

# Historic Modelling

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Table # 4a				
Gompertz Regression: Historical Coefficients				
	Dispersion Coefficient $m$		Modal Value $b$	
Year	MALE	FEMALE	MALE	FEMALE
1945	<b>76.86</b> $\pm 2.10$	<b>80.24</b> $\pm 1.07$	<b>11.05</b> $\pm 1.02$	<b>10.20</b> $\pm 0.88$
1948	<b>77.22</b> $\pm 2.18$	<b>81.11</b> $\pm 0.88$	<b>11.45</b> $\pm 0.83$	<b>10.17</b> $\pm 0.56$
1951	<b>76.92</b> $\pm 2.19$	<b>80.76</b> $\pm 0.92$	<b>11.02</b> $\pm 0.79$	<b>9.85</b> $\pm 0.54$
1954	<b>77.68</b> $\pm 1.67$	<b>81.57</b> $\pm 0.71$	<b>10.93</b> $\pm 0.63$	<b>9.82</b> $\pm 0.50$
1957	<b>77.43</b> $\pm 1.70$	<b>81.68</b> $\pm 0.76$	<b>10.92</b> $\pm 0.60$	<b>9.68</b> $\pm 0.50$
1960	<b>77.81</b> $\pm 1.52$	<b>82.15</b> $\pm 0.72$	<b>10.78</b> $\pm 0.64$	<b>9.50</b> $\pm 0.50$
1963	<b>77.51</b> $\pm 1.46$	<b>82.17</b> $\pm 0.74$	<b>10.80</b> $\pm 0.61$	<b>9.51</b> $\pm 0.48$
1966	<b>77.74</b> $\pm 1.53$	<b>82.67</b> $\pm 0.87$	<b>10.92</b> $\pm 0.61$	<b>9.56</b> $\pm 0.49$
1969	<b>77.65</b> $\pm 1.57$	<b>82.76</b> $\pm 0.93$	<b>10.98</b> $\pm 0.58$	<b>9.73</b> $\pm 0.49$
1972	<b>78.14</b> $\pm 1.35$	<b>83.43</b> $\pm 0.80$	<b>11.00</b> $\pm 0.58$	<b>9.63</b> $\pm 0.55$
1975	<b>78.39</b> $\pm 1.22$	<b>83.91</b> $\pm 0.85$	<b>10.91</b> $\pm 0.57$	<b>9.66</b> $\pm 0.59$
1978	<b>78.90</b> $\pm 1.05$	<b>84.58</b> $\pm 0.85$	<b>10.88</b> $\pm 0.51$	<b>9.56</b> $\pm 0.66$
1981	<b>79.38</b> $\pm 0.95$	<b>85.01</b> $\pm 0.86$	<b>10.75</b> $\pm 0.51$	<b>9.57</b> $\pm 0.63$
1984	<b>79.95</b> $\pm 0.96$	<b>85.55</b> $\pm 0.87$	<b>10.67</b> $\pm 0.49$	<b>9.58</b> $\pm 0.58$
1987	<b>80.41</b> $\pm 0.90$	<b>85.95</b> $\pm 0.87$	<b>10.64</b> $\pm 0.50$	<b>9.52</b> $\pm 0.56$
1990	<b>80.92</b> $\pm 0.89$	<b>86.25</b> $\pm 0.98$	<b>10.40</b> $\pm 0.42$	<b>9.37</b> $\pm 0.60$
1993	<b>81.43</b> $\pm 1.05$	<b>86.52</b> $\pm 1.16$	<b>10.15</b> $\pm 0.39$	<b>9.28</b> $\pm 0.53$
1996	<b>82.06</b> $\pm 1.06$	<b>87.04</b> $\pm 1.09$	<b>10.05</b> $\pm 0.47$	<b>9.28</b> $\pm 0.54$
1999	<b>82.52</b> $\pm 0.99$	<b>87.31</b> $\pm 1.11$	<b>9.91</b> $\pm 0.52$	<b>9.26</b> $\pm 0.44$
2002	<b>83.17</b> $\pm 1.00$	<b>87.71</b> $\pm 1.16$	<b>9.87</b> $\pm 0.54$	<b>9.25</b> $\pm 0.41$
2005	<b>83.88</b> $\pm 1.02$	<b>88.41</b> $\pm 1.10$	<b>9.86</b> $\pm 0.62$	<b>9.28</b> $\pm 0.42$
2008	<b>84.49</b> $\pm 0.99$	<b>88.86</b> $\pm 1.07$	<b>9.87</b> $\pm 0.67$	<b>9.32</b> $\pm 0.42$
2011	<b>85.22</b> $\pm 0.95$	<b>89.47</b> $\pm 1.05$	<b>9.86</b> $\pm 0.66$	<b>9.35</b> $\pm 0.40$
<i>Source: Human Mortality Database, Period 1945-2011, 15 Countries</i>				

