

Kenya

[1] "Census Females"

A tibble: 18 x 8

##	aggr.age	`1962`	`1969`	`1979`	`1989`	`1999`	`2009`	`2019`
##	*	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>
## 1	0	705064.	1046380	1423936.	1891568.	2256516.	2940322.	2978323.
## 2	5	597154.	874226.	1235895.	1708725.	2055280.	2735980.	3064593.
## 3	10	477386.	691456.	1046913.	1476419.	1934383.	2438712.	2977774.
## 4	15	395882.	550900.	872886.	1226523.	1748105.	2146642.	2652670.
## 5	20	367906.	464071.	701504.	1019471.	1482544.	1940959.	2304416.
## 6	25	336176.	392957.	546283.	821903.	1176768.	1657743.	2043947.
## 7	30	272548.	318636.	423762.	615387.	900106.	1300974.	1753184.
## 8	35	208542.	257704.	334882.	464691.	706673.	1001392.	1385454.
## 9	40	161280.	208136.	274175.	370261.	547466.	777107.	1087393.
## 10	45	124664.	167178.	227571.	298181.	426343.	621651.	866858.
## 11	50	92140.	136058.	184967.	239216.	335929.	486662.	679125.
## 12	55	67382.	109512.	142658.	192942.	258435.	370542.	556669.
## 13	60	53409.	88640.	109394.	158686.	207777.	289461.	452658.
## 14	65	39397.	66777.	84777.	123427.	168755.	223312.	354144.
## 15	70	26466.	45690.	62651.	90086.	129033.	171156.	265847.
## 16	75	17945.	30620.	86752.	60564.	82113.	118734.	181084.
## 17	80	14141.	21530	NA	94209.	121769.	224687.	118391.
## 18	85	17121.	26621	NA	NA	NA	NA	141785.

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##	aggr.age	`1962`	`1969`	`1979`	`1989`	`1999`	`2009`	`2019`
##	*	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>	<dbl>
## 1	0	680883.	1058102	1424953.	1914189.	2308755.	3002234.	2997631.
## 2	5	609628.	901502.	1244344.	1728441.	2097298.	2809453.	3102097.
## 3	10	513677.	726541.	1052936.	1484869.	1952354.	2523246.	3040190.
## 4	15	386214.	565756.	851898.	1189315.	1694212.	2142963.	2651859.
## 5	20	289232.	441444.	664211.	936316.	1368457.	1791316.	2159206.
## 6	25	250085.	352038.	519992.	760638.	1097757.	1518251.	1840199.
## 7	30	221413.	290906.	404695.	604081.	874258.	1262642.	1615620.
## 8	35	189179.	244789.	312473.	470056.	691971.	1002938.	1362683.
## 9	40	162241.	203129.	258557.	370463.	540968.	782174.	1125199.
## 10	45	137093.	167854.	221009.	291860.	428326.	623496.	898890.
## 11	50	107131.	138027.	181751.	233257.	335648.	488150.	687325.
## 12	55	81154.	116068.	143338.	186345.	248443.	373342.	537408.
## 13	60	64459.	98553.	114261.	148130.	189804.	283422.	419991.
## 14	65	47331.	75013.	93665.	114381.	149855.	205573.	316734.
## 15	70	33717.	50794.	66506.	86192.	115173.	150987.	223830.
## 16	75	24812.	33529.	87947.	66706.	79747.	99893.	138307.
## 17	80	20104.	22078	NA	82347.	95999.	159220.	81682.
## 18	85	25148.	29194	NA	NA	NA	NA	83593.

Thiele Normal Hump

##	user	system	elapsed
##	137.96	1.64	140.78

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

Thiele log-Normal Hump

```
##      user  system elapsed
```

```
## 157.14    2.05  159.38
```

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

Thiele Normal Hump (Pop 5-9 to 70-74, DHS 15-19 to 45-49)

```
##      user  system elapsed
```

```
## 121.17    1.53  122.95
```

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

Thiele log-Normal Hump (Pop 5-9 to 70-74, DHS 15-19 to 45-49)

```
##      user  system elapsed
```

```
## 146.16    1.66  148.05
```

