Standardized Estimates for Nominal, Count and Survival Variables

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Staring with Version 8.5 the computation of the standardized estimates for nominal, count and survival variables has been changed. The coefficients are no longer standardized with respect to the variance of the dependent nominal, count or survival variables. Due to the non-linearity of the link function between the dependent variable and the predictor, standardizing with respect to the variance of the dependent variable is difficult to interpret and yields confusing results. Nominal, count and survival variables have a very specific integer or time metric that does not lend itself to the idea of standardization.

If a nominal variable N is regressed on another variable X and the regression coefficient is β, the standardized version of that coefficient is computed as $\beta\sqrt{Var(X)}$. The same applies to count and survival variables. If the variable X is a dependent variable (observed or latent), $Var(X)$ is the model estimated variance of X. If X is an independent variable, $Var(X)$ is the sample variance of X.

This change concerns the STDY and STDYX sections of the output only. It does not concerns the STD section, which only standardizes with respect to the scale of the continuous latent variables. In addition, the R-SQUARE for nominal, count and survival variables is no longer computed for the same reason. The variance of the dependent variable is on a scale that is completely different from the variance of the linear predictor. Therefore, these two variances are not comparable and the R-SQUARE can not be computed.