"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:

\[
Crime_{it}^* = \alpha Crime_{it} + \delta_i + v_{it}
\]  

(4)

\[
Crime_{it} = \beta_0 + \beta_1 Crime_{it-1} + \beta_2 Growth_{it} + \beta_3 GDP_{it} + \beta_4 Unempl_{it} + \beta_5 Dens_{it} + \beta_6 Tourism_{it} + \beta_7 Diploma_{it} + \beta_8 Deterrence_{it} + \beta_9 South_{i} + \beta_{10} Year_{t} + \eta_i + \mu_{it}
\]  

(5)

where \( \tilde{\beta}_j = \beta_j / \alpha \), \( \bar{\eta}_i = \delta (1- \beta_1) + \alpha \eta_i \) and \( \mu_{it} = -\beta_7 v_{it-1} + v_{it} + \alpha \varepsilon_{it} \).

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

\[
Crime_{it}^* = \beta_0 + \beta_1 Crime_{it-1} + \beta_2 Growth_{it} + \beta_3 GDP_{it} + \beta_4 Unempl_{it} + \beta_5 Dens_{it} + \beta_6 Tourism_{it} + \beta_7 Diploma_{it} + \beta_8 Deterrence_{it} + \beta_9 South_{i} + \beta_{10} Year_{t} + \eta_i + \varepsilon_{it}
\]  

(3)

\[
Crime_{it} = \alpha Crime_{it}^* + \delta_i + v_{it}
\]  

(4)

\[
\frac{Crime_{it}^* - \delta_i - v_{it}}{\alpha} = \beta_0 + \beta_1 (\frac{Crime_{it-1}^* - \delta_i - v_{it-1}}{\alpha}) + \beta_2 Growth_{it} + \beta_3 GDP_{it} + \beta_4 Unempl_{it} + \beta_5 Dens_{it} + \beta_6 Tourism_{it} + \beta_7 Diploma_{it} + \beta_8 Deterrence_{it} + \beta_9 South_{i} + \beta_{10} Year_{t} + \eta_i + \varepsilon_{it}
\]  

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

\[
Crime_{it}^* = \alpha Crime_{it} + \delta_i + v_{it}
\]  

(4)

\[
Crime_{it} = \frac{\alpha Crime_{it}^* - \delta_i - v_{it}}{\alpha}
\]  

\[
\frac{\alpha Crime_{it}^* - \delta_i - v_{it}}{\alpha} = \beta_0 + \beta_1 (\frac{\alpha Crime_{it-1}^* - \delta_i - v_{it-1}}{\alpha}) + \beta_2 Growth_{it} + \beta_3 GDP_{it} + \beta_4 Unempl_{it} + \beta_5 Dens_{it} + \beta_6 Tourism_{it} + \beta_7 Diploma_{it} + \beta_8 Deterrence_{it} + \beta_9 South_{i} + \beta_{10} Year_{t} + \eta_i + \varepsilon_{it}
\]  

\[
Crime_{it} = \beta_0 + \beta_1 Crime_{it-1} + \beta_2 Growth_{it} + \beta_3 GDP_{it} + \beta_4 Unempl_{it} + \beta_5 Dens_{it} + \beta_6 Tourism_{it} + \beta_7 Diploma_{it} + \beta_8 Deterrence_{it} + \beta_9 South_{i} + \beta_{10} Year_{t} + \alpha \eta_i + \alpha \varepsilon_{it}
\]
$$\text{CRIME}_{it} = \tilde{\beta}_0 + \tilde{\beta}_g \text{CRIME}_{it-1} + \tilde{\beta}_2 \text{GROWTH}_{it} + \tilde{\beta}_3 \text{GDP}_{it} + \tilde{\beta}_4 \text{UNEMPL}_{it} + \tilde{\beta}_5 \text{DENSITY}_{it} + \tilde{\beta}_6 \text{TOURISM}_{it} + \tilde{\beta}_7 \text{DIPLOMA}_{it} + \tilde{\beta}_8 \text{DETERRENCE}_{it} + \tilde{\beta}_9 \text{SOUTH}_{it} + \tilde{\beta}_0 \text{YEAR}_{it} + \tilde{\eta}_i + \mu_{it}$$ (5)