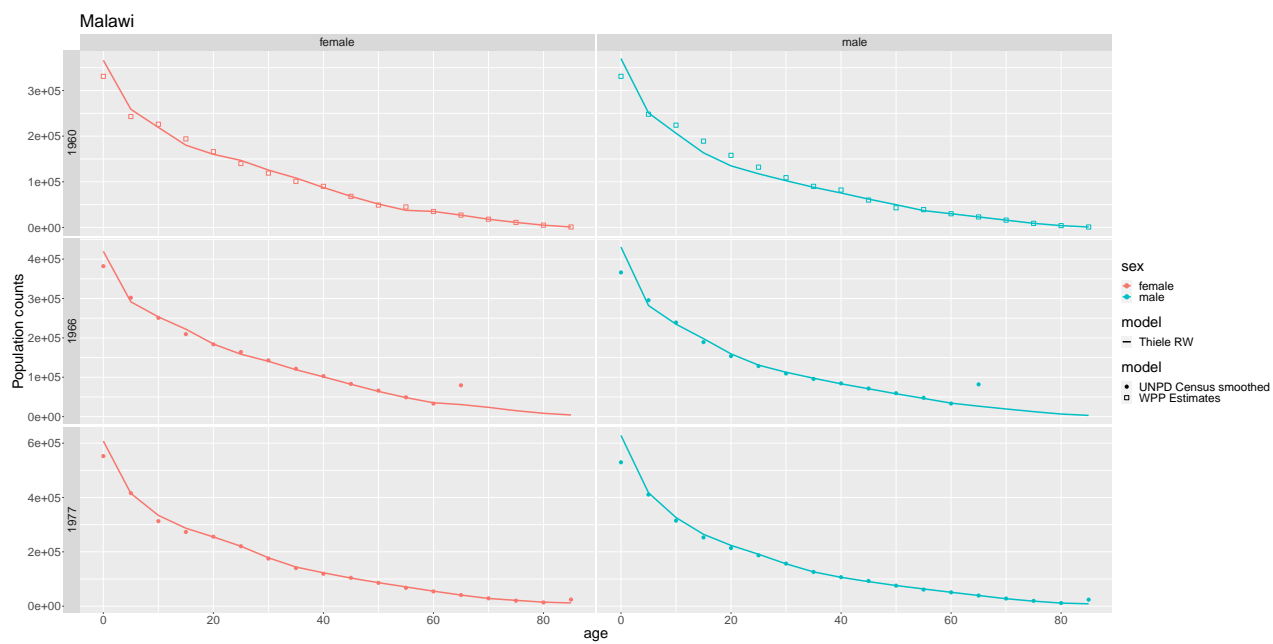


Figure 9: Population

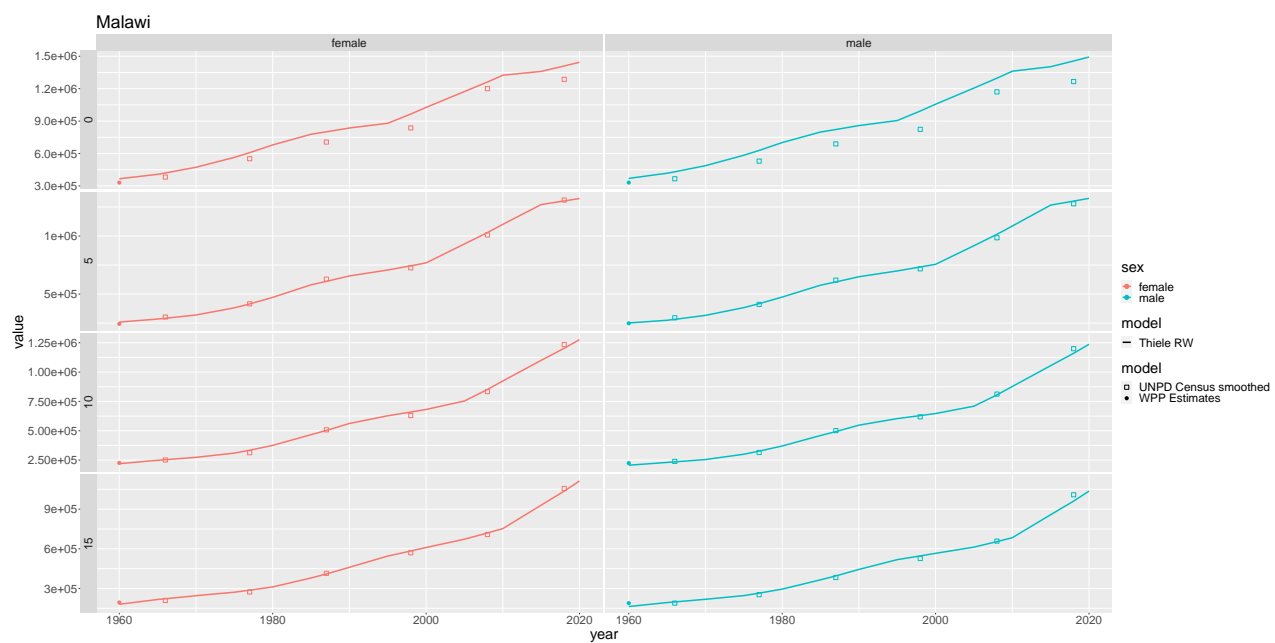


