

Revised Tables: By Ariel Sosnovsky

Ariel Sosnovsky

July 9, 2019

Table # 1b							
Gompertz-Makeham Parameters Around the World: FEMALE							
Country	$\ln h[i]$	$\lambda_0[i]$	Makeham: λ	$g[i]$	$\lambda_{55}[i]$	m	b
1. Australia	-12.349	31.5×10^{-5}	31.0×10^{-5}	11.29%	0.273%	90.04	8.85
2. Austria	-11.952	4.7×10^{-5}	4.0×10^{-5}	10.99%	0.308%	88.65	9.10
3. Belarus	-10.797	76.3×10^{-5}	74.0×10^{-5}	10.21%	0.695%	83.44	9.80
4. Belgium	-11.620	15.0×10^{-5}	14.0×10^{-5}	10.60%	0.355%	88.43	9.43
5. Canada	-11.773	18.9×10^{-5}	18.0×10^{-5}	10.64%	0.317%	89.56	9.40
6. Croatia	-11.784	1.9×10^{-5}	1.0×10^{-5}	11.25%	0.416%	85.34	8.89
7. Czechia	-12.009	19.7×10^{-5}	19.0×10^{-5}	11.44%	0.388%	86.01	8.74
8. Denmark	-11.608	2.0×10^{-5}	1.0×10^{-5}	10.75%	0.376%	87.21	9.30
9. Estonia	-11.132	18.6×10^{-5}	17.0×10^{-5}	10.20%	0.460%	86.75	9.80
10. Finland	-11.860	9.8×10^{-5}	9.0×10^{-5}	10.84%	0.315%	88.90	9.22
11. France	-11.614	22.0×10^{-5}	21.0×10^{-5}	10.25%	0.302%	91.08	9.75
12. Germany	-11.898	11.8×10^{-5}	11.0×10^{-5}	11.00%	0.332%	88.12	9.09
13. Greece	-12.594	24.4×10^{-5}	24.0×10^{-5}	11.78%	0.272%	88.77	8.49
14. Hungary	-10.812	3.2×10^{-5}	1.0×10^{-5}	10.14%	0.590%	84.06	9.86
15. Ireland	-11.725	8.9×10^{-5}	8.0×10^{-5}	10.75%	0.342%	88.29	9.30
16. Israel	-12.494	23.4×10^{-5}	23.0×10^{-5}	11.64%	0.277%	88.84	8.59
17. Italy	-12.478	15.4×10^{-5}	15.0×10^{-5}	11.49%	0.252%	89.80	8.71
18. Japan	-12.344	38.5×10^{-5}	38.0×10^{-5}	11.00%	0.245%	92.12	9.09
19. Korea	-13.266	47.2×10^{-5}	47.0×10^{-5}	12.46%	0.233%	89.77	8.03
20. Latvia	-10.646	20.6×10^{-5}	18.0×10^{-5}	9.86%	0.612%	84.51	10.15
21. Lithuania	-10.649	43.6×10^{-5}	41.0×10^{-5}	9.74%	0.597%	85.39	10.26
22. Luxembourg	-11.877	1.8×10^{-5}	1.0×10^{-5}	10.92%	0.316%	88.47	9.16
23. Netherlands	-11.700	12.9×10^{-5}	12.0×10^{-5}	10.73%	0.350%	88.22	9.32
24. New Zealand	-12.079	33.6×10^{-5}	33.0×10^{-5}	11.17%	0.329%	88.48	8.95
25. Norway	-12.006	5.7×10^{-5}	5.0×10^{-5}	11.05%	0.303%	88.68	9.05
26. Poland	-11.280	10.4×10^{-5}	9.0×10^{-5}	10.45%	0.449%	86.31	9.57
27. Portugal	-12.249	27.5×10^{-5}	27.0×10^{-5}	11.31%	0.297%	89.00	8.84
28. Russia	-11.156	160.6×10^{-5}	159.0×10^{-5}	10.65%	0.714%	83.74	9.39
29. Slovakia	-11.560	10.1×10^{-5}	9.0×10^{-5}	11.00%	0.460%	85.04	9.09
30. Slovenia	-11.683	1.9×10^{-5}	1.0×10^{-5}	10.73%	0.345%	88.07	9.32
31. Spain	-12.362	17.5×10^{-5}	17.0×10^{-5}	11.24%	0.248%	90.57	8.90
32. Sweden	-12.377	11.5×10^{-5}	11.0×10^{-5}	11.51%	0.276%	88.79	8.69
33. Switzerland	-12.233	6.5×10^{-5}	6.0×10^{-5}	11.15%	0.256%	90.05	8.97
34. Taiwan	-12.051	40.7×10^{-5}	40.0×10^{-5}	11.15%	0.341%	88.40	8.97
35. U.K.	-11.861	29.8×10^{-5}	29.0×10^{-5}	10.90%	0.345%	88.48	9.17
36. U.S.A.	-11.063	41.7×10^{-5}	40.0×10^{-5}	9.97%	0.457%	87.83	10.03
37. Ukraine	-11.460	129.2×10^{-5}	128.0×10^{-5}	11.12%	0.662%	83.29	8.99
Average:	- 11.795	27.0×10^{-5}	26.0×10^{-5}	10.90%	0.381%	87.80	9.20
Source: Human Mortality Database, Period 2011							