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

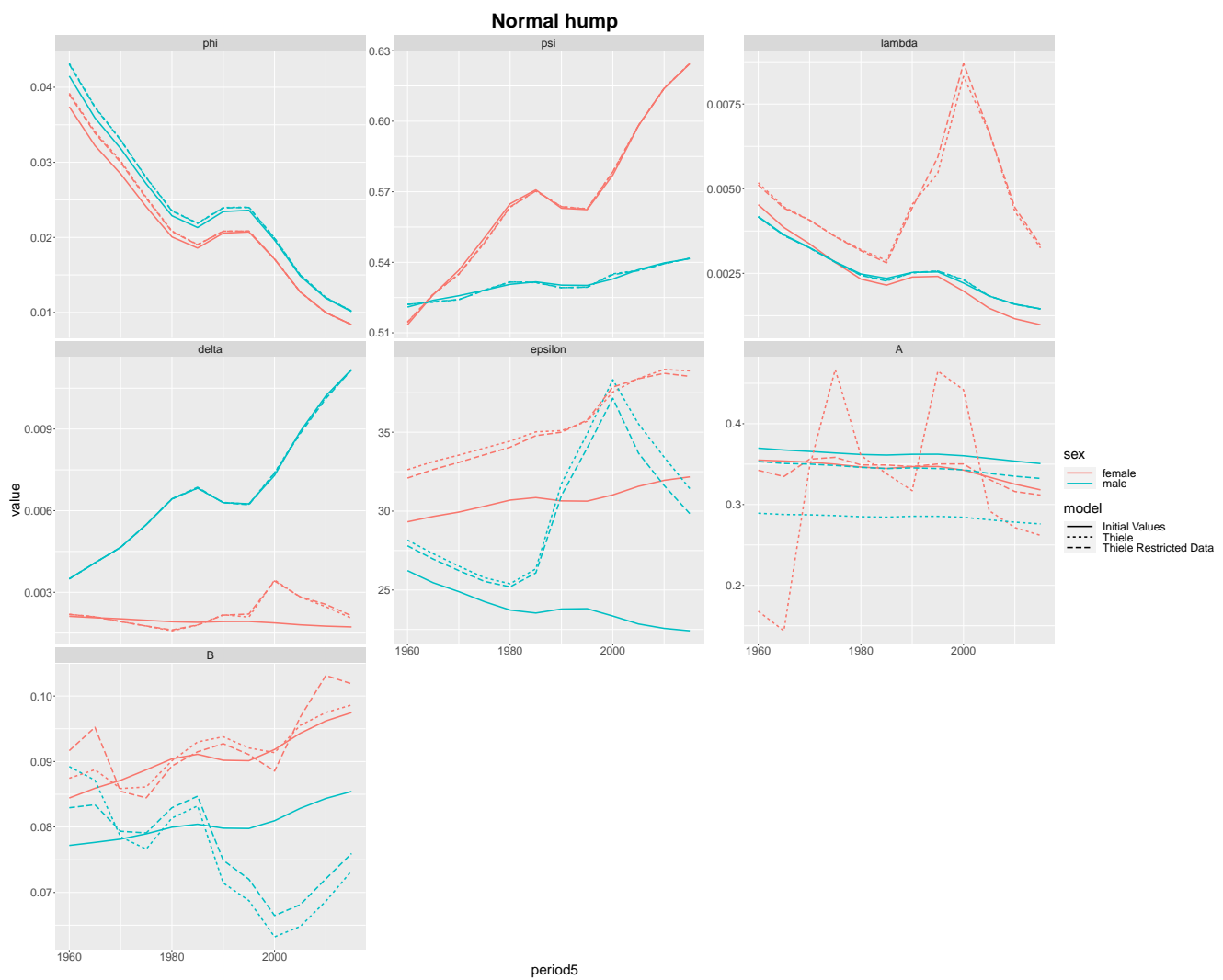


Figure 1: Estimated parameters

```
## Using Sex as id variables
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## Warning: Removed 20 rows containing missing values (geom_point).