Figure 10: Population

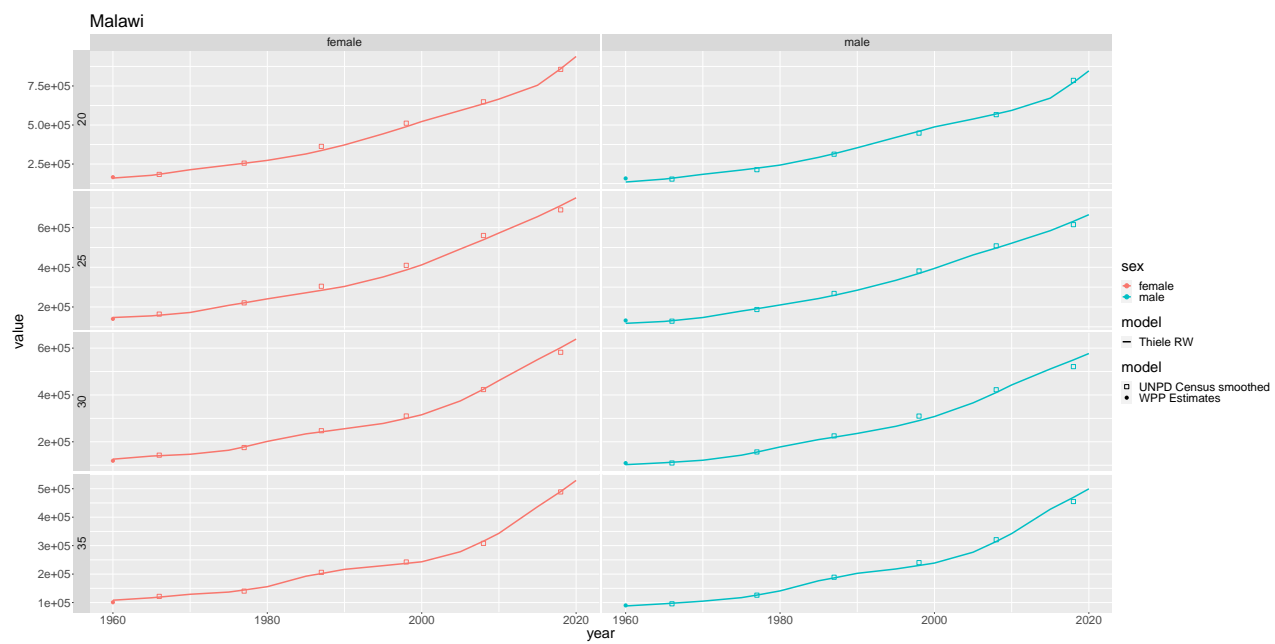


Figure 11: Population



