LIST OF NOTATIONS

C_h Holding cost per unit per unit time. ($/unit/unit time)

C Purchase cost per unit. ($/unit)

D Demand function.

C_d Deterioration cost per unit. ($/unit)

T_d Length of time during which there is no deterioration.

C_a Advertisement cost advertisement. ($/advertisement)

M Credit period to settle the account.

P Selling price per unit. ($/unit)

C_s Lost sale cost per unit. ($/unit)

T Length of the inventory order cycle.

α, β Deterioration parameters.

I_c Rate of interest charged on the remaining amount.

I_0 Initial inventory level.

η Simulation coefficient representing the percentage increase in $m(\xi)$
    per dollar increase in ξ.

A Advertisement frequency per cycle.

C_O Ordering cost per order. ($/order)

T_1 Time point at which inventory level becomes zero, due to demand
    and deterioration with preservation technology.

I_e Rate of interest earned on sales revenue.

$I(t)$ The level of inventory at time t.

k, γ, a, b, m Demand parameters.

δ Inventory Backlog coefficient.

ξ' Maximum preservation technology investment budget.

ξ Preservation technology investment cost. (\$/unit time).

$m(\xi)$ Proportion of reduced deterioration rate $(0 \leq m(\xi) \leq 1)$.

Q Order quantity per order cycle T.

I_B Backlogged Inventory.

TP Total profit function.