## Warning: Removed 20 rows containing missing values (geom_point).
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```

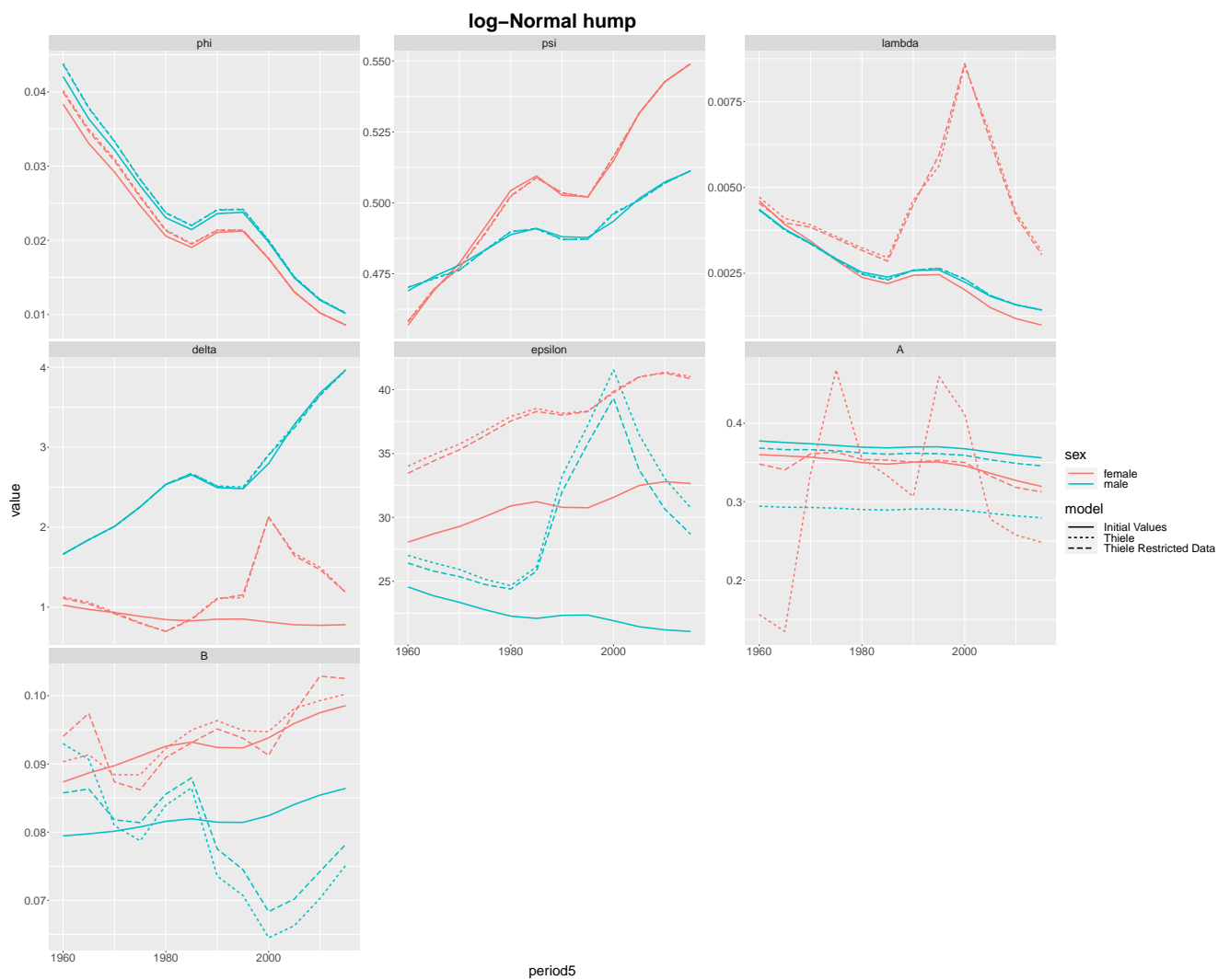


Figure 2: Estimated parameters

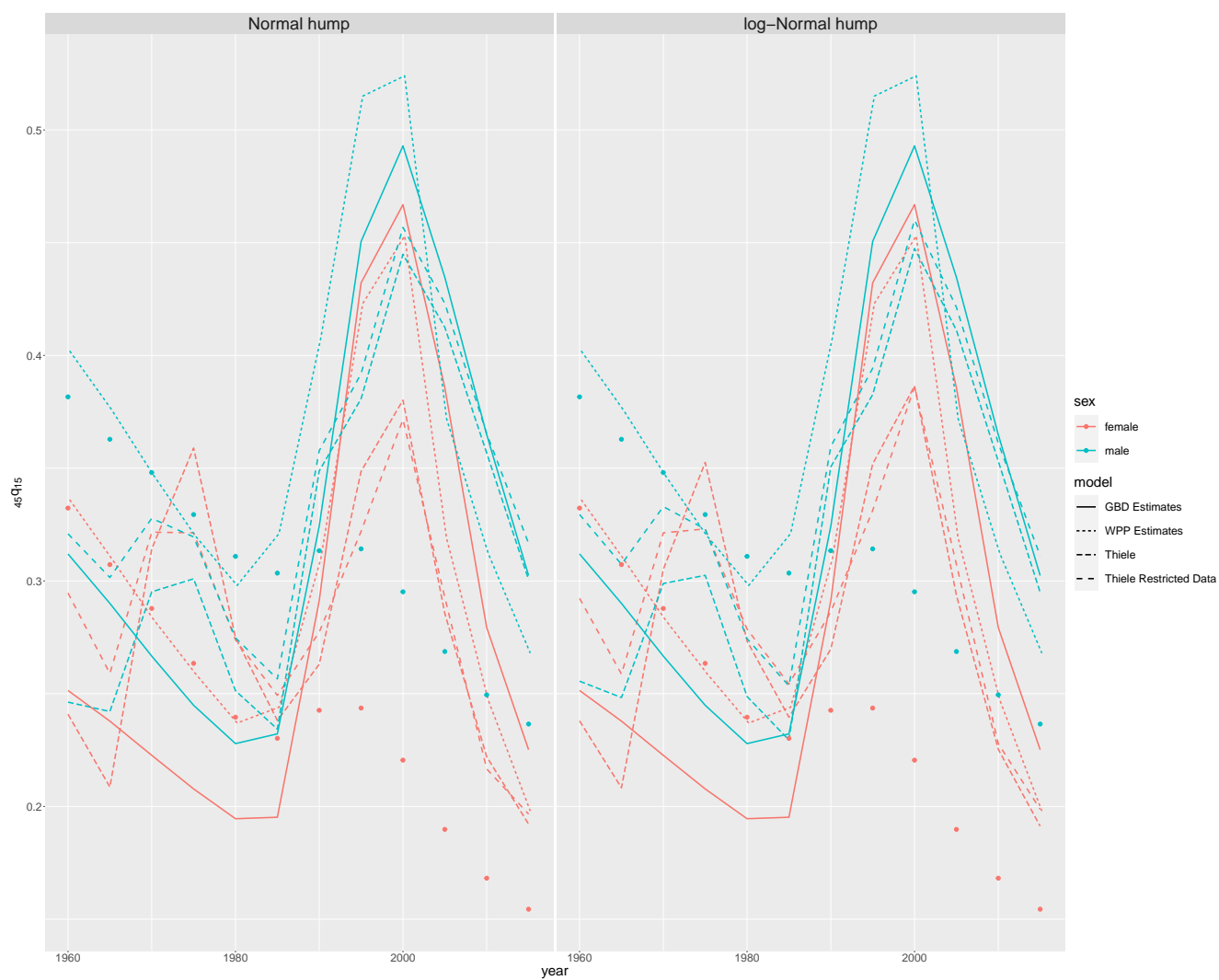


Figure 3: Estimated $_{45}q_{15}$

