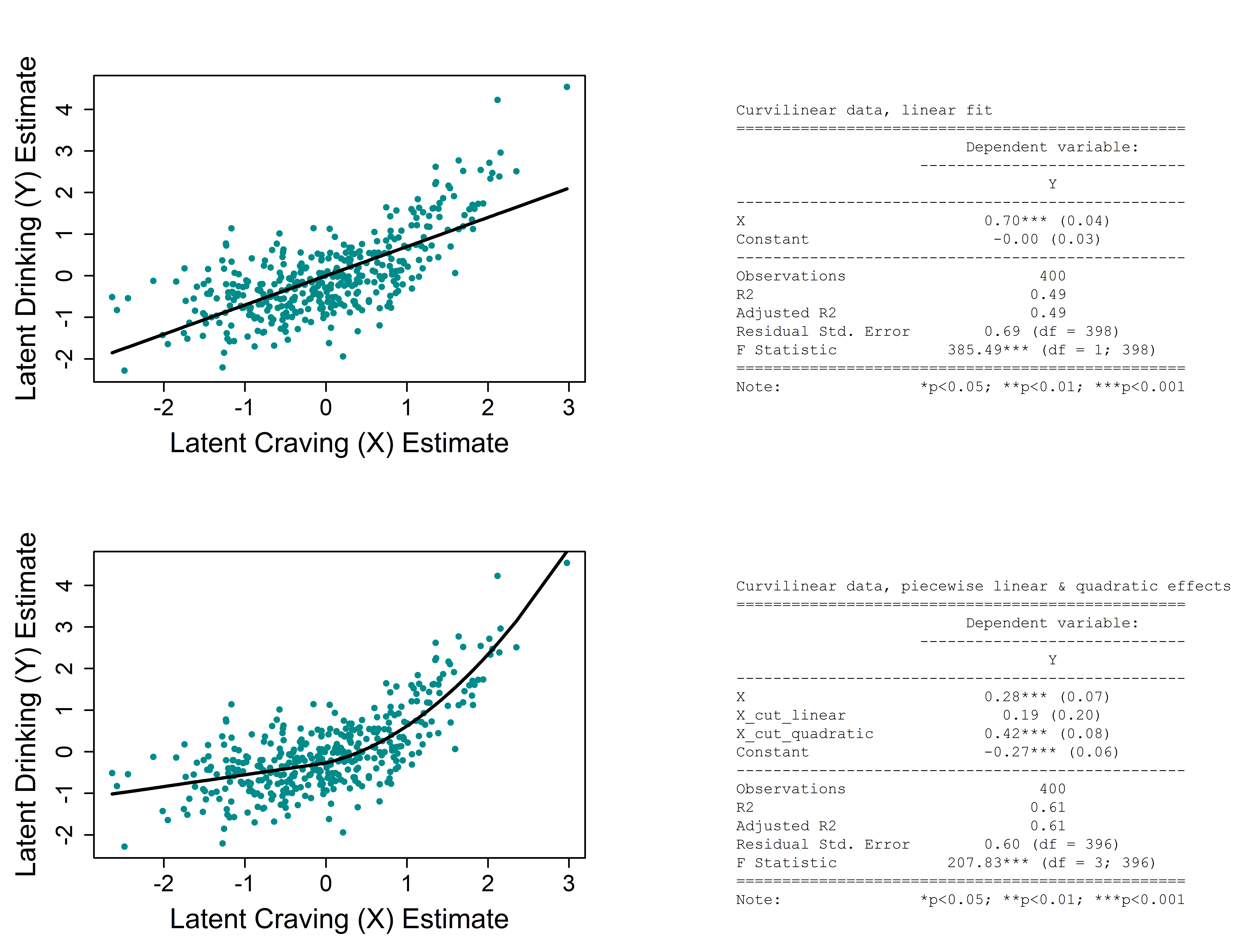
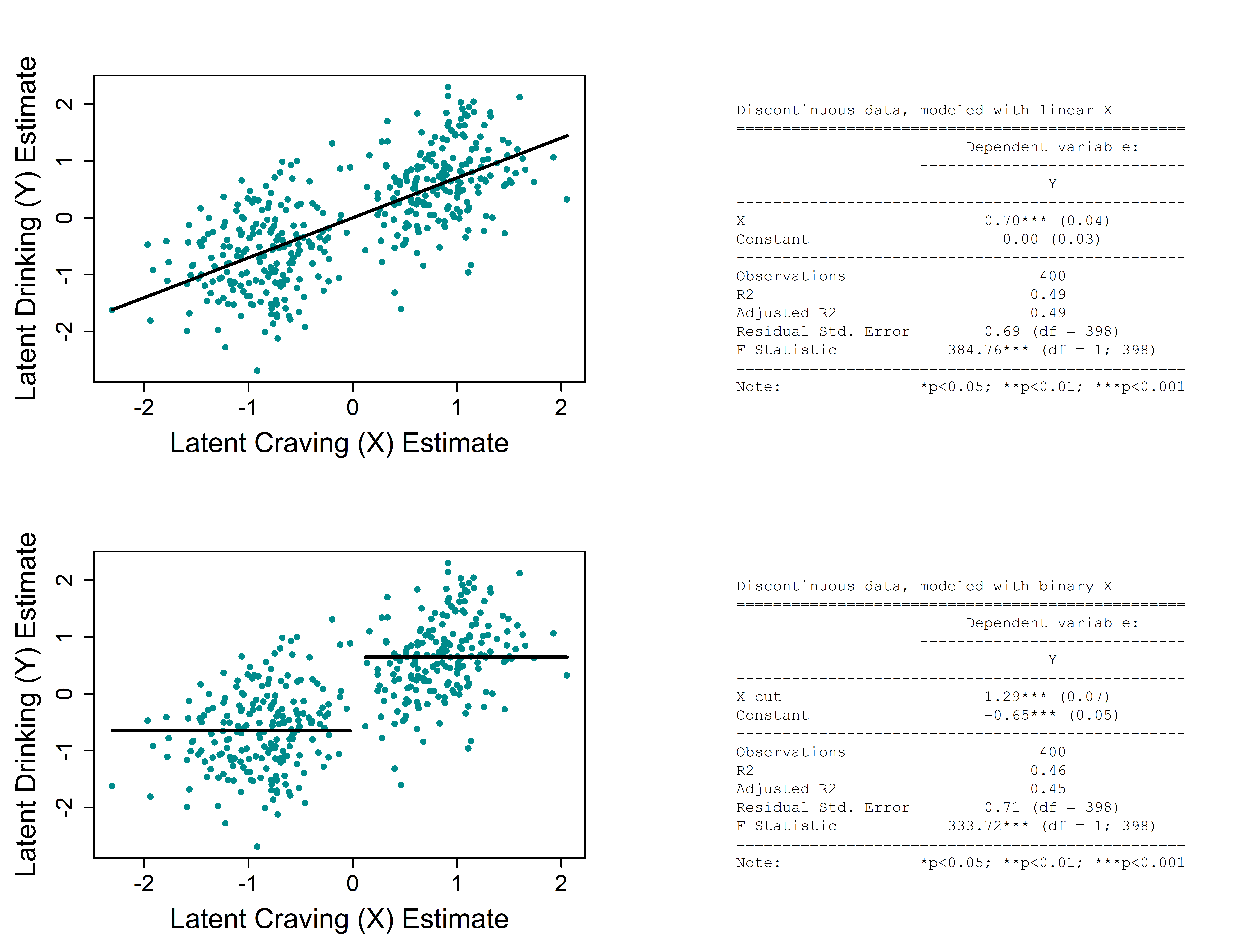
The supplemental figures below show alternative model parameterizations for the data shown in the main manuscript Figure 2 panel B (Figure S1) and panel C (Figure S2). Each approach uses linear regressions of factor score estimates (“two-step factor score regression”), which provides a method for feasibly transforming values of X to model nonlinear and piecewise relationships.



