

Online Appendix: Evaluating the Linearity Assumption in Kastner’s Model

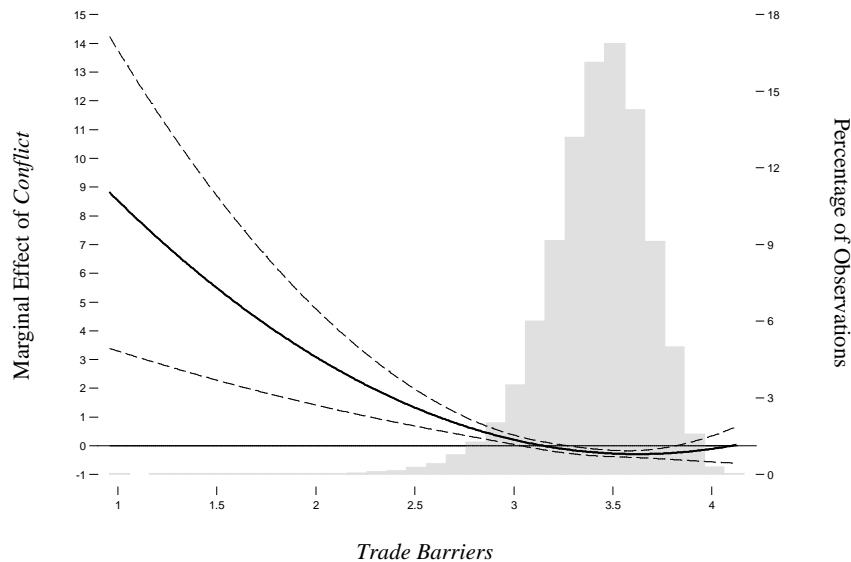
In our replication of Kastner’s model, we pointed out (see note 16) that the fact that there are few observations at low levels of *Trade Barriers* means that the evidence in Figure 4a that *Conflict* has a statistically significant positive effect on *Trade* when *Trade Barriers* is low may rest heavily on the model’s assumption that the marginal effect of *Conflict* is *linearly* related to *Trade Barriers*. To test whether this might be the case, we modify Eq. (5) in two ways that relax the linearity assumption.

First, we specify a model in which the marginal effect of *Conflict* is related to *Trade Barriers* via a quadratic relationship:

$$\begin{aligned} Trade = & \beta_0 + \beta_C Conflict + \beta_B Trade\ Barriers + \beta_{C*B}(Conflict \times Trade\ Barriers) \\ & + \beta_{BB} Trade\ Barriers^2 + \beta_{C*BB}(Conflict \times Trade\ Barriers^2) \\ & + \beta_{Controls} + \epsilon. \end{aligned} \tag{10}$$

Figure 7 shows how the estimated marginal effect of *Conflict* on *Trade* varies with *Trade Barriers* given this quadratic model specification.

Figure 7: Marginal Effect of *Conflict* on *Trade* Based on the Quadratic Model in Eq. (10)



Recall that Figure 4a shows that the marginal effect of *Conflict* on *Trade* is positive and statistically

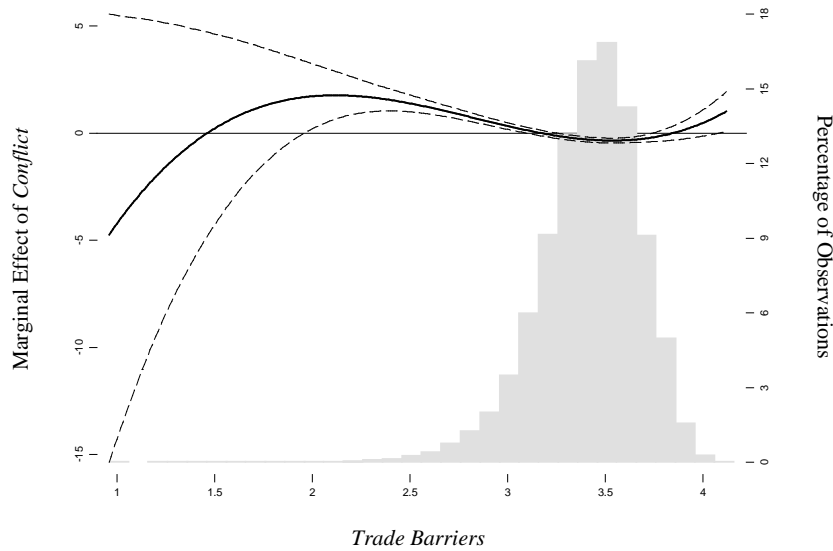
significant when *Trade Barriers* is less than 3.16, and that 14.5% of the sample observations fall into this region of significance. The marginal effect plot in Figure 7 based on the model incorporating quadratic terms indicates that the marginal effect of *Conflict* on *Trade* is positive and statistically significant when *Trade Barriers* is less than 3.04; 9.4% of the sample observations fall in this region of significance.

Second, we specify a model in which the marginal effect of *Conflict* is related to *Trade Barriers* via a cubic relationship:

$$\begin{aligned}
 Trade = & \beta_0 + \beta_C Conflict + \beta_B Trade\ Barriers + \beta_{C*B}(Conflict \times Trade\ Barriers) \\
 & + \beta_{BB} Trade\ Barriers^2 + \beta_{C*BB}(Conflict \times Trade\ Barriers^2) \\
 & + \beta_{BBB} Trade\ Barriers^3 + \beta_{C*BBB}(Conflict \times Trade\ Barriers^3) \\
 & + \beta_{Controls} + \epsilon.
 \end{aligned}
 \tag{11}$$

Figure 8 shows how the estimated marginal effect of *Conflict* on *Trade* varies with *Trade Barriers* given this cubic model specification.

Figure 8: Marginal Effect of *Conflict* on *Trade* Based on the Cubic Model in Eq. (11)



The plot in Figure 8 indicates that the marginal effect of *Conflict* on *Trade* is positive and statistically significant when *Trade Barriers* is less than 3.10 but greater than 1.95; 12.8% of the sample observations

fall in this region of significance.¹

In sum, all three model specifications – linear, quadratic, and cubic – indicate that *Conflict* has a statistically significant positive effect on *Trade* when *Trade Barriers* is low (less than 3.04 to 3.16). Between 9.4% and 14.5% of the sample observations fall in these regions of statistical significance. This constitutes evidence that the finding in Figure 4a that *Conflict* has a statistically significant positive effect on *Trade* when *Trade Barriers* is low is not an artifact of Kastner’s assumption that the marginal effect of *Conflict* is linearly related to *Trade Barriers*.

¹Although the estimated marginal effect of *Conflict* fails to be statistically significant when *Trade Barriers* is less than 1.96, it is worth noting that the observations of *Trade Barriers* in this range are extreme outliers, representing less than 0.1% of the sample observations.