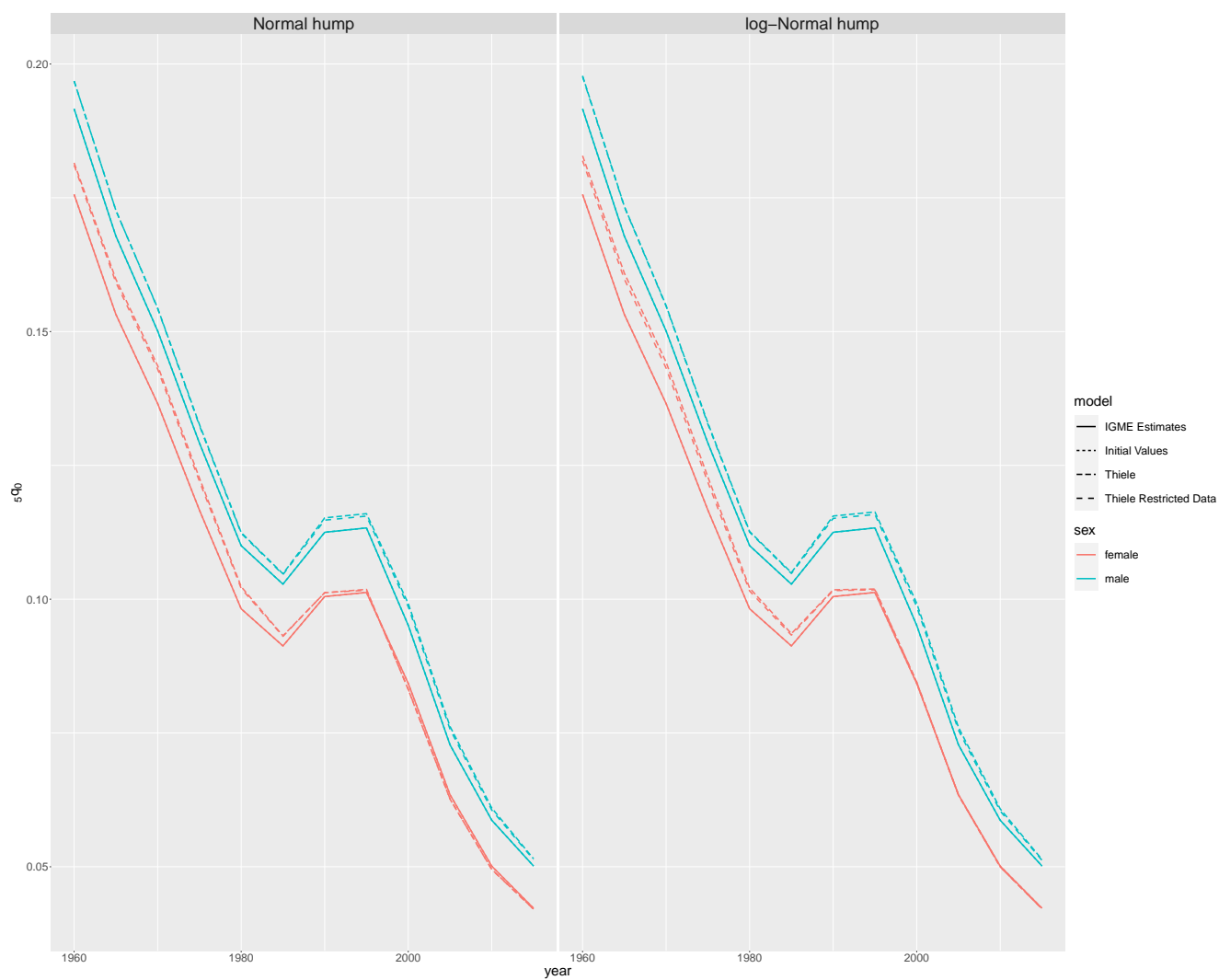


Figure 4: Estimated ${}_5q_0$

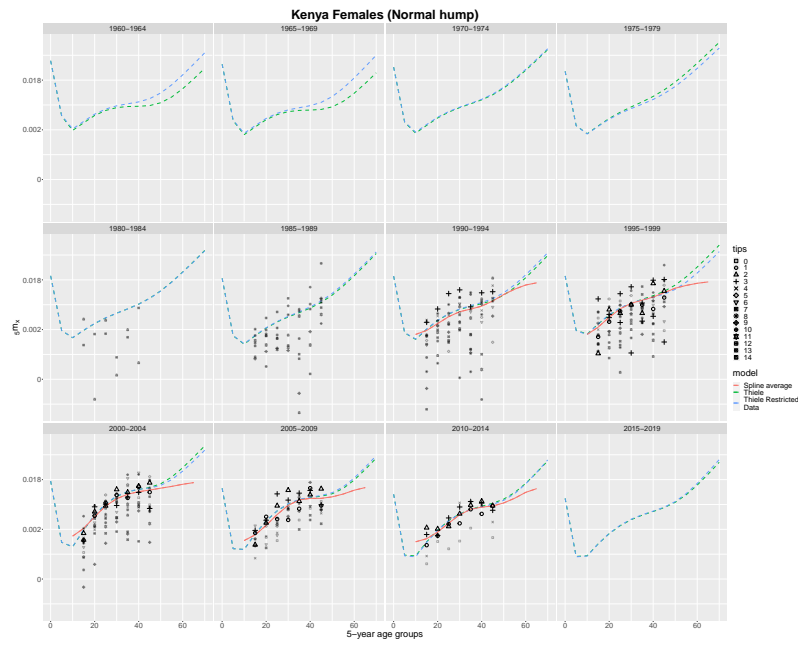


Figure 5: Mortality Schedules

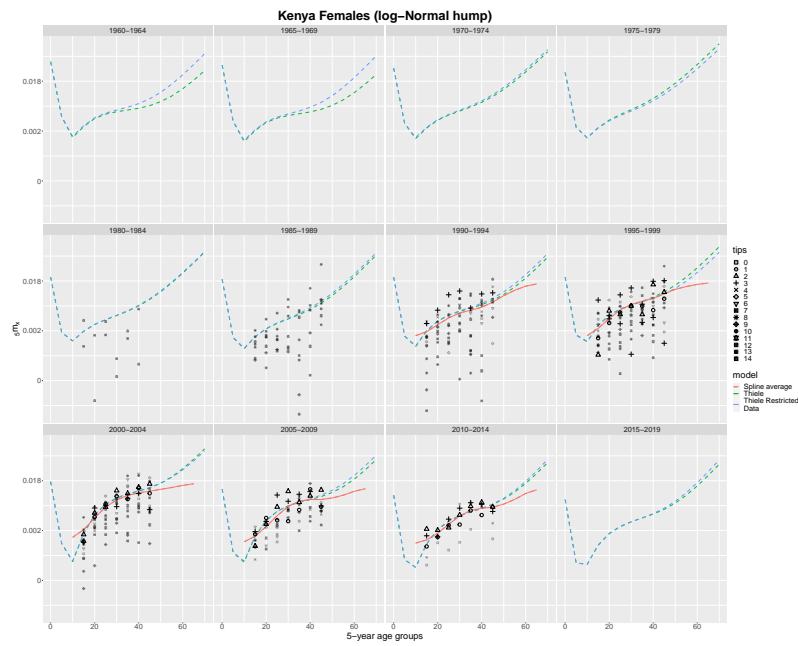


Figure 6: Mortality Schedules

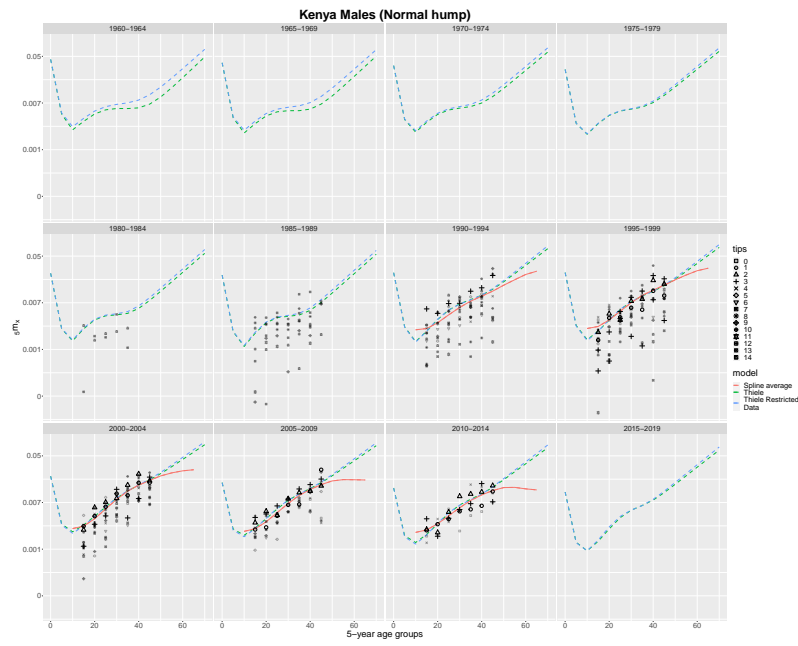


Figure 7: Mortality Schedules