Table # 1a							
Gompertz-Makeham Parameters Around the World: MALE							
Country	$\ln h[i]$	$\lambda_0[i]$	Makeham: λ	$g[i]$	$\lambda_{55}[i]$	m	b
1. Australia	-11.854	66.8×10^{-5}	66.0×10^{-5}	11.19%	0.440%	86.37	8.94
2. Austria	-10.769	3.3×10^{-5}	1.0×10^{-5}	10.08%	0.596%	84.08	9.92
3. Belarus	-7.746	50.4×10^{-5}	4.0×10^{-5}	7.12%	2.335%	71.68	14.04
4. Belgium	-10.900	29.0×10^{-5}	27.0×10^{-5}	10.28%	0.610%	83.92	9.73
5. Canada	-11.292	37.4×10^{-5}	36.0×10^{-5}	10.53%	0.490%	85.85	9.50
6. Croatia	-10.156	5.3×10^{-5}	1.0×10^{-5}	9.75%	0.914%	80.29	10.26
7. Czechia	-10.258	4.9×10^{-5}	1.0×10^{-5}	9.81%	0.855%	80.88	10.19
8. Denmark	-10.835	16.2×10^{-5}	14.0×10^{-5}	10.25%	0.626%	83.50	9.76
9. Estonia	-9.045	13.8×10^{-5}	1.0×10^{-5}	8.33%	1.256%	78.72	12.00
10. Finland	-10.594	36.8×10^{-5}	34.0×10^{-5}	9.91%	0.679%	83.57	10.09
11. France	-10.378	35.4×10^{-5}	32.0×10^{-5}	9.44%	0.647%	84.92	10.59
12. Germany	-10.731	3.4×10^{-5}	1.0×10^{-5}	10.10%	0.625%	83.57	9.90
13. Greece	-10.485	17.1×10^{-5}	14.0×10^{-5}	9.67%	0.643%	84.26	10.34
14. Hungary	-9.421	9.9×10^{-5}	1.0×10^{-5}	8.98%	1.239%	78.07	11.13
15. Ireland	-11.291	39.4×10^{-5}	38.0×10^{-5}	10.67%	0.529%	84.87	9.37
16. Israel	-11.038	2.8×10^{-5}	1.0×10^{-5}	10.19%	0.486%	85.88	9.81
17. Italy	-11.647	23.0×10^{-5}	22.0×10^{-5}	11.06%	0.450%	85.39	9.04
18. Japan	-11.282	39.4×10^{-5}	38.0×10^{-5}	10.55%	0.502%	85.60	9.48
19. Korea	-10.803	37.3×10^{-5}	35.0×10^{-5}	10.19%	0.647%	83.59	9.81
20. Latvia	-8.517	22.6×10^{-5}	1.0×10^{-5}	7.86%	1.635%	75.98	12.72
21. Lithuania	-8.143	32.3×10^{-5}	1.0×10^{-5}	7.34%	1.772%	75.37	13.63
22. Luxembourg	-11.334	2.3×10^{-5}	1.0×10^{-5}	10.83%	0.517%	84.11	9.23
23. Netherlands	-11.628	18.0×10^{-5}	17.0×10^{-5}	11.12%	0.468%	84.83	8.99
24. New Zealand	-11.542	49.1×10^{-5}	48.0×10^{-5}	10.88%	0.478%	85.68	9.19
25. Norway	-11.566	33.1×10^{-5}	32.0×10^{-5}	11.01%	0.484%	85.00	9.08
26. Poland	-9.198	12.0×10^{-5}	1.0×10^{-5}	8.48%	1.172%	79.34	11.79
27. Portugal	-10.377	42.4×10^{-5}	39.0×10^{-5}	9.62%	0.721%	83.50	10.39
28. Russia	-8.246	315.3×10^{-5}	287.0×10^{-5}	7.62%	2.158%	74.43	13.12
29. Slovakia	-9.593	8.5×10^{-5}	1.0×10^{-5}	9.10%	1.117%	79.06	10.99
30. Slovenia	-10.559	3.9×10^{-5}	1.0×10^{-5}	10.02%	0.712%	82.40	9.98
31. Spain	-10.827	3.2×10^{-5}	1.0×10^{-5}	10.04%	0.551%	84.92	9.96
32. Sweden	-11.898	25.8×10^{-5}	25.0×10^{-5}	11.40%	0.427%	85.34	8.77
33. Switzerland	-11.721	25.9×10^{-5}	25.0×10^{-5}	11.07%	0.424%	86.02	9.04
34. Taiwan	-9.849	97.8×10^{-5}	92.0×10^{-5}	8.89%	0.859%	83.56	11.25
35. U.K.	-11.386	64.3×10^{-5}	63.0×10^{-5}	10.73%	0.525%	85.30	9.32
36. U.S.A.	-10.275	65.8×10^{-5}	62.0×10^{-5}	9.42%	0.735%	84.01	10.62
37. Ukraine	-8.616	223.6×10^{-5}	204.0×10^{-5}	8.12%	1.914%	75.18	12.31
Average:	-10.427	41.0×10^{-5}	34.3×10^{-5}	9.77%	0.844%	82.41	10.39
Source: Human Mortality Database, Period 2011							