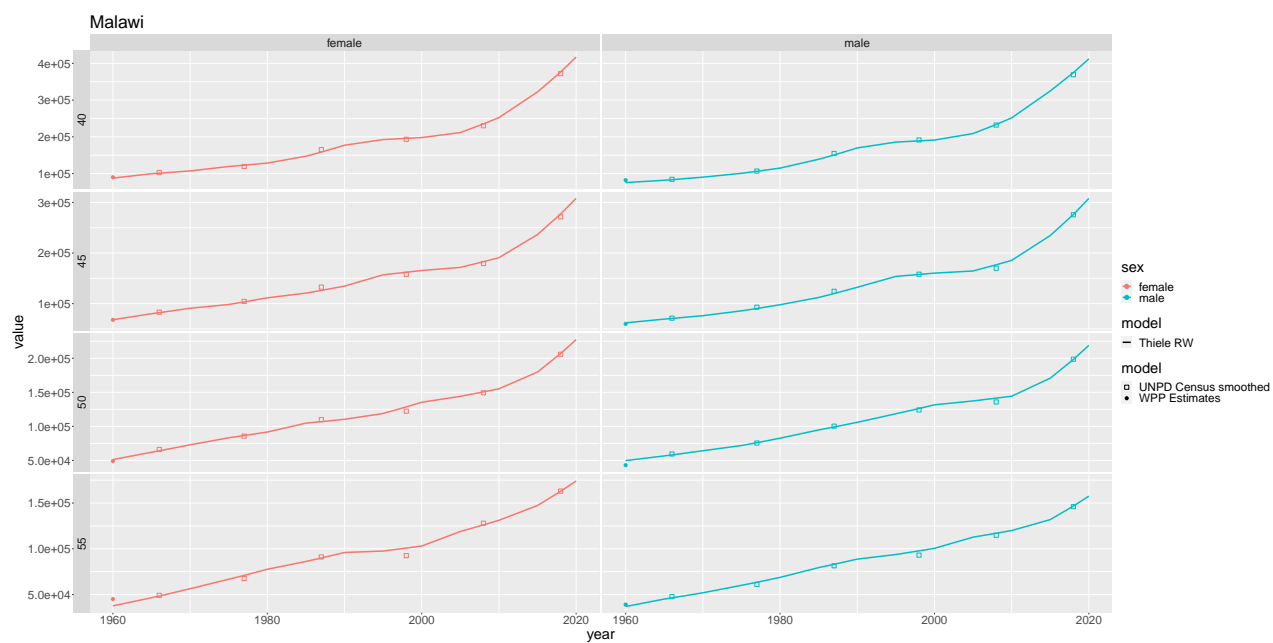


Figure 12: Population