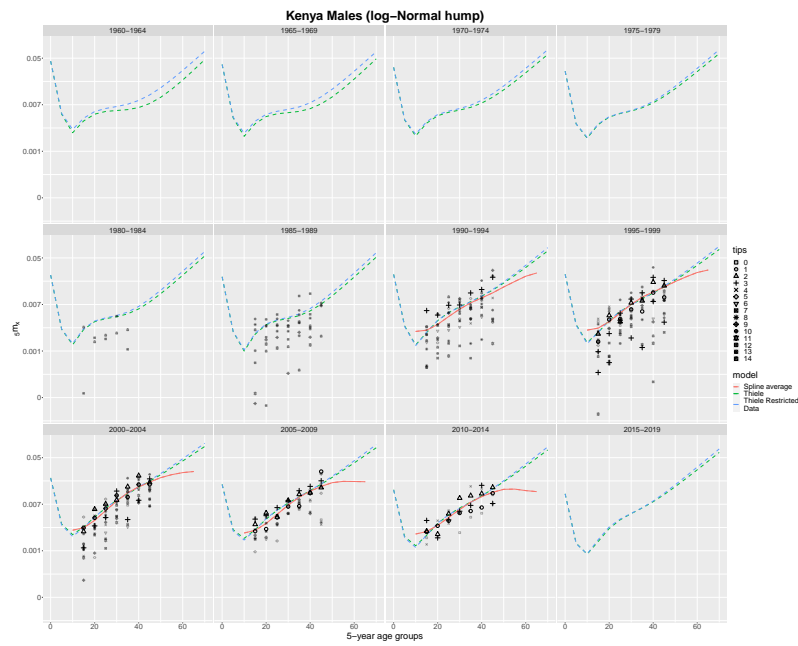


Figure 8: Mortality Schedules

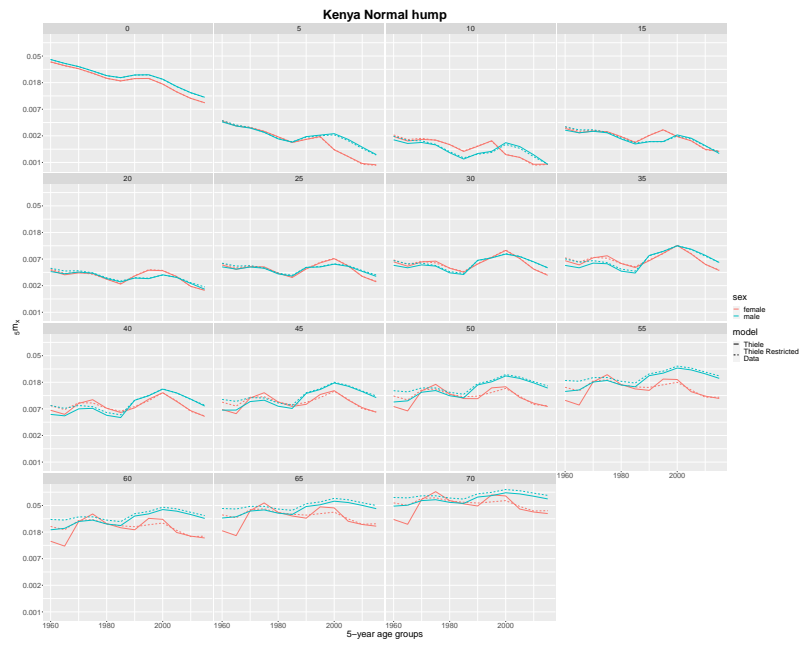


Figure 9: Mortality Schedules

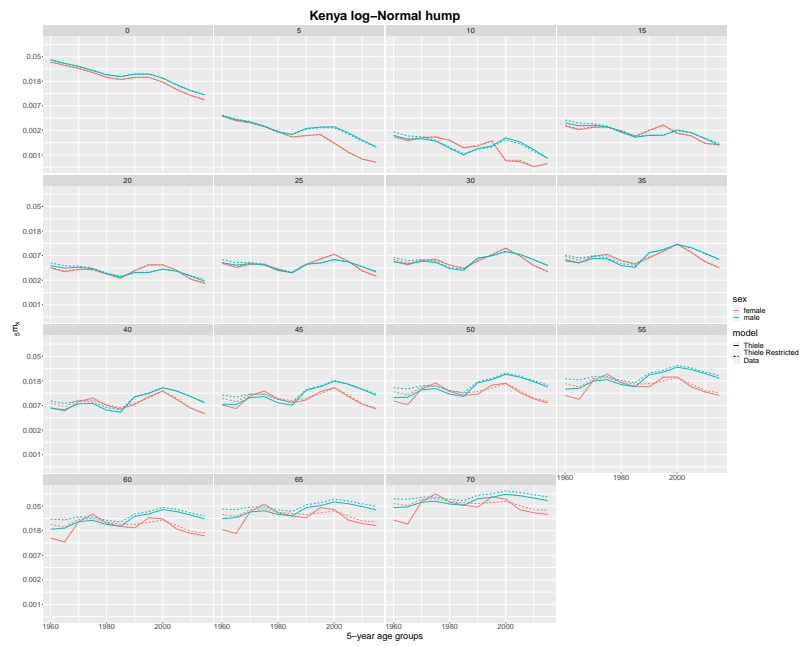


Figure 10: Mortality Schedules

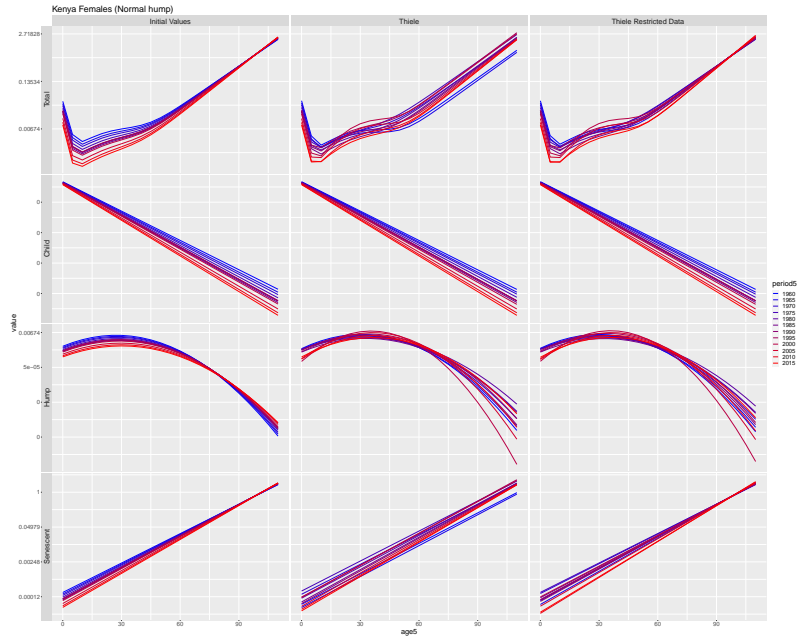


Figure 11: Thiele Decomposed

