

$$r_k = b_k + \epsilon_k \quad , \quad (1)$$

$$b_k = \begin{cases} \beta + \alpha k, & 40 \leq k \leq k^*, \quad \alpha > 0 \\ \gamma + \theta k + \delta k^2, & k > k^*, \quad \delta > 0 \end{cases} \quad (2)$$

with the restrictions

$$\begin{aligned} \gamma &= \beta + \delta k^{*2} \\ \theta &= \alpha - 2\delta k^* \end{aligned} \quad (3)$$

$$r_k = \beta + \alpha k + \delta d_k(k^{*2} - 2k^*k + k^2) + \epsilon_k, \quad (4)$$

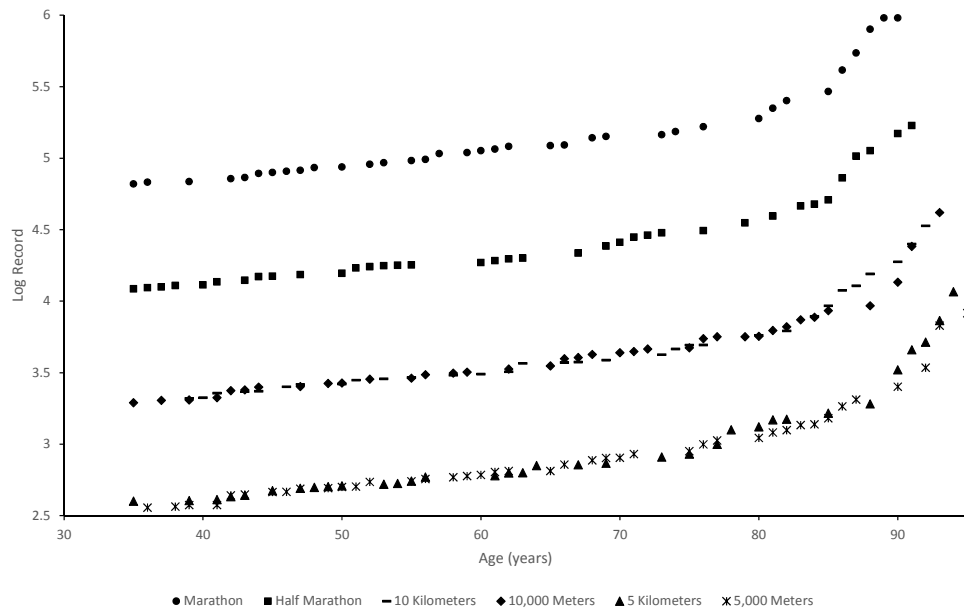
where $d_k = 0$ if $k \leq k^*$ and $d_k = 1$ if $k > k^*$.

$$R_k = e^{\hat{b}_k} / e^{\hat{b}_{40}}, \quad k = 40, \dots, 95 \quad . \quad (5)$$

Table 1
Coefficient Estimates and Implied Age Factors

	Estimates			Age Factors						No.	Max
	$\hat{\alpha}$	\hat{k}^*	$\hat{\delta}$	R_{50}	R_{60}	R_{70}	R_{80}	R_{90}	R_{95}	Obs.	Age
LQ: Fair(2007)	0.0080	75.1	0.00164	1.08	1.17	1.27	1.43	2.15	2.99	267	96
LQmin	0.0098	77.6	0.00222	1.10	1.22	1.34	1.50	2.30	3.36	200	95
LQml	0.0099	79.7	0.00298	1.10	1.22	1.35	1.49	2.25	3.47	200	95
NPmin				1.09	1.20	1.32	1.55	2.25	3.86	200	95
NPml				1.08	1.17	1.29	1.53	2.20	3.86	200	95
WMA 5K				1.08	1.16	1.27	1.51	2.12	2.84		
WMA 10K				1.08	1.18	1.30	1.55	2.19	2.97		
WMA MA				1.08	1.18	1.30	1.55	2.19	2.97		
WMA 5,000M				1.08	1.18	1.29	1.54	2.19	2.98		

Figure 1
 Log Age Records, Six Events
 Non-Dominated Observations



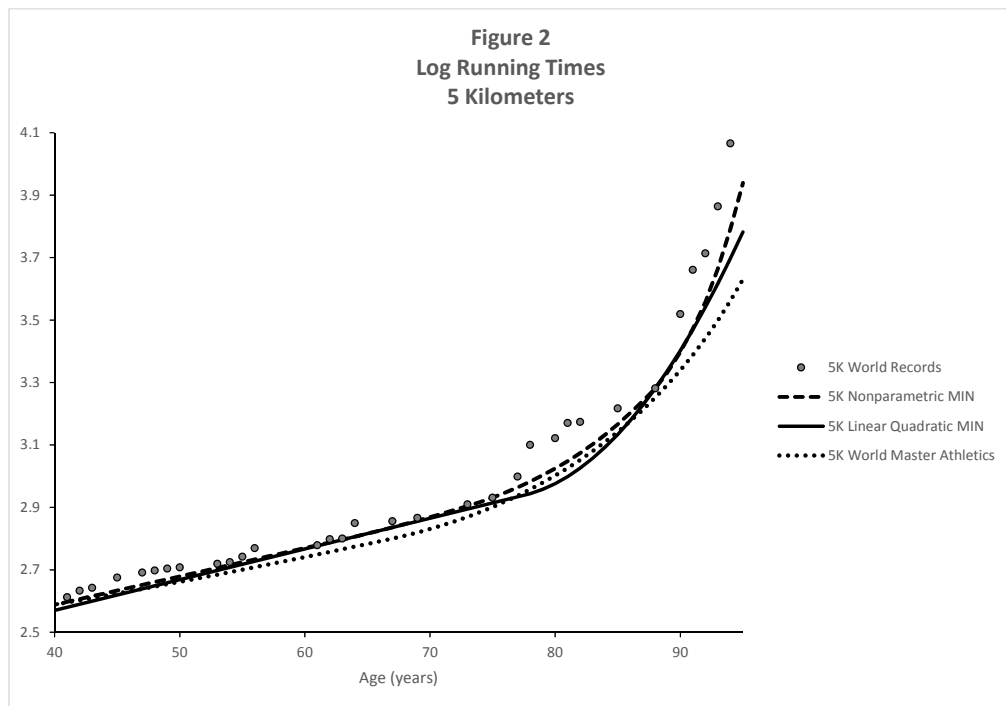


Figure 3
Log Running Times
Marathon