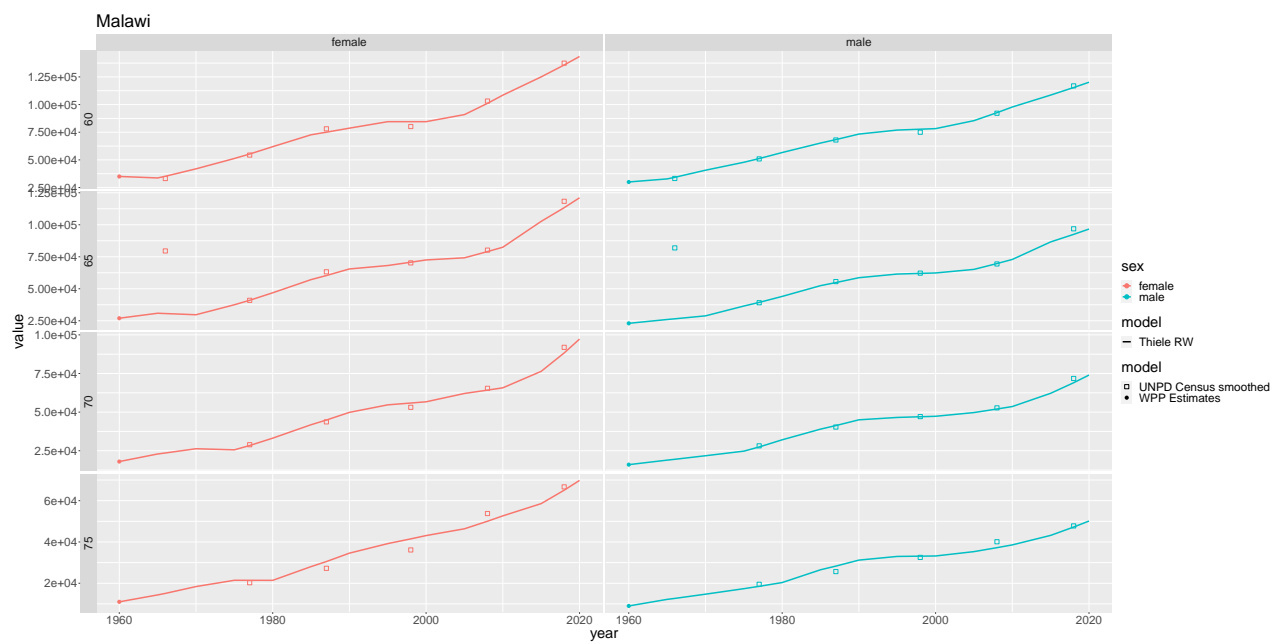


Figure 13: Population

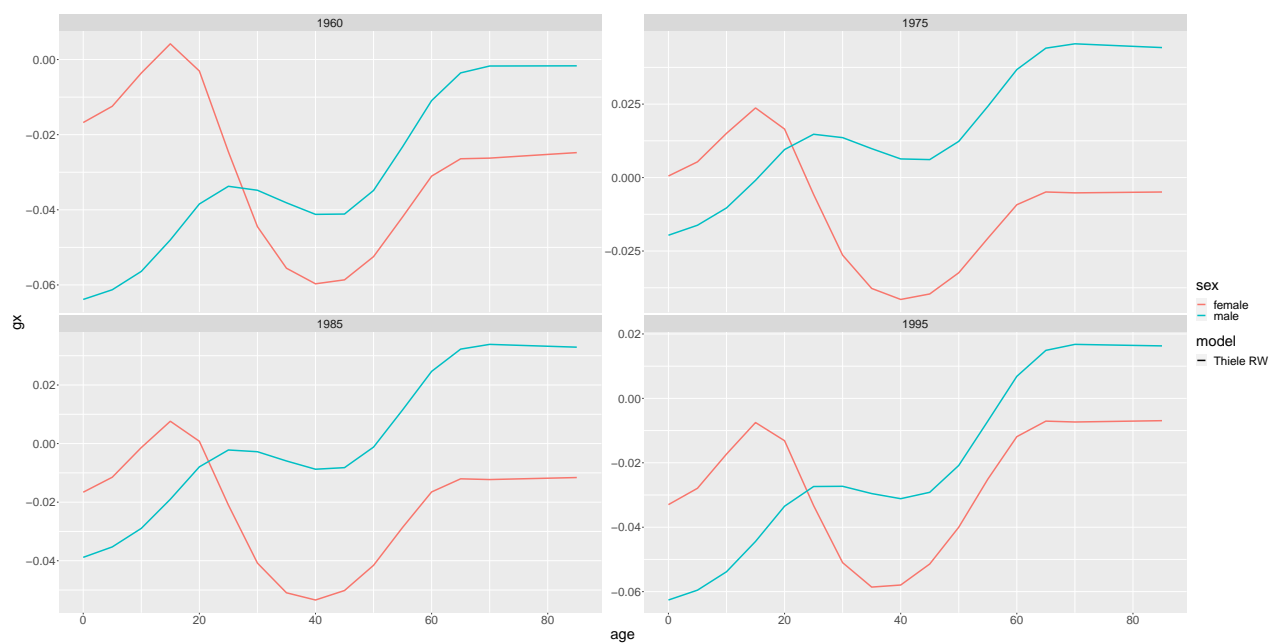