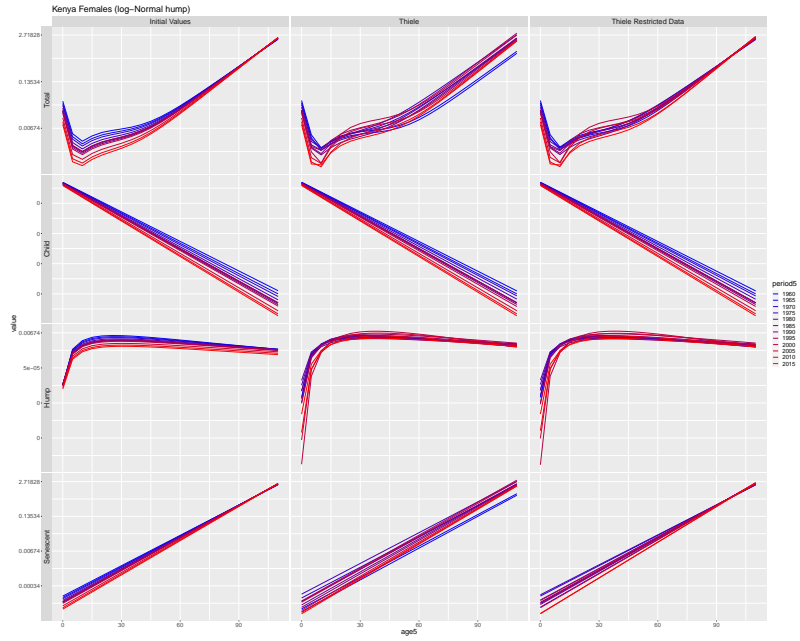


Figure 12: Thiele Decomposed

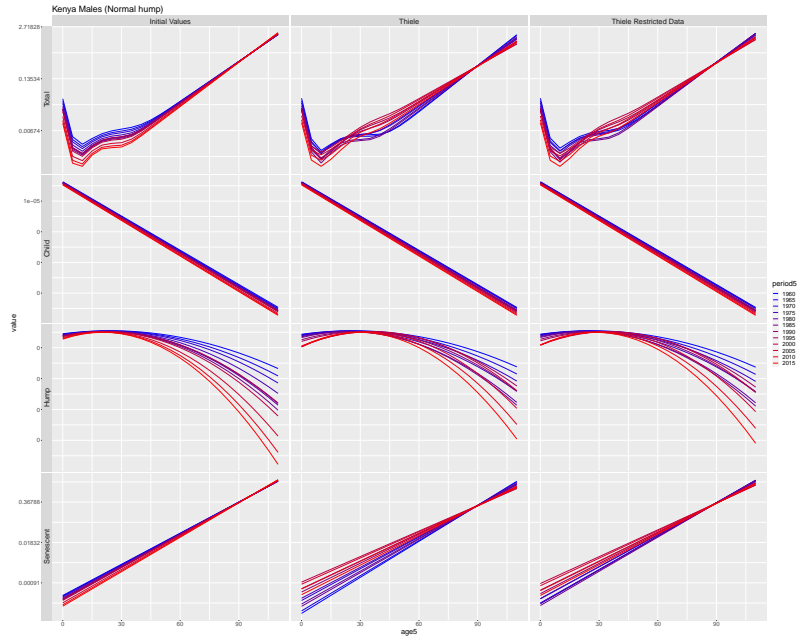


Figure 13: Thiele Decomposed

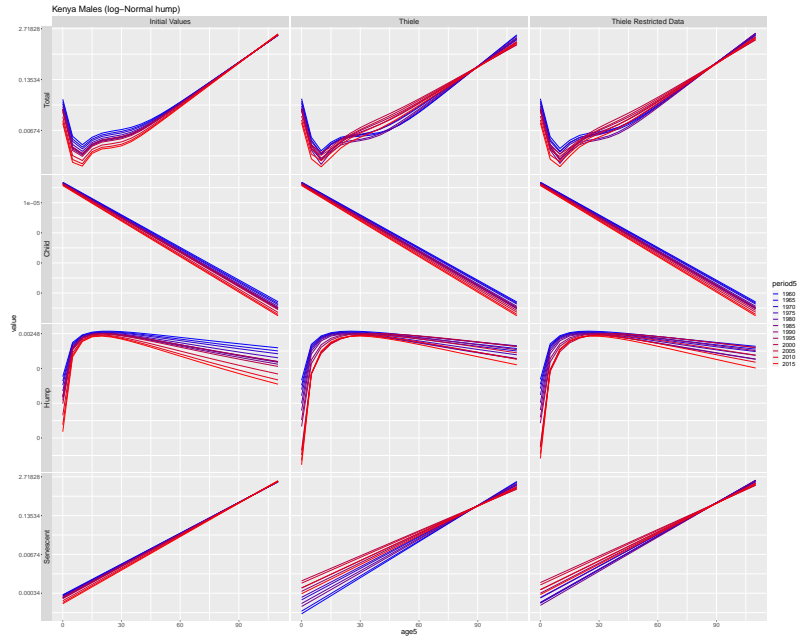


Figure 14: Thiele Decomposed

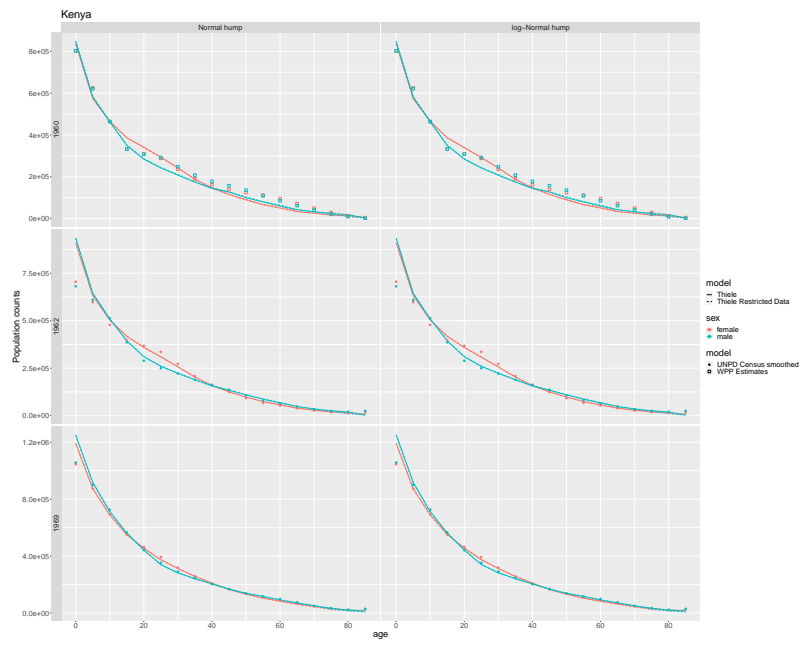


Figure 15: Population

