

We consider a dataset that consists of 300 observations on terminal sample size 'N' obtained by employing (i) Purely Sequential strategy (4.1) (ii) Accelerated Sequential strategy (4.12) with  $k = 2, 3$  and 4 and (iii) Three-stage strategy (4.19)-(4.21) with  $\kappa = 1/2$  and  $1/3$  to construct 95% MRFSCR for unknown  $\mu$ . The calculation of 'N' was carried out by first generating random samples from  $N(\mu, \sigma^2 H)$  population

with  $\mu = \begin{pmatrix} 3 \\ 5 \\ 2 \end{pmatrix}$ ,  $\sigma^2 = 16$  and  $H = \begin{pmatrix} 5 & -4 & 1 \\ -4 & 6 & -4 \\ 1 & -4 & 5 \end{pmatrix}$  and fixing  $\alpha = 0.05$ ,  $\rho = 1.0$  in the loss function (3.5),  $C = 1000$ ,  $d = 0.1768$ ,  $\beta = 0.5$   $m = 15$  and  $m_0 = 30$ . Then, under this fixed structure, we run the Purely Sequential stopping rule (4.1), the Accelerated Sequential stopping rule (4.12) with  $k = 2, 3$  and 4 and the Three-stage stopping rule (4.19)-(4.21) with  $\kappa = 1/2$  and  $1/3$  independently of each other  $b = 300$  times. These stopping times are labelled  $N_i; i = 1, 2, 3, 4, 5, 6$  respectively.

From the theory discussed in Sec 4.1 in (4.7), we can claim that  $N_1 \sim N(C, gC)$  with  $g = 2p^{-1}(1 - \beta)^2$  (In our case,  $p = 3$  and  $\beta = 0.5 \Rightarrow g = \frac{1}{6}$ ). From the theory discussed in Sec 4.2 in (4.15), we can claim that  $N_i \sim N(C, kgC)$  when  $(i, k)$  corresponds to  $(2, 2), (3, 3), (4, 4)$  respectively. Also, from the theory discussed in Sec 4.3 in (4.23) part (iii), we can claim that  $N_i \sim N(C, kgC)$  when  $(i, k)$  corresponds to  $(5, 2), (6, 3)$  respectively. Since  $N_i$ 's are independent, we can claim  $\mathbf{N}_{6 \times 1} = (N_1, N_2, N_3, N_4, N_5, N_6)^T \sim N_6(\mu, \Sigma = \sigma^2 H)$

where  $\mu = (C, C, C, C, C, C)^T$  and  $\sigma^2 = C$ ,  $H = g \begin{pmatrix} 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 2 & 0 & 0 & 0 & 0 \\ 0 & 0 & 3 & 0 & 0 & 0 \\ 0 & 0 & 0 & 4 & 0 & 0 \\ 0 & 0 & 0 & 0 & 2 & 0 \\ 0 & 0 & 0 & 0 & 0 & 3 \end{pmatrix}$ .

This represents the distribution of our 'population'. A sample of size 300 from this population is considered as our real dataset.

The multivariate normality of the dataset was checked by means of the Henze-Zirkler test (p-value = 0.3136) implying that the multivariate normality assumption worked reasonably well. One may also employ other available tests of multivariate normality, such as (Mardia Skewness p-value=0.6164; Mardia Kurtosis p-value=0.7736, Royston's test (p-value=0.9869) and many more. The univariate normality of each individual variable was also verified with the Anderson-Darling test (p-values=0.7087, 0.8063, 0.7920, 0.7469, 0.5714, 0.8516).