

Retaining Sales People A Bonus Lost

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- You are a sales manager charged with reducing the sales force turnover. The cost of losing and replacing a sales person is \$150,000.
- You have been promised a bonus of \$10,000 for every sales person you can retain that would have been lost without your new salesmen retention program.
- Last year the firm lost 220 sales people at a loss rate of 10% from a sales force size of 2,200 people.
- This year you lost 225 sales people but your loss rate improved to 9%. You believe your retention program worked. The boss says 'no bonus' because the total number of replacements increased by 5 men. There was an increase in the number of turnovers.

What is a loss or retention rate when turnover is discussed?

- Every year we lose salesmen to our competitors, retirement or to new career opportunities in other firms.
- The number lost (and replaced) divided by the size of the sales force is the turnover rate.
- If the firm downsized and dropped the size of the sales force, this is not part of the turnover

What is a loss or retention rate when turnover is discussed?

- Loss rate or turnover is
- (Number lost, N) / (size of the force, Q)
- $N/Q = \text{loss rate}$

	Period 1	Period 2	Change, Δ	%Δ based on period 1
Number of Sales People, Q	2,200			
Loss rate, R = Q/N	10%			
Number Lost, N	N = Q x R = 220			

	Period 1	Period 2	Change, Δ	%Δ based on period 1
Number of Sales People, Q	2,200	??		
Loss rate, R	10%	9%	ΔR = -1%	
Number Lost	220	225	ΔN = 5	$\frac{\Delta N}{N} = \frac{5}{220}$ $\% \Delta N = 2.27\%$

	Period 1	Period 2	Change, Δ	%Δ based on period 1
Number of Sales People, Q	2,200	$Q = N/R$ $Q = 225 / .09$ $\approx 2,500$	$\Delta Q = 300$	$\Delta Q / Q_1 = 300 / 2,200$ $\% \Delta R = 13.6\%$
Loss rate, R	10%	9%	$\Delta R = -1\%$	$\Delta R / R_1 = 1 / 10$ $\% \Delta R = -10\%$
Number Lost	220	225	$\Delta N = 5$	$\Delta N / N = 5 / 220$ $\% \Delta N = 2.27\%$
$N = R \times Q$ or $N = (N/Q) \times Q$				

	Period 1	Period 2	Change, Δ	%Δ based on period 1
Number of Sales People, Q	2,200	2,500	$\Delta Q = 300$	
Loss rate, R	10%	9%	$\Delta R = -1\%$	
Number Lost	220	225	$\Delta N = 5$	
$N = R \times Q$ or $N = (N/Q) \times Q$				

	Period 1	Period 2	Change, Δ	%Δ based on period 1
Number of Sales People, Q	2,200	2,500	$\Delta Q = 300$	$\Delta Q / Q_1 = 300 / 2,200$ $\% \Delta Q = 13.6\%$
Loss rate, R	0.10	0.09	$\Delta R = -0.01$	$\Delta R / R_1 = 0.01 / 0.10$ $\% \Delta R = -10\%$
Number Lost	220	225	$\Delta N = 5$	$\Delta N / N = 5 / 220$ $\% \Delta N = 2.27\%$
$N = R \times Q$ or $N = (N/Q) \times Q$				

- We can **NOT** compare the percentage changes in the loss rate and the percentage changes in the size of the sales force.
- We need to compare the impact of the changes in size and loss rate on the change in the number of sales people lost

	Period 1	Period 2	Change, Δ	Impact of the changes on Number lost ΔN
Number of Sales People, Q	2,200	2,500	$\Delta Q = 300$	
Loss rate, R	10%	9%	$\Delta R = -1\%$	
Number Lost	220	225	$\Delta N = 5$ men	

	Period 1	Period 2	Change, Δ	Impact of the change on Number lost ΔN
Number of Sales People, Q	2,200	2,500	$\Delta Q = 300$	$I \Delta Q =$
Loss rate, R	10%	9%	$\Delta R = -1\%$	$I \Delta R =$
Number Lost	220	225	$\Delta N = 5$ men	$\Delta N = I \Delta Q + I \Delta R$

	Period 1	Period 2	Change, Δ	Impact of the change on Number lost IΔ
Number of Sales People, Q	2,200	2,500	ΔQ= 300	IΔQ = MinR(ΔQ) IΔQ = 9%(300) IΔQ = 27 men
Loss rate, R	10%	9%	ΔR = -1%	IΔR =
Number Lost	220	225	ΔN = 5 men	ΔN = IΔQ + IΔR

	Period 1	Period 2	Change, Δ	Impact of the change on Number lost IΔ
Number of Sales People, Q	2,200	2,500	ΔQ= 300	IΔQ = MinR(ΔQ) IΔQ = 9%(300) IΔQ = 27 men
Loss rate, R	10%	9%	ΔR = -1%	IΔR = MinQ(ΔR) IΔR = 2,200(-1%) IΔR = -22 men
Number Lost	220	225	ΔN = 5 men	ΔN = IΔQ + IΔR

	Period 1	Period 2	Change, Δ	Impact of the change on Number lost IΔ
Number of Sales People, Q	2,200	2,500	ΔQ= 300	IΔQ = MinR(ΔQ) IΔQ = 9%(300) IΔQ = 27 men
Loss rate, R	10%	9%	ΔR = -1%	IΔR = MinQ(ΔR) IΔR = 2,200(-1%) IΔR = -22 men
Number Lost	220	225	ΔN = 5 men	ΔN = IΔQ + IΔR 5 = 27 + (-22)

	Period 1	Period 2	Change, Δ	Impact of the change on Number lost IΔ
Number of Sales People, Q	2,200	2,500	ΔQ= 300	IΔQ = MinR(ΔQ) IΔQ = 9%(300) IΔQ = 27 men
Loss rate, R	10%	9%	ΔR = -1%	IΔR = MinQ(ΔR) IΔR = 2,200(-1%) IΔR = -22 men
Number Lost	220	225	ΔN = 5 men	ΔN = IΔQ + IΔR 5 = 27 + (-22)
Bonus = \$10,000 x 22 men = \$220,000				