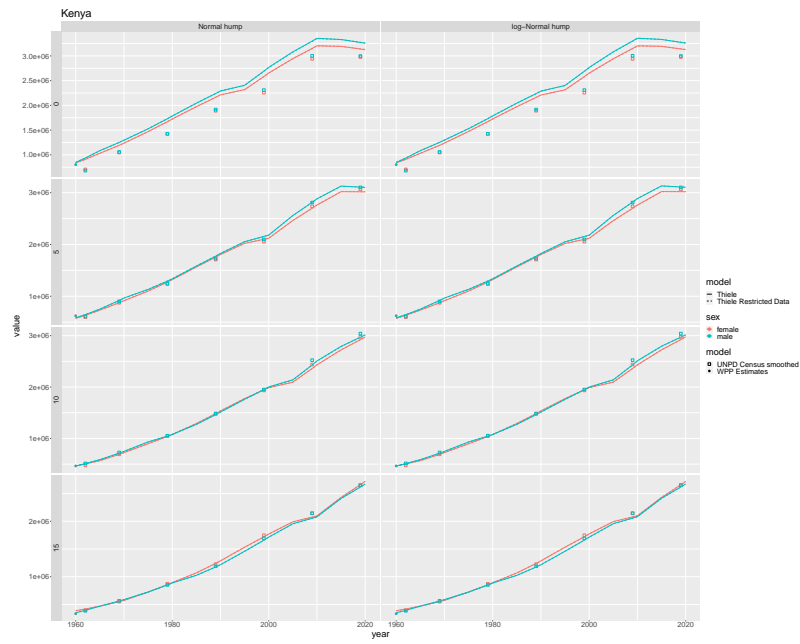


Figure 16: Population

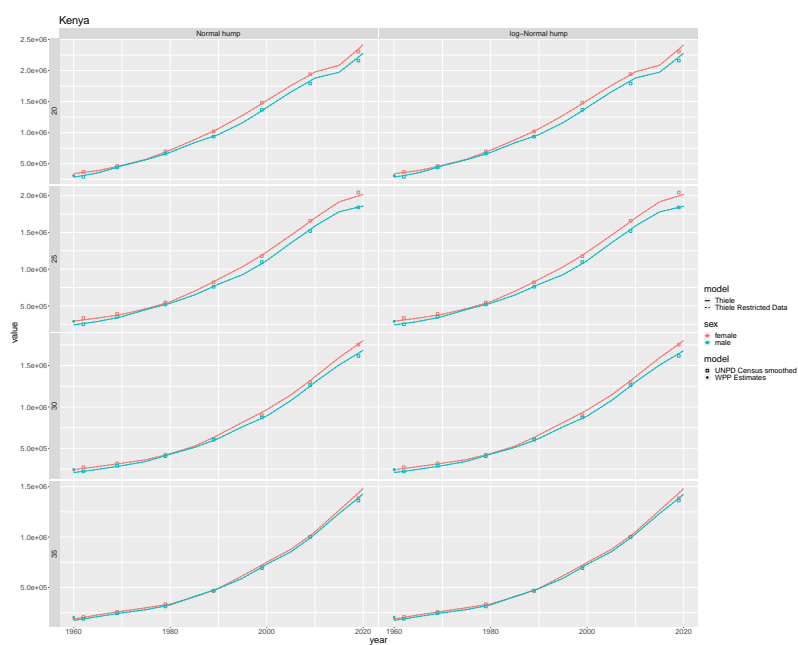


Figure 17: Population

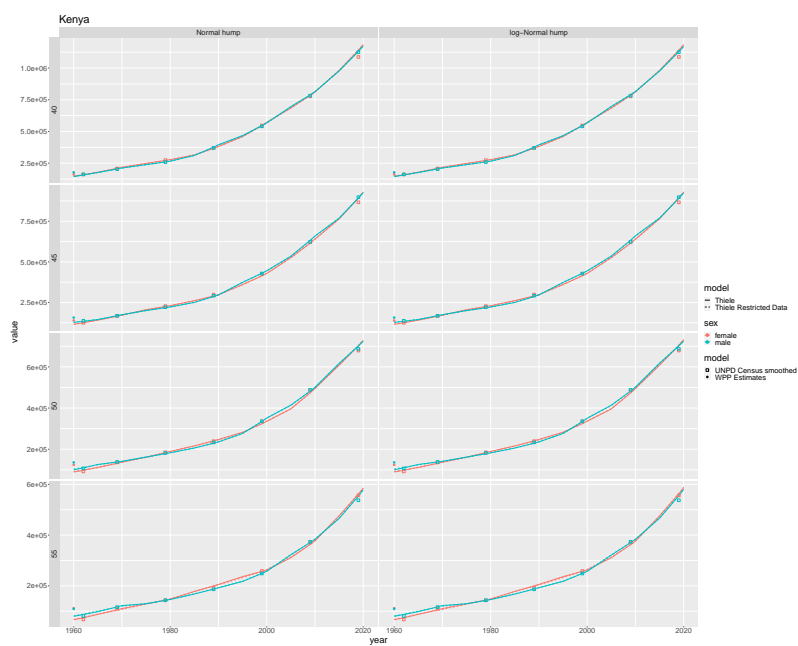


Figure 18: Population

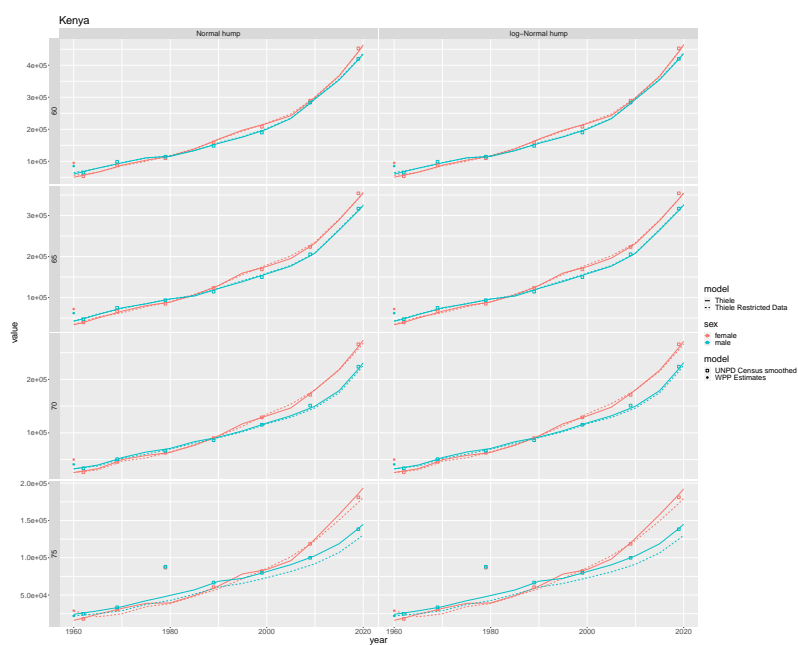


Figure 19: Population

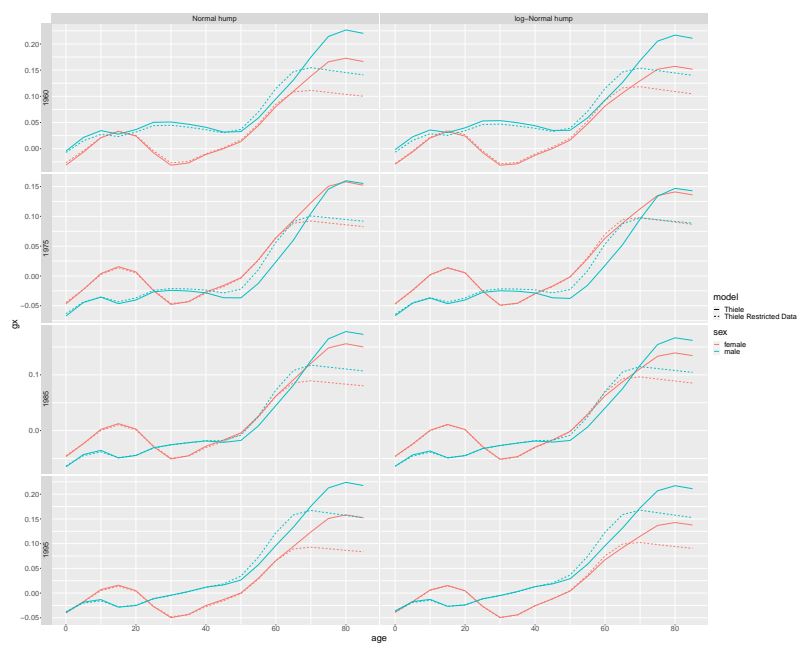