**Figure S1.** This figure illustrates the same data shown in Figure 2 panel B. The top row models a linear X-Y relationship and the bottom models a nonlinear, piecewise X-Y relationship (i.e., linear relationship when X≤0, quadratic when X>0). The left images contain scatterplots of factor scores with the modeled X-Y relationships overlaid as black lines. The regression tables on the right contain regression coefficients and overall model fit statistics. Measures of overall fit (adjusted R2 and residual standard errors) indicate that both models fit the data well, and that the nonlinear model (bottom panel) provides better overall fit to the data. The regression models use the following variables:

1. X (The untransformed factor scores for X)
2. X\_cut\_linear (Additive linear effect of X when X>0. These values equal 0 when X≤0 and equal X when X>0.)
3. X\_cut\_quadratic (Quadratic effect of X when X>0. These values equal 0 when X≤0 and equal X^2 when X>0.)
4. Constant (Regression intercept; predicted value of Y when X=0)



**Figure S2.** This figure illustrates the same data shown in Figure 2 panel C. The top row fits a linear X-Y relationship, whereas the bottom row fits a nonlinear relationship in which X is dichotomized. The left images contain scatterplots of factor scores with modeled X-Y relationships overlaid as black lines. The regression tables on the right show regression coefficients and overall model fit. Measures of overall fit (adjusted R2 and residual standard errors) indicate that both models fit the data well, and that the linear model (top panel) provides slightly better fit. The regression models include the following variables:

1. X (The untransformed factor scores for X)
2. X\_cut (Dichotomized version of X, equal to 0 if X≤0 and equal to 1 if X>0.