Figure 14: Migration

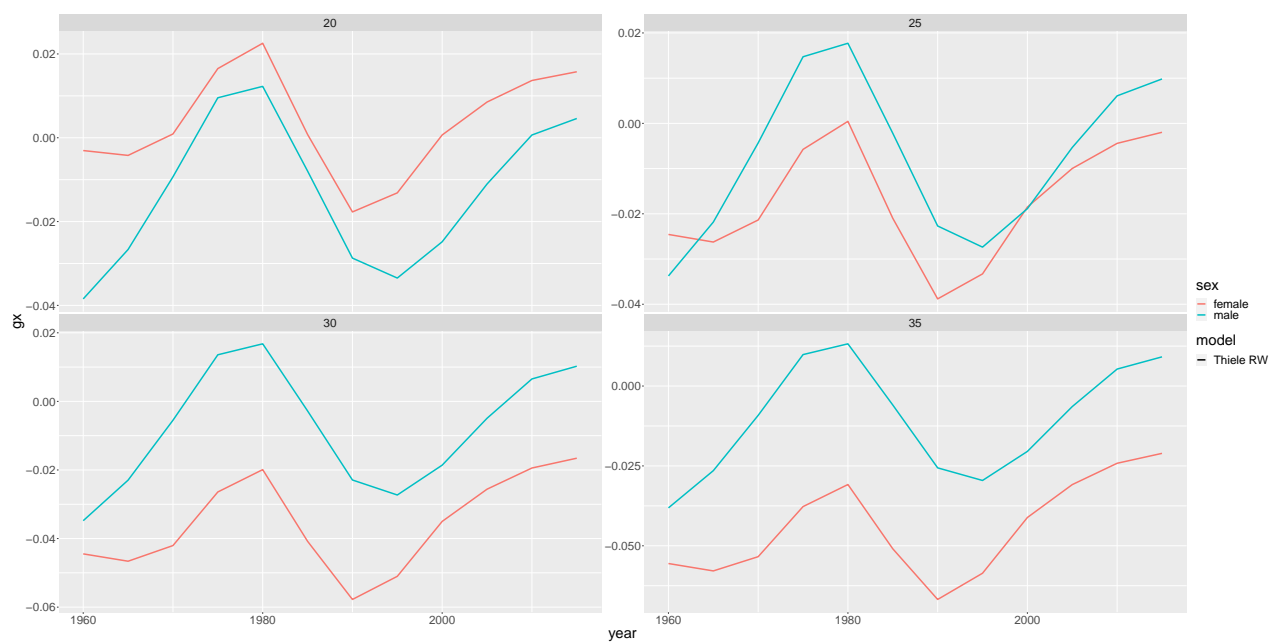


Figure 15: Migration