Figure 20: Migration

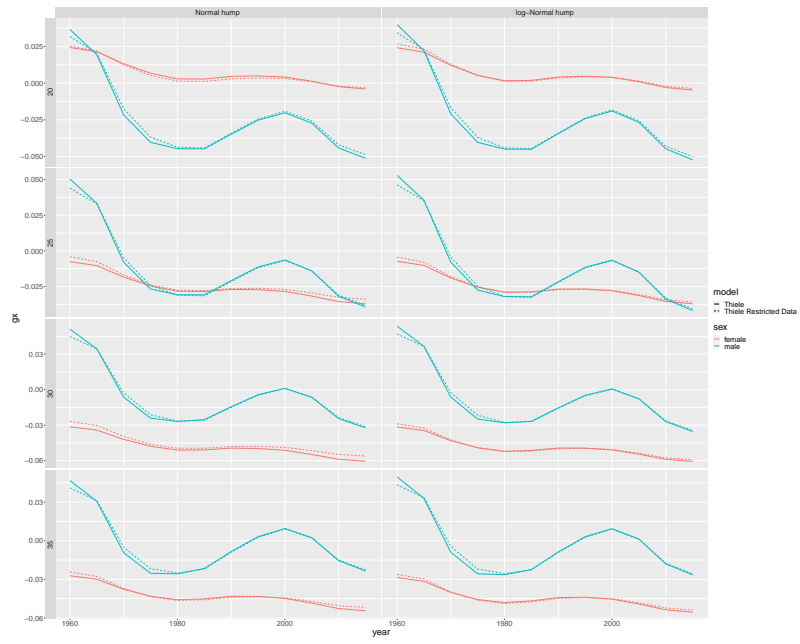


Figure 21: Migration

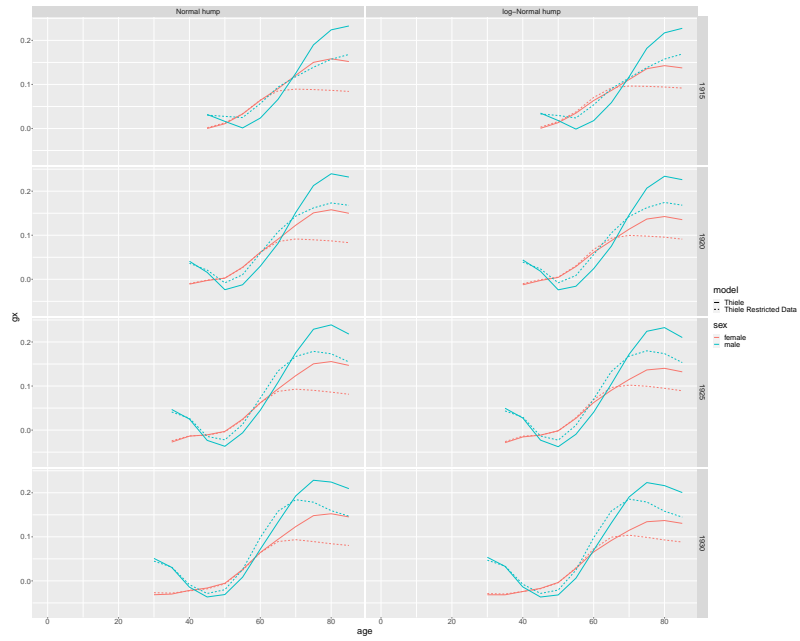


Figure 22: Migration

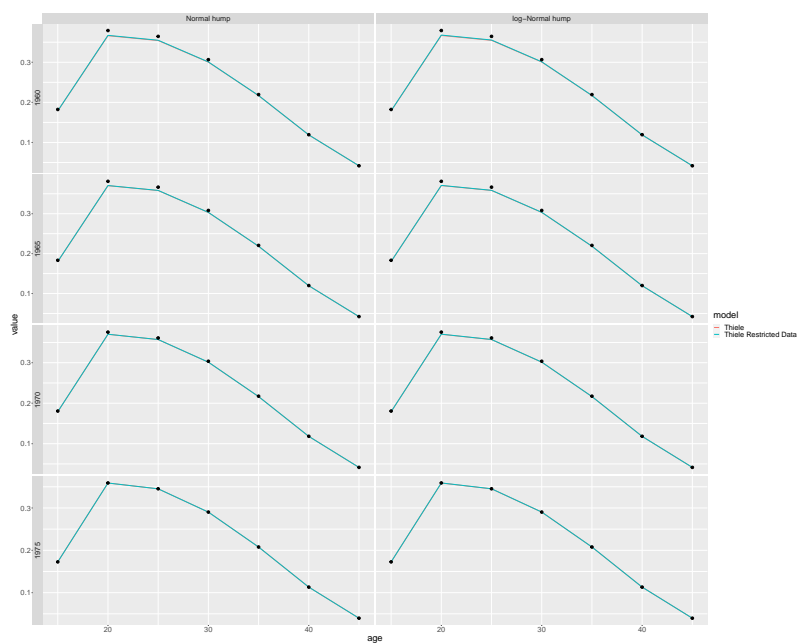


Figure 23: Fertility

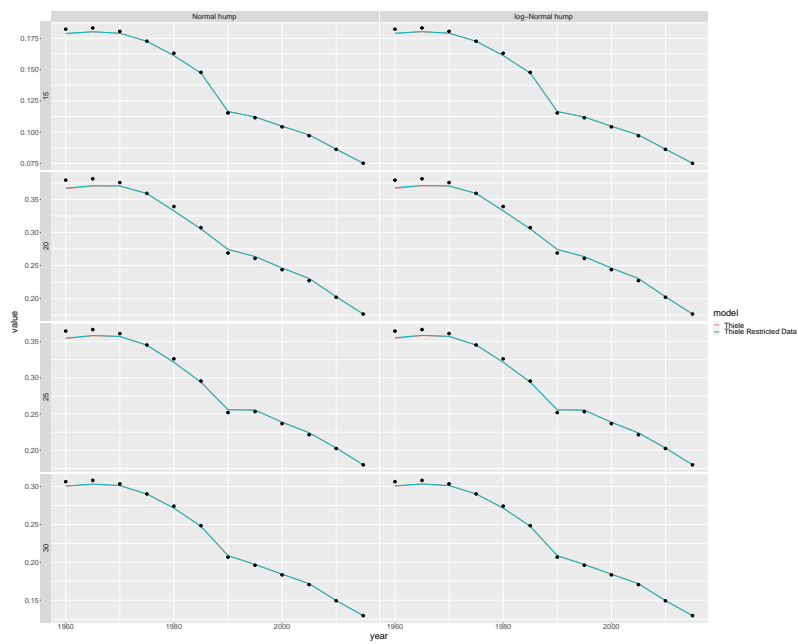


Figure 24: Fertility