Table #2:						
CLaM Regression Line Around the World						
Variable	MALE			FEMALE		
	Coeff.	Std.Er	t-val.	Coeff.	Std.Er	t-val.
Intercept (L)	-0.851	0.193	-4.413	-1.289	0.705	-1.828
Slope: $(-x^*)$	-97.964	1.960	-49.987	-96.360	6.459	-14.919
Adj. R^2	98.58%			86.02%		
Range: $g[i]$	(7.12%, 11.40%)			(9.74%, 12.46%)		
Average: $g[i]$	G = 9.77%%			G = 10.90%%		
Plateau (+/-): λ^*	(0.321, 0.547)			(0.176, 0.477)		
Countries	$N = 37$			$N = 37$		

Note: These are the results from regressing the (male and female) Gompertz-Makeham (log) mortality intercepts $\ln h[i]$ on the mortality growth rates $g[i]$, from the Human Mortality Database (HMD) for *period* mortality in 2011. This is the second phase regression.

Table # 3						
Mortality-Adjusted Biological Ages (ξ) Around the World						
	MALE			FEMALE		
Country	$x = 55$	$x = 70$	$x = 85$	$x = 55$	$x = 70$	$x = 85$
1. Australia	48.79	65.96	83.12	53.52	69.06	84.59
2. Austria	53.66	69.13	84.60	54.66	69.79	84.91
3. Belarus	66.67	77.59	88.52	57.64	71.69	85.73
4. Belgium	52.80	68.57	84.33	56.14	70.72	85.31
5. Canada	51.67	67.84	84.00	55.98	70.63	85.27
6. Croatia	55.11	70.07	85.03	53.69	69.16	84.64
7. Czechia	54.83	69.89	84.95	52.96	68.70	84.44
8. Denmark	52.93	68.65	84.37	55.56	70.36	85.15
9. Estonia	61.34	74.12	86.91	57.66	71.70	85.73
10. Finland	54.40	69.61	84.82	55.23	70.15	85.06
11. France	56.46	70.95	85.44	57.47	71.57	85.68
12. Germany	53.58	69.08	84.57	54.64	69.77	84.90
13. Greece	55.46	70.30	85.14	51.68	67.88	84.09
14. Hungary	58.49	72.27	86.05	57.89	71.84	85.79
15. Ireland	51.08	67.45	83.82	55.57	70.36	85.16
16. Israel	53.16	68.80	84.44	52.19	68.21	84.23
17. Italy	49.35	66.32	83.30	52.79	68.59	84.39
18. Japan	51.58	67.78	83.97	54.62	69.75	84.89
19. Korea	53.17	68.81	84.45	49.10	66.24	83.38
20. Latvia	63.40	75.47	87.54	58.97	72.53	86.09
21. Lithuania	65.71	76.97	88.23	59.40	72.80	86.21
22. Luxembourg	50.36	66.98	83.60	54.93	69.95	84.98
23. Netherlands	49.10	66.16	83.22	55.64	70.41	85.18
24. New Zealand	50.13	66.83	83.53	53.97	69.34	84.72
25. Norway	49.56	66.46	83.36	54.42	69.63	84.84
26. Poland	60.67	73.69	86.71	56.71	71.09	85.47
27. Portugal	55.66	70.43	85.20	53.44	69.00	84.57
28. Russia	64.47	76.16	87.86	55.97	70.62	85.27
29. Slovakia	57.96	71.92	85.89	54.64	69.77	84.90

30. Slovenia	53.91	69.29	84.67	55.65	70.41	85.18
31. Spain	53.82	69.23	84.64	53.74	69.19	84.65
32. Sweden	47.87	65.36	82.85	52.71	68.54	84.37
33. Switzerland	49.32	66.30	83.29	54.06	69.40	84.74
34. Taiwan	58.89	72.53	86.17	54.06	69.40	84.74
35. U.K.	50.79	67.26	83.73	55.01	70.01	85.00
36. U.S.A.	56.57	71.02	85.47	58.53	72.25	85.97
37. Ukraine	62.27	74.73	87.19	54.17	69.47	84.77
Average:	55.00	70.00	85.00	55.00	70.00	85.00
<i>Source: Human Mortality Database, Period 2011</i>						