Table # 4b						
CLaM Regression: Historical Coefficients						
	Slope: ( $x^*$ )		Intercept ( $L$ )		Mortality Rate ( $G$ )	
Year	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
1945	<b>81.71</b> $\pm 5.51$	<b>69.14</b> $\pm 3.79$	<b>-1.97</b> $\pm 0.50$	<b>-3.41</b> $\pm 0.37$	0.0912	0.0987
1948	<b>92.88</b> $\pm 3.93$	<b>73.66</b> $\pm 4.59$	<b>-1.07</b> $\pm 0.35$	<b>-3.05</b> $\pm 0.45$	0.0878	0.0986
1951	<b>90.46</b> $\pm 5.62$	<b>73.74</b> $\pm 5.01$	<b>-1.17</b> $\pm 0.51$	<b>-3.00</b> $\pm 0.51$	0.0911	0.1018
1954	<b>87.37</b> $\pm 5.96$	<b>71.35</b> $\pm 4.18$	<b>-1.51</b> $\pm 0.55$	<b>-3.33</b> $\pm 0.43$	0.0918	0.1020
1957	<b>91.31</b> $\pm 5.51$	<b>74.71</b> $\pm 4.42$	<b>-1.12</b> $\pm 0.51$	<b>-2.99</b> $\pm 0.46$	0.0918	0.1036
1960	<b>87.28</b> $\pm 4.75$	<b>73.10</b> $\pm 4.13$	<b>-1.50</b> $\pm 0.44$	<b>-3.21</b> $\pm 0.44$	0.0930	0.1055
1963	<b>85.71</b> $\pm 5.00$	<b>74.51</b> $\pm 4.20$	<b>-1.62</b> $\pm 0.46$	<b>-3.06</b> $\pm 0.44$	0.0929	0.1054
1966	<b>87.03</b> $\pm 5.28$	<b>72.94</b> $\pm 5.03$	<b>-1.54</b> $\pm 0.49$	<b>-3.28</b> $\pm 0.53$	0.0919	0.1049
1969	<b>86.79</b> $\pm 6.24$	<b>69.71</b> $\pm 5.24$	<b>-1.56</b> $\pm 0.57$	<b>-3.62</b> $\pm 0.54$	0.0913	0.1030
1972	<b>84.38</b> $\pm 5.32$	<b>74.46</b> $\pm 4.12$	<b>-1.83</b> $\pm 0.49$	<b>-3.20</b> $\pm 0.43$	0.0911	0.1042
1975	<b>80.19</b> $\pm 5.52$	<b>72.73</b> $\pm 4.07$	<b>-2.23</b> $\pm 0.51$	<b>-3.43</b> $\pm 0.42$	0.0919	0.1038
1978	<b>79.23</b> $\pm 5.50$	<b>73.96</b> $\pm 3.54$	<b>-2.36</b> $\pm 0.51$	<b>-3.37</b> $\pm 0.37$	0.0921	0.1051
1981	<b>78.85</b> $\pm 4.93$	<b>76.55</b> $\pm 3.74$	<b>-2.43</b> $\pm 0.46$	<b>-3.14</b> $\pm 0.39$	0.0932	0.1049
1984	<b>81.50</b> $\pm 4.80$	<b>79.82</b> $\pm 4.00$	<b>-2.22</b> $\pm 0.45$	<b>-2.86</b> $\pm 0.42$	0.0939	0.1048
1987	<b>81.76</b> $\pm 4.03$	<b>83.23</b> $\pm 3.79$	<b>-2.24</b> $\pm 0.38$	<b>-2.54</b> $\pm 0.40$	0.0942	0.1054
1990	<b>80.82</b> $\pm 5.31$	<b>83.38</b> $\pm 3.90$	<b>-2.35</b> $\pm 0.51$	<b>-2.54</b> $\pm 0.42$	0.0963	0.1071
1993	<b>82.75</b> $\pm 6.86$	<b>86.66</b> $\pm 5.10$	<b>-2.19</b> $\pm 0.68$	<b>-2.22</b> $\pm 0.55$	0.0987	0.1081
1996	<b>88.05</b> $\pm 4.43$	<b>89.08</b> $\pm 4.06$	<b>-1.71</b> $\pm 0.44$	<b>-2.01</b> $\pm 0.44$	0.0997	0.1081
1999	<b>86.16</b> $\pm 3.84$	<b>92.74</b> $\pm 4.97$	<b>-1.93</b> $\pm 0.39$	<b>-1.64</b> $\pm 0.54$	0.1012	0.1083
2002	<b>85.30</b> $\pm 3.97$	<b>92.36</b> $\pm 6.09$	<b>-2.08</b> $\pm 0.40$	<b>-1.72</b> $\pm 0.66$	0.1016	0.1083
2005	<b>85.25</b> $\pm 3.47$	<b>92.54</b> $\pm 5.45$	<b>-2.15</b> $\pm 0.35$	<b>-1.78</b> $\pm 0.59$	0.1018	0.1079
2008	<b>85.37</b> $\pm 2.85$	<b>91.18</b> $\pm 5.59$	<b>-2.20</b> $\pm 0.29$	<b>-1.98</b> $\pm 0.60$	0.1017	0.1076
2011	<b>85.70</b> $\pm 2.80$	<b>86.92</b> $\pm 6.66$	<b>-2.24</b> $\pm 0.29$	<b>-2.51</b> $\pm 0.71$	0.1018	0.1072
<i>Source: Human Mortality Database, Period 1945-2011, 15 Countries</i>						