

Firm decisions

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Motivating example

X	t	Req	Arrivals per month
350	10 months	3	3
50	2 months	2	6

Average projects a worker can complete in a year,
long(short): $\frac{\text{period under consideration}}{\text{average completion rate}} = \frac{12}{10}(\frac{12}{2}) = 1.2(6)$

Required number of employees to accept all projects of
type long(short): $10 * 3 * 3(2 * 2 * 6) = 90(24)$

Maximum possible acceptance of projects per year:
 $3 * 12 = 36(6 * 12 = 72)$

Cash per month per project: $350/10 = 35(50/2 = 25)$.

Cash per month per employee:
 $350/(10 * 3) = 11.66(50/(2 * 2) = 12.5)$

Commitment versus priority when $n = 90$

Constrained/unconstrained priority long:

$$350 * \frac{1}{2} * 90 * 1.2 = 36 * 350 = 12600$$

$$\text{Constrained: } 6 * 24 * 50 * \frac{1}{3} = 3600$$

$$\text{Unconstrained short} 3600 + 1.2 * 66 * \frac{1}{2} 350 = 12840$$

Commitment versus priority when $n = 90$

	Commit	Not commit
Priority Long	12600	12600
Priority short	3600	12840

Commitment versus priority when $n = 6$

	Commit	Not commit
Priority Long	840	840
Priority short	900	900