

1. A company has planned a new marketing campaign which could have three investment levels with the following projections.

	Investment levels		
	L1	L2	L3
Marketing Investment (\$'000)	600	1200	1800
Gross Margin (\$'000)	900	1650	2350

- i. Employing the scalability principle of marketing investments, identify the best of the three investment levels if the hurdle rate is 20%.
- ii. For the above data, a regression of Return on Marketing Investment (ROMI) on marketing investment (I) results in the following estimates.

$$\text{ROMI} = 0.588 - 0.00000016 I$$

Calculate the optimal investment level using optimal investment theory. How does your answer compare with your results using scalability principle?

Solution:

ROMI for the investment levels:

	Investment levels		
	L1	L2	L3
Marketing Investment (\$'000)	600	1200	1800
Gross Margin (\$'000)	900	1650	2350
Return (\$'000)	300	450	550
ROMI	50%	37.5%	30.6%

Thus, all three levels individually satisfy the hurdle rates. Considering incremental ROMI,

	Incremental Investment levels		
	L1	L2-L1	L3-L2
Incremental Marketing Investment (\$'000)	600	600	600
Gross Margin (\$'000)	900	750	700
Incremental Return (\$'000)	300	150	100
Incremental ROMI	50%	25%	16.67%

Considering the incremental ROMI, hurdle rate is satisfied only for investment of up to \$1.2M dollars (level 2). Incremental returns from further investments is less than the hurdle rate and so the firm should go with level 2.

ii. Using optimal investment theory,

$$\text{Optimal investment} = (H-a)/2b. = (0.2 - 0.588) / (2 * -0.00000016) = 1,212,500.$$

Thus, both scalability method and optimal investment theory suggest same level of optimal investment \$1.2 million (Optimal investment theory gives a more precise figure).