

## EKSEMPEL: Binary Logistic Regression

Dette er Example 12.15 I boka utført med MINITAB. Merk at for hver linje i tabellen i boka har vi laget to linjer, en for antall "killed" (K) og en for antall "alive" (A).

### Data Display

Row	x	Response	Freq
1	0,10	K	8
2	0,10	A	39
3	0,15	K	14
4	0,15	A	39
5	0,20	K	24
6	0,20	A	31
7	0,30	K	32
8	0,30	A	20
9	0,50	K	38
10	0,50	A	8
11	0,70	K	50
12	0,70	A	4
13	0,95	K	50
14	0,95	A	2

Har så brukt MINITAB,

Stat > Regression > Binary Logistic Regression

Her settes kolonnen C5-T (Response) som Response, og kolonnen C6 (Freq) som Frequency (optional). For Model settes prediktoren(e), som her er bare C4 (x).

C4	C5-T	C6	C7
x	Response	Freq	
0,10	K	8	
0,10	A	39	
0,15	K	14	
0,15	A	39	
0,20	K	24	
0,20	A	31	
0,30	K	32	
0,30	A	20	
0,50	K	38	
0,50	A	8	
0,70	K	50	
0,70	A	4	
0,95	K	50	
0,95	A	2	

The screenshot shows the Minitab Binary Logistic Regression dialog box. The 'Response' field is set to 'Response' and the 'Frequency (optional)' field is set to 'Freq'. The 'Model' field contains 'x'. The 'Factors (optional)' field is empty. The dialog box has buttons for 'Select', 'Help', 'Graphs...', 'Options...', 'Results...', 'Storage...', 'OK', and 'Cancel'.

## Binary Logistic Regression: Response versus x

Link Function: Logit

Response Information

Variable	Value	Count
Response	K	216 (Event)
	A	143
	Total	359

Frequency: Freq

Logistic Regression Table

Predictor	Coef	SE Coef	Z	P	Odds Ratio	95% CI	
						Lower	Upper
Constant	-1,73611	0,242042	-7,17	0,000			
x	6,29539	0,742229	8,48	0,000	542,07	126,55	2321,94

Log-Likelihood = -171,305

Test that all slopes are zero: G = 140,122, DF = 1, P-Value = 0,000

Vi ser at dette stemmer med resultatene i Example 12.15 i boka.