Appendix 5 : Comparison of growth curves

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Model fitted:

$$length_a^{set} = a^{set} + b^{set}\left(age/3\right)^{c^{set}}$$

Hypothesis tested:

H_0: $a^{set} = a$; $b^{set} = b$; $c^{set} = c$
H1: $a^{set} = a$; $b^{set} = b$; c^{set},

where set = 1 is the Namibian growth data for 1996 and set = 2 is the Namibian growth data for 2004.

Table 1. Parameter estimates of growth curves under the two hypothesis and testing of hypothesis that the growth curves for the four sets of growth data are equal.

Parameter estimates	H_0	H_1
a	10.651	10.635
b	13.747	13.853
c^1	0.956	0.883
c^2	0.956	0.973
σ	0.164	0.164
-Log-likelihood	-1290.50	-1291.99
Log-likelihood ratio test		2.98
p-value		0.395

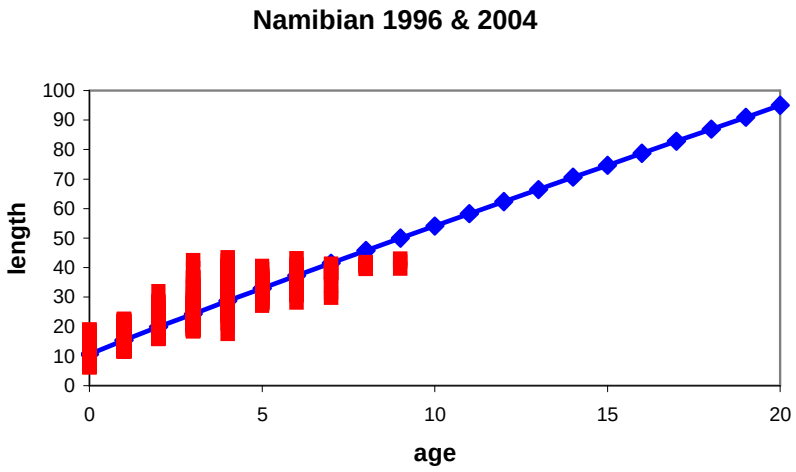

Figure 1. Growth curve fit under the hypothesis of equal growth curves for all sets of growth data.

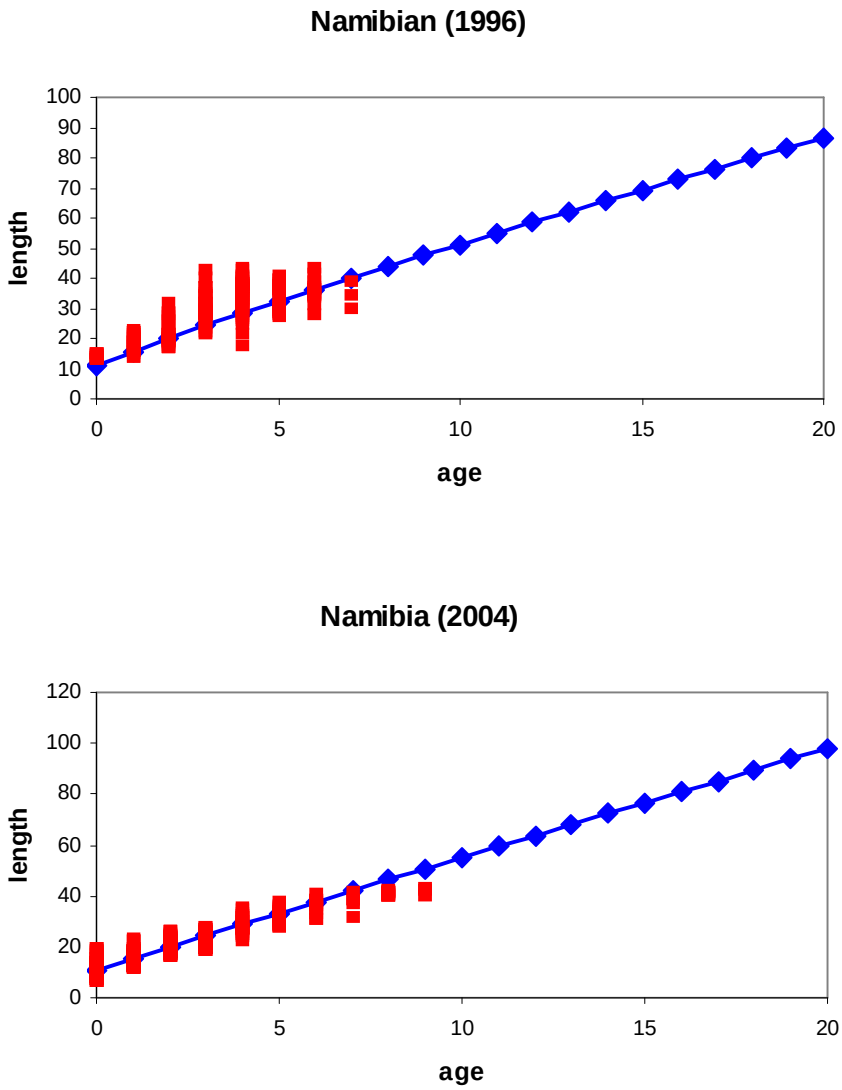

Figure 2. Growth curve fits under the hypothesis of different growth curves for the different sets of data.