

Assignment Chi-Squared test

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1. A random sample of employees of a large company was selected and the employees were asked to complete a questionnaire. One question asked was whether the employee was in favour of the introduction of flexible working hours. The following table classifies the employees by their response and their response and by their area of work.

	Production	Non-Production
In Favour	129	171
Not in Favour	31	69

Test whether there is evidence of a significant association between the response and the area of work.

Solution:

Null hypothesis:

Two categorical variables are independent

H_0 : Response independent of the area of work

Alternative hypothesis:

Two categorical variables are dependent

H_1 : Response dependent of the area of work

2. The theory predicts that the proportion of beans in four given groups should be 9 : 3 : 3 : 1 in an examination with 1600 beans, the numbers in the four groups were 882, 313, 287 and 118. Does the experiment result support the theory ?

Solution: