A regression model, based on the exponeniated-exponential geometric distribution, is defined and studied. The regression model can be applied to count data with under-dispersion or over-dispersion. Some forms of its modifications to truncated or inflated data are mentioned. Some tests to discriminate between the regression model and its competitors are discussed. Real numerical data sets are used to illustrate the applications of the regression model.

**Keywords:** Count data; dispersion; zero-inflation; tests.