"The effect of tourism on crime in Italy: a dynamic panel approach"

ANSWER TO Anonymous 1 (February 09, 2012)

Question 1

"I suggest to eliminate the first part of the Introduction, because it is definitely a standard and useless part for an advanced tourism research, like this one. The Introduction could instead begin directly with the words "Why should crime ...".

Answer

As it has been correctly points out, the first part of the introduction is standard for tourist economists, however since Economics is not a "tourism journal" we believe this part can be useful for economists that are non familiar with this field.

Question 2

"..., it is not clear to me how equation (5) has been obtained by substituting equation (4) in (3): I did not understand at all the mathematical computation."

Answer

The reader is right, we find some inaccuracies in the formula that can confuse the reader, the new version of the formula 4 and 5 is now:

$$CRIME_{i,t} = \alpha CRIME^*_{i,t} + \delta_i + \upsilon_{i,t} \qquad (4)$$

$$CRIME_{i,t} = \tilde{\beta}_0 + \beta_1 CRIME_{i,t-1} + \tilde{\beta}_2 GROWTH_{i,t} + \tilde{\beta}_3 GDP_{i,t} + \tilde{\beta}_4 UNEMPL_{i,t} + \tilde{\beta}_5 DENSITY_{i,t} + \tilde{\beta}_6 TOURISM_{i,t} + \tilde{\beta}_7 DIPLOMA_{i,t} + \tilde{\beta}_8 DETERRENCE_{i,t} + \tilde{\beta}_9 SOUTH_i + \tilde{\beta}_{10} YEAR_t + \tilde{\eta}_i + \mu_{i,t} \qquad (5)$$

where $\tilde{\beta}_j = \beta_j \alpha$, $\tilde{\eta}_i = \delta_i(1-\beta_1) + \alpha\eta_i$ and $\mu_{i,t} = -\beta_1 v_{i,t-1} + v_{i,t} + \alpha\varepsilon_{i,t}$

The steps and substitutions to arrive at formula 5 from formula 3 and 4 are the following:

$$CRIME^*_{i,t} = \beta_0 + \beta_1 CRIME^*_{i,t-1} + \beta_2 GROWTH_{i,t} + \beta_3 GDP_{i,t} + \beta_4 UNEMPL_{i,t} + \beta_5 DENSITY_{i,t} + \beta_6 TOURISM_{i,t} + \beta_7 DIPLOMA_{i,t} + \beta_8 DETERRENCE_{i,t} + \beta_9 SOUTH_i + \beta_{10} YEAR_t + \eta_i + \varepsilon_{i,t} \qquad (3)$$

$$CRIME_{i,t} = \alpha CRIME^*_{i,t} + \delta_i + \upsilon_{i,t} \qquad (4)$$

$$CRIME^*_{i,t} = \frac{CRIME_{i,t}}{\alpha} - \frac{\delta_i}{\alpha} - \frac{\upsilon_{i,t}}{\alpha}$$

$$\frac{CRIME_{i,t}}{\alpha} - \frac{\delta_i}{\alpha} - \frac{\upsilon_{i,t}}{\alpha} = \beta_0 + \beta_1\left(\frac{CRIME_{i,t-1}}{\alpha} - \frac{\delta_i}{\alpha} - \frac{\upsilon_{i,t-1}}{\alpha}\right) + \beta_2 GROWTH_{i,t} + \beta_3 GDP_{i,t} + \beta_4 UNEMPL_{i,t} + \beta_5 DENSITY_{i,t} + \beta_6 TOURISM_{i,t} + \beta_7 DIPLOMA_{i,t} + \beta_8 DETERRENCE_{i,t} + \beta_9 SOUTH_i + \beta_{10} YEAR_t + \eta_i + \varepsilon_{i,t}$$

$$CRIME_{i,t} - \delta_i - \upsilon_{i,t} = \alpha\beta_0 + \beta_1(CRIME_{i,t-1} - \delta_i - \upsilon_{i,t-1}) + \alpha\beta_2 GROWTH_{i,t} + \alpha\beta_3 GDP_{i,t} + \alpha\beta_4 UNEMPL_{i,t} + \alpha\beta_5 DENSITY_{i,t} + \alpha\beta_6 TOURISM_{i,t} + \alpha\beta_7 DIPLOMA_{i,t} + \alpha\beta_8 DETERRENCE_{i,t} + \alpha\beta_9 SOUTH_i + \beta_{10} YEAR_t + \alpha\eta_i + \alpha\varepsilon_{i,t}$$

$$CRIME_{i,t} = \alpha\beta_0 + \beta_1 CRIME_{i,t-1} + \alpha\beta_2 GROWTH_{i,t} + \alpha\beta_3 GDP_{i,t} + \alpha\beta_4 UNEMPL_{i,t} + \alpha\beta_5 DENSITY_{i,t} + \alpha\beta_6 TOURISM_{i,t} + \alpha\beta_7 DIPLOMA_{i,t} + \alpha\beta_8 DETERRENCE_{i,t} + \alpha\beta_9 SOUTH_i + \alpha\beta_{10} YEAR_t + (\delta_i - \beta_1\delta_i + \alpha\eta_i) + (-\beta_1\upsilon_{i,t-1} + \upsilon_{i,t} + \alpha\varepsilon_{i,t})$$

$$CRIME_{i,t} = \tilde{\beta}_0 + \beta_1 CRIME_{i,t-1} + \tilde{\beta}_2 GROWTH_{i,t} + \tilde{\beta}_3 GDP_{i,t} + \tilde{\beta}_4 UNEMPL_{i,t} + \tilde{\beta}_5 DENSITY_{i,t} + \tilde{\beta}_6 TOURISM_{i,t} + \tilde{\beta}_7 DIPLOMA_{i,t} + \tilde{\beta}_8 DETERRENCE_{i,t} + \tilde{\beta}_9 SOUTH_i + \tilde{\beta}_{10} YEAR_t + \tilde{\eta}_i + \mu_{i,t} \quad (5)$$