

An R-square measure for a binary outcome has been proposed by McFadden (1973) in *Frontier of Econometrics*,

$$R\text{-square} = 1 - \log L(\text{free}) / \log L(\text{fixed}),$$

where $\log L$ refers to the maximum-likelihood loglikelihood value, “free” refers to a run with free regression slopes for the predictors (so a regular run), and “fixed” refers to a run which fixes all these slopes at zero.