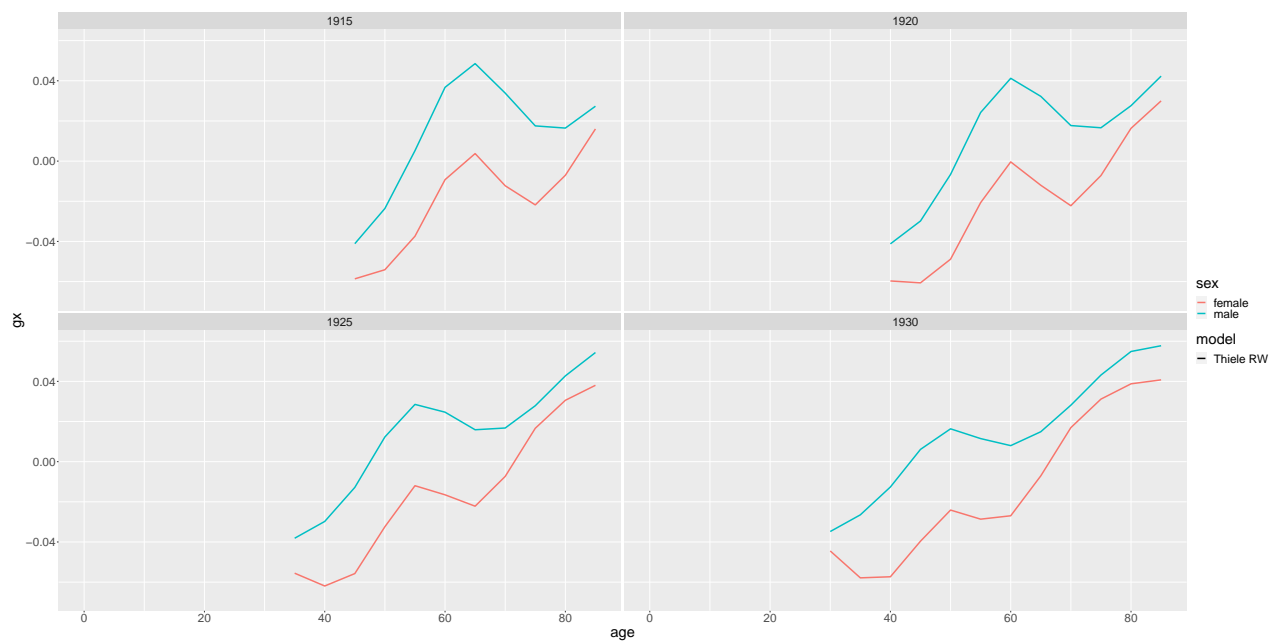


Figure 16: Migration

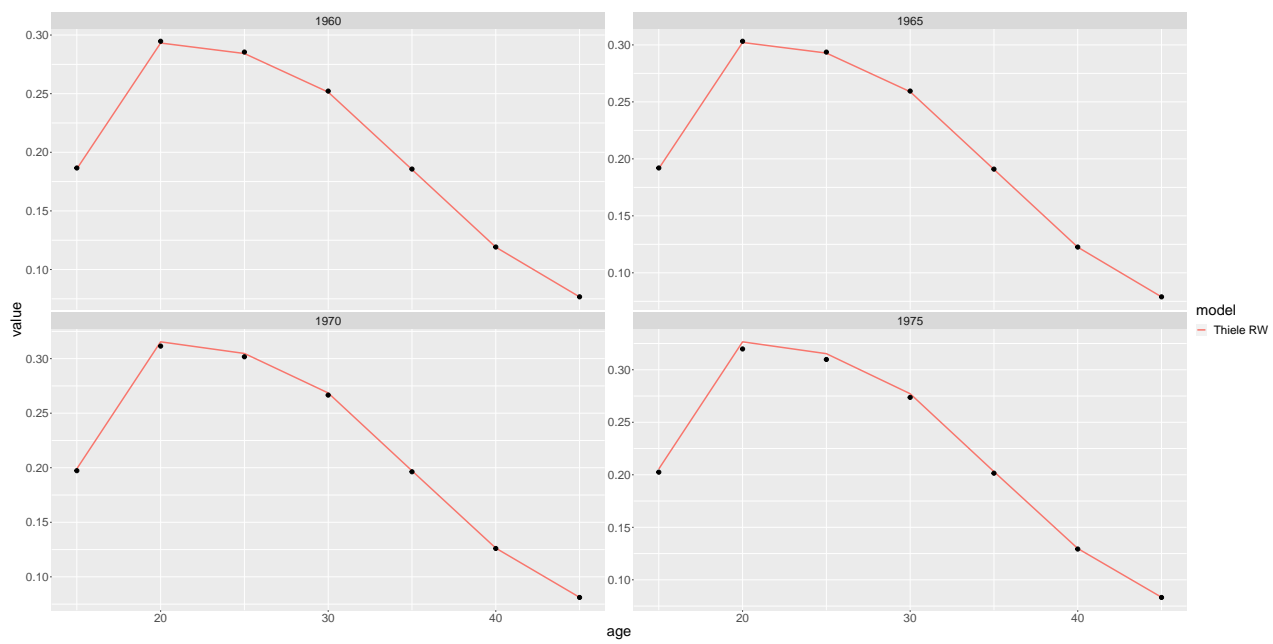


Figure 17: Fertility

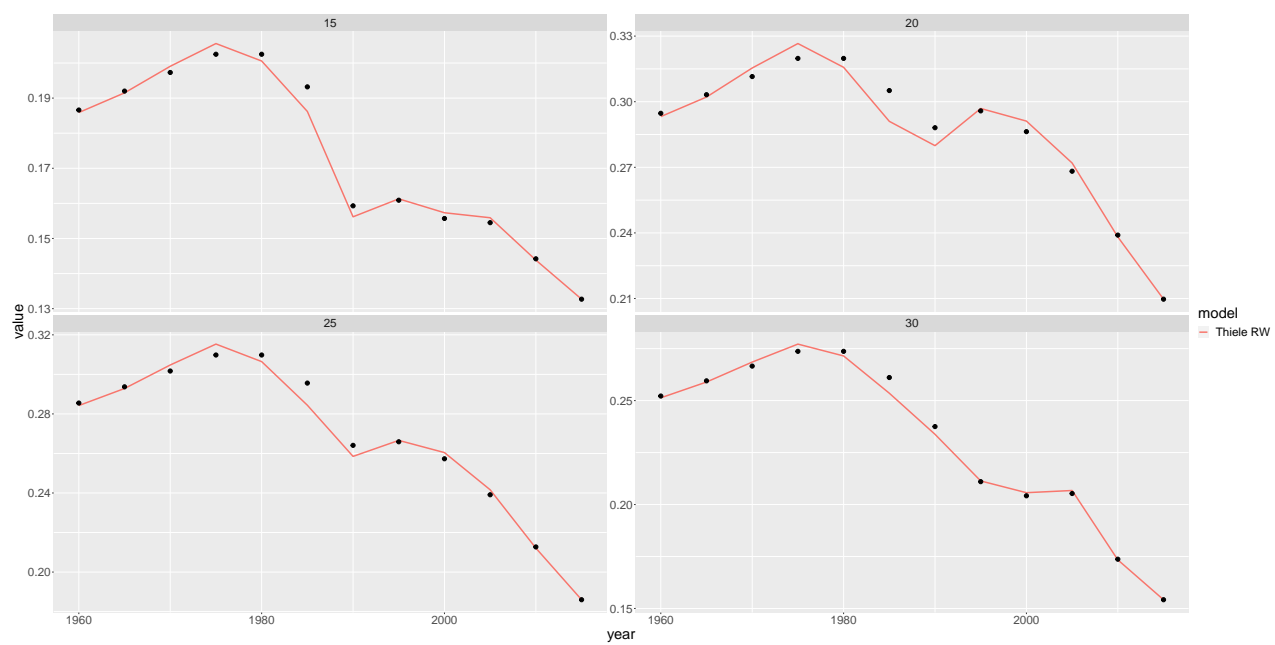


Figure